

April 17, 2008

Analytical Report for Service Request No: K0802880

Richard Johnson  
Environmental Chemistry Consulting Services, Inc.  
2525 Advance Rd.  
Madison, WI 53718

**RE: Kuhlman Electric**

Dear Richard:


Enclosed are the results of the samples submitted to our laboratory on April 03, 2008. For your reference, these analyses have been assigned our service request number K0802880.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376. You may also contact me via Email at [GSalata@caslab.com](mailto:GSalata@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Gregory Salata, Ph.D.  
Project Chemist

GS/lb

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## Acronyms

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

### **Inorganic Data Qualifiers**

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

### **Metals Data Qualifiers**

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
  - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- \* The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

### **Organic Data Qualifiers**

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  - i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

### **Additional Petroleum Hydrocarbon Specific Qualifiers**

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

**Columbia Analytical Services, Inc.**  
**Kelso, WA**  
**State Certifications, Accreditations, and Licenses**

<b>Program</b>	<b>Number</b>
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-



## **Case Narrative**

**COLUMBIA ANALYTICAL SERVICES, INC.**

<b>Client:</b>	Environmental Chemistry Consulting Services, Inc.	<b>Service Request No.:</b>	K0802880
<b>Project:</b>	Kuhlman Electric	<b>Date Received:</b>	04/03/08
<b>Sample Matrix:</b>	Water		

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

**Sample Receipt**

Two water samples were received for analysis at Columbia Analytical Services on 04/03/08. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

**Volatile Organic Compounds by EPA Method 8260B**

**Initial Calibration (ICAL) Exceptions:**

The primary evaluation criterion was exceeded for Dichlorodifluoromethane, Vinyl Chloride, Bromomethane, Trichlorofluoromethane, 1,1-Dichloroethene, Methylene Chloride, Carbon Tetrachloride and 1,1-Dichloropropene in ICAL ID 6696. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 9.4%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

The CAS minimum relative response factor criterion for 2-Butanone (MEK) was not met in ICAL ID 6696. In accordance with CAS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verifies instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question, the data quality is not significantly affected. No further corrective action was appropriate.

**Lab Control Sample Exceptions:**

The advisory criterion was exceeded for 1,1,1-Trichloroethane (TCA) in Laboratory Control Sample (LCS) KWG0803341-3. As per the CAS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

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

**Polynuclear Aromatic Hydrocarbons by EPA Method 8270C**

**Sample Notes and Discussion**

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

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

Approved by Gregory Salata Date 4/18/08

**Chain of Custody  
Documentation**





**Columbia Analytical Services, Inc.  
Cooler Receipt and Preservation Form**

PC loreg

Client / Project: ECS Service Request K08 2880

Received: 4-3-08 Opened: 4-3-08 By: A. Jell

1. Samples were received via?  US Mail  Fed Ex  UPS  DHL  GH  GS  PDX  Courier  Hand Delivered
2. Samples were received in: (circle)  Cooler  Box  Envelope  Other \_\_\_\_\_ NA
3. Were custody seals on coolers? NA  Y  N If yes, how many and where? \_\_\_\_\_  
If present, were custody seals intact? Y  N If present, were they signed and dated? Y  N
4. Is shipper's air-bill filed? If not, record air-bill number: \_\_\_\_\_ NA  Y  N
5. Temperature of cooler(s) upon receipt (°C): 6.6 \_\_\_\_\_  
Temperature Blank (°C): — \_\_\_\_\_
6. If applicable, list Chain of Custody Numbers: \_\_\_\_\_
7. Were custody papers properly filled out (ink, signed, etc.)? NA  Y  N
8. Packing material used.  Inserts  Baggies  Bubble Wrap  Gel Packs  Wet Ice  Sleeves  Other \_\_\_\_\_
9. Did all bottles arrive in good condition (unbroken)? Indicate in the table below. NA  Y  N
10. Were all sample labels complete (i.e analysis, preservation, etc.)?  Y  N
11. Did all sample labels and tags agree with custody papers? Indicate in the table below  Y  N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA  Y  N
13. Were the pH-preserved bottles tested\* received at the appropriate pH? Indicate in the table below  NA  Y  N
14. Were VOA vials and 1631 Mercury bottles received without headspace? Indicate in the table below. NA  Y  N
15. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?  NA  Y  N
16. Was C12/Res negative?  NA  Y  N

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

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

\*Does not include all pH preserved sample aliquots received. See sample receiving SOP (SMO-GEN).

Additional Notes, Discrepancies, & Resolutions: \_\_\_\_\_

**Volatile Organic Compounds  
EPA Method 8260B**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

## Volatile Organic Compounds

**Sample Name:** CSW-WA1-023  
**Lab Code:** K0802880-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.17	1	04/11/08	04/11/08	KWG0803341	
Chloromethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Vinyl Chloride	ND	U	0.50	0.042	1	04/11/08	04/11/08	KWG0803341	
Bromomethane	ND	U	0.50	0.22	1	04/11/08	04/11/08	KWG0803341	
Chloroethane	ND	U	0.50	0.23	1	04/11/08	04/11/08	KWG0803341	
Trichlorofluoromethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Acetone	ND	U	20	4.1	1	04/11/08	04/11/08	KWG0803341	
<b>1,1-Dichloroethene</b>	<b>1.3</b>		0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
Carbon Disulfide	ND	U	0.50	0.16	1	04/11/08	04/11/08	KWG0803341	
Methylene Chloride	ND	U	2.0	0.20	1	04/11/08	04/11/08	KWG0803341	
trans-1,2-Dichloroethene	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	
1,1-Dichloroethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
2-Butanone (MEK)	ND	U	20	2.3	1	04/11/08	04/11/08	KWG0803341	*
2,2-Dichloropropane	ND	U	0.50	0.18	1	04/11/08	04/11/08	KWG0803341	
cis-1,2-Dichloroethene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Chloroform	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Bromochloromethane	ND	U	0.50	0.17	1	04/11/08	04/11/08	KWG0803341	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	*
1,1-Dichloropropene	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	
Carbon Tetrachloride	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Benzene	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Trichloroethene (TCE)	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichloropropane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Bromodichloromethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Dibromomethane	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
2-Hexanone	ND	U	20	4.0	1	04/11/08	04/11/08	KWG0803341	
cis-1,3-Dichloropropene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Toluene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
trans-1,3-Dichloropropene	ND	U	0.50	0.090	1	04/11/08	04/11/08	KWG0803341	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	04/11/08	04/11/08	KWG0803341	
1,3-Dichloropropane	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

## Volatile Organic Compounds

**Sample Name:** CSW-WA1-023  
**Lab Code:** K0802880-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
Dibromochloromethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.099	1	04/11/08	04/11/08	KWG0803341	
Chlorobenzene	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Ethylbenzene	ND	U	0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
m,p-Xylenes	ND	U	0.50	0.22	1	04/11/08	04/11/08	KWG0803341	
o-Xylene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Styrene	ND	U	0.50	0.095	1	04/11/08	04/11/08	KWG0803341	
Bromoform	ND	U	0.50	0.28	1	04/11/08	04/11/08	KWG0803341	
Isopropylbenzene	ND	U	2.0	0.11	1	04/11/08	04/11/08	KWG0803341	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2,3-Trichloropropane	ND	U	0.50	0.24	1	04/11/08	04/11/08	KWG0803341	
Bromobenzene	ND	U	2.0	0.18	1	04/11/08	04/11/08	KWG0803341	
n-Propylbenzene	ND	U	2.0	0.098	1	04/11/08	04/11/08	KWG0803341	
2-Chlorotoluene	ND	U	2.0	0.12	1	04/11/08	04/11/08	KWG0803341	
4-Chlorotoluene	ND	U	2.0	0.12	1	04/11/08	04/11/08	KWG0803341	
1,3,5-Trimethylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
tert-Butylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,2,4-Trimethylbenzene	ND	U	2.0	0.15	1	04/11/08	04/11/08	KWG0803341	
sec-Butylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,3-Dichlorobenzene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
4-Isopropyltoluene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
n-Butylbenzene	ND	U	2.0	0.23	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1.0	1	04/11/08	04/11/08	KWG0803341	
1,2,4-Trichlorobenzene	ND	U	2.0	0.22	1	04/11/08	04/11/08	KWG0803341	
1,2,3-Trichlorobenzene	ND	U	2.0	0.33	1	04/11/08	04/11/08	KWG0803341	
Naphthalene	ND	U	2.0	0.29	1	04/11/08	04/11/08	KWG0803341	
Hexachlorobutadiene	ND	U	2.0	0.28	1	04/11/08	04/11/08	KWG0803341	
1,3,5-Trichlorobenzene	ND	U	5.0	0.35	1	04/11/08	04/11/08	KWG0803341	

\* See Case Narrative

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

**Volatile Organic Compounds**

**Sample Name:** CSW-WA1-023  
**Lab Code:** K0802880-001

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	75-120	04/11/08	Acceptable
Toluene-d8	121	80-128	04/11/08	Acceptable
4-Bromofluorobenzene	105	75-117	04/11/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

## Volatile Organic Compounds

**Sample Name:** Duplicate  
**Lab Code:** K0802880-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.17	1	04/11/08	04/11/08	KWG0803341	
Chloromethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Vinyl Chloride	ND	U	0.50	0.042	1	04/11/08	04/11/08	KWG0803341	
Bromomethane	ND	U	0.50	0.22	1	04/11/08	04/11/08	KWG0803341	
Chloroethane	ND	U	0.50	0.23	1	04/11/08	04/11/08	KWG0803341	
Trichlorofluoromethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Acetone	ND	U	20	4.1	1	04/11/08	04/11/08	KWG0803341	
<b>1,1-Dichloroethene</b>	<b>1.3</b>		0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
Carbon Disulfide	ND	U	0.50	0.16	1	04/11/08	04/11/08	KWG0803341	
Methylene Chloride	ND	U	2.0	0.20	1	04/11/08	04/11/08	KWG0803341	
trans-1,2-Dichloroethene	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	
1,1-Dichloroethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
2-Butanone (MEK)	ND	U	20	2.3	1	04/11/08	04/11/08	KWG0803341	*
2,2-Dichloropropane	ND	U	0.50	0.18	1	04/11/08	04/11/08	KWG0803341	
cis-1,2-Dichloroethene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Chloroform	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Bromochloromethane	ND	U	0.50	0.17	1	04/11/08	04/11/08	KWG0803341	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	*
1,1-Dichloropropene	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	
Carbon Tetrachloride	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Benzene	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Trichloroethene (TCE)	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichloropropane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Bromodichloromethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Dibromomethane	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
2-Hexanone	ND	U	20	4.0	1	04/11/08	04/11/08	KWG0803341	
cis-1,3-Dichloropropene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Toluene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
trans-1,3-Dichloropropene	ND	U	0.50	0.090	1	04/11/08	04/11/08	KWG0803341	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	04/11/08	04/11/08	KWG0803341	
1,3-Dichloropropane	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

**Volatile Organic Compounds**

**Sample Name:** Duplicate  
**Lab Code:** K0802880-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
Dibromochloromethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.099	1	04/11/08	04/11/08	KWG0803341	
Chlorobenzene	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Ethylbenzene	ND	U	0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
m,p-Xylenes	ND	U	0.50	0.22	1	04/11/08	04/11/08	KWG0803341	
o-Xylene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Styrene	ND	U	0.50	0.095	1	04/11/08	04/11/08	KWG0803341	
Bromoform	ND	U	0.50	0.28	1	04/11/08	04/11/08	KWG0803341	
Isopropylbenzene	ND	U	2.0	0.11	1	04/11/08	04/11/08	KWG0803341	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2,3-Trichloropropane	ND	U	0.50	0.24	1	04/11/08	04/11/08	KWG0803341	
Bromobenzene	ND	U	2.0	0.18	1	04/11/08	04/11/08	KWG0803341	
n-Propylbenzene	ND	U	2.0	0.098	1	04/11/08	04/11/08	KWG0803341	
2-Chlorotoluene	ND	U	2.0	0.12	1	04/11/08	04/11/08	KWG0803341	
4-Chlorotoluene	ND	U	2.0	0.12	1	04/11/08	04/11/08	KWG0803341	
1,3,5-Trimethylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
tert-Butylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,2,4-Trimethylbenzene	ND	U	2.0	0.15	1	04/11/08	04/11/08	KWG0803341	
sec-Butylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,3-Dichlorobenzene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
4-Isopropyltoluene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
n-Butylbenzene	ND	U	2.0	0.23	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1.0	1	04/11/08	04/11/08	KWG0803341	
1,2,4-Trichlorobenzene	ND	U	2.0	0.22	1	04/11/08	04/11/08	KWG0803341	
1,2,3-Trichlorobenzene	ND	U	2.0	0.33	1	04/11/08	04/11/08	KWG0803341	
Naphthalene	ND	U	2.0	0.29	1	04/11/08	04/11/08	KWG0803341	
Hexachlorobutadiene	ND	U	2.0	0.28	1	04/11/08	04/11/08	KWG0803341	
1,3,5-Trichlorobenzene	ND	U	5.0	0.35	1	04/11/08	04/11/08	KWG0803341	

\* See Case Narrative

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

**Volatile Organic Compounds**

**Sample Name:** Duplicate  
**Lab Code:** K0802880-002

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	75-120	04/11/08	Acceptable
Toluene-d8	122	80-128	04/11/08	Acceptable
4-Bromofluorobenzene	106	75-117	04/11/08	Acceptable

**Comments:** \_\_\_\_\_



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** KWG0803341-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.17	1	04/11/08	04/11/08	KWG0803341	
Chloromethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Vinyl Chloride	ND	U	0.50	0.042	1	04/11/08	04/11/08	KWG0803341	
Bromomethane	ND	U	0.50	0.22	1	04/11/08	04/11/08	KWG0803341	
Chloroethane	ND	U	0.50	0.23	1	04/11/08	04/11/08	KWG0803341	
Trichlorofluoromethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Acetone	ND	U	20	4.1	1	04/11/08	04/11/08	KWG0803341	
1,1-Dichloroethene	ND	U	0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
Carbon Disulfide	ND	U	0.50	0.16	1	04/11/08	04/11/08	KWG0803341	
Methylene Chloride	ND	U	2.0	0.20	1	04/11/08	04/11/08	KWG0803341	
trans-1,2-Dichloroethene	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	
1,1-Dichloroethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
2-Butanone (MEK)	ND	U	20	2.3	1	04/11/08	04/11/08	KWG0803341	*
2,2-Dichloropropane	ND	U	0.50	0.18	1	04/11/08	04/11/08	KWG0803341	
cis-1,2-Dichloroethene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Chloroform	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Bromochloromethane	ND	U	0.50	0.17	1	04/11/08	04/11/08	KWG0803341	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	*
1,1-Dichloropropene	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	
Carbon Tetrachloride	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Benzene	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Trichloroethene (TCE)	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichloropropane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
Bromodichloromethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Dibromomethane	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
2-Hexanone	ND	U	20	4.0	1	04/11/08	04/11/08	KWG0803341	
cis-1,3-Dichloropropene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Toluene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
trans-1,3-Dichloropropene	ND	U	0.50	0.090	1	04/11/08	04/11/08	KWG0803341	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	04/11/08	04/11/08	KWG0803341	
1,3-Dichloropropane	ND	U	0.50	0.15	1	04/11/08	04/11/08	KWG0803341	

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** KWG0803341-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
Dibromochloromethane	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.099	1	04/11/08	04/11/08	KWG0803341	
Chlorobenzene	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
Ethylbenzene	ND	U	0.50	0.13	1	04/11/08	04/11/08	KWG0803341	
m,p-Xylenes	ND	U	0.50	0.22	1	04/11/08	04/11/08	KWG0803341	
o-Xylene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
Styrene	ND	U	0.50	0.095	1	04/11/08	04/11/08	KWG0803341	
Bromoform	ND	U	0.50	0.28	1	04/11/08	04/11/08	KWG0803341	
Isopropylbenzene	ND	U	2.0	0.11	1	04/11/08	04/11/08	KWG0803341	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.14	1	04/11/08	04/11/08	KWG0803341	
1,2,3-Trichloropropane	ND	U	0.50	0.24	1	04/11/08	04/11/08	KWG0803341	
Bromobenzene	ND	U	2.0	0.18	1	04/11/08	04/11/08	KWG0803341	
n-Propylbenzene	ND	U	2.0	0.098	1	04/11/08	04/11/08	KWG0803341	
2-Chlorotoluene	ND	U	2.0	0.12	1	04/11/08	04/11/08	KWG0803341	
4-Chlorotoluene	ND	U	2.0	0.12	1	04/11/08	04/11/08	KWG0803341	
1,3,5-Trimethylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
tert-Butylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,2,4-Trimethylbenzene	ND	U	2.0	0.15	1	04/11/08	04/11/08	KWG0803341	
sec-Butylbenzene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,3-Dichlorobenzene	ND	U	0.50	0.11	1	04/11/08	04/11/08	KWG0803341	
4-Isopropyltoluene	ND	U	2.0	0.13	1	04/11/08	04/11/08	KWG0803341	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
n-Butylbenzene	ND	U	2.0	0.23	1	04/11/08	04/11/08	KWG0803341	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	04/11/08	04/11/08	KWG0803341	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1.0	1	04/11/08	04/11/08	KWG0803341	
1,2,4-Trichlorobenzene	ND	U	2.0	0.22	1	04/11/08	04/11/08	KWG0803341	
1,2,3-Trichlorobenzene	ND	U	2.0	0.33	1	04/11/08	04/11/08	KWG0803341	
Naphthalene	ND	U	2.0	0.29	1	04/11/08	04/11/08	KWG0803341	
Hexachlorobutadiene	ND	U	2.0	0.28	1	04/11/08	04/11/08	KWG0803341	
1,3,5-Trichlorobenzene	ND	U	5.0	0.35	1	04/11/08	04/11/08	KWG0803341	

\* See Case Narrative

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** KWG0803341-4

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	110	75-120	04/11/08	Acceptable
Toluene-d8	120	80-128	04/11/08	Acceptable
4-Bromofluorobenzene	110	75-117	04/11/08	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880

**Surrogate Recovery Summary  
 Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>
CSW-WA1-023	K0802880-001	111	121	105
Duplicate	K0802880-002	111	122	106
Method Blank	KWG0803341-4	110	120	110
Batch QC	K0802796-001	112	120	105
Batch QCMS	KWG0803341-1	109	120	110
Batch QCDMS	KWG0803341-2	107	121	111
Lab Control Sample	KWG0803341-3	109	120	109

**Surrogate Recovery Control Limits (%)**

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Sur1 = Dibromofluoromethane	75-120
Sur2 = Toluene-d8	80-128
Sur3 = 4-Bromofluorobenzene	75-117

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

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Extracted:** 04/11/2008  
**Date Analyzed:** 04/11/2008

**Matrix Spike/Duplicate Matrix Spike Summary  
 Volatile Organic Compounds**

**Sample Name:** Batch QC  
**Lab Code:** K0802796-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG0803341

Analyte Name	Sample Result	Batch QCMS KWG0803341-1 Matrix Spike			Batch QCDMS KWG0803341-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,1-Dichloroethene	3.6	16.6	10.0	131	15.5	10.0	120	67-147	7	30
Benzene	ND	10.7	10.0	107	10.2	10.0	102	69-126	4	30
Trichloroethene (TCE)	ND	11.9	10.0	119	11.3	10.0	113	56-137	5	30
Toluene	0.30	11.5	10.0	112	11.0	10.0	107	66-128	5	30
Chlorobenzene	ND	10.3	10.0	103	9.98	10.0	100	68-120	3	30
1,2-Dichlorobenzene	ND	9.90	10.0	99	9.63	10.0	96	67-116	3	30
Naphthalene	ND	10.6	10.0	106	10.5	10.0	105	61-137	1	30

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

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

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

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Extracted:** 04/11/2008  
**Date Analyzed:** 04/11/2008

**Lab Control Spike Summary**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG0803341

Lab Control Sample  
 KWG0803341-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Dichlorodifluoromethane	9.71	10.0	97	21-156
Chloromethane	8.51	10.0	85	45-135
Vinyl Chloride	9.94	10.0	99	59-135
Bromomethane	9.65	10.0	97	24-144
Chloroethane	8.90	10.0	89	60-128
Trichlorofluoromethane	12.4	10.0	124	54-129
Acetone	52.6	50.0	105	53-129
1,1-Dichloroethene	12.0	10.0	120	70-136
Carbon Disulfide	19.4	20.0	97	64-129
Methylene Chloride	9.37	10.0	94	64-137
trans-1,2-Dichloroethene	10.6	10.0	106	70-121
1,1-Dichloroethane	10.5	10.0	105	72-122
2-Butanone (MEK)	52.8	50.0	106	56-137
2,2-Dichloropropane	13.2	10.0	132	48-133
cis-1,2-Dichloroethene	10.6	10.0	106	76-125
Chloroform	11.2	10.0	112	71-118
Bromochloromethane	10.3	10.0	103	72-123
1,1,1-Trichloroethane (TCA)	12.7	10.0	127 *	65-126
1,1-Dichloropropene	11.6	10.0	116	71-119
Carbon Tetrachloride	12.9	10.0	129	58-133
1,2-Dichloroethane (EDC)	12.5	10.0	125	69-125
Benzene	10.2	10.0	102	74-118
Trichloroethene (TCE)	11.3	10.0	113	71-122
1,2-Dichloropropane	9.62	10.0	96	73-123
Bromodichloromethane	12.2	10.0	122	72-127
Dibromomethane	10.7	10.0	107	71-124
2-Hexanone	52.8	50.0	106	44-135
cis-1,3-Dichloropropene	11.4	10.0	114	71-125
Toluene	10.8	10.0	108	74-117
trans-1,3-Dichloropropene	10.5	10.0	105	56-121
1,1,2-Trichloroethane	10.1	10.0	101	73-122
4-Methyl-2-pentanone (MIBK)	52.3	50.0	105	57-129
1,3-Dichloropropane	9.93	10.0	99	74-120
Tetrachloroethene (PCE)	11.3	10.0	113	65-121
Dibromochloromethane	10.7	10.0	107	67-124

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

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

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Extracted:** 04/11/2008  
**Date Analyzed:** 04/11/2008

**Lab Control Spike Summary**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG0803341

Lab Control Sample  
KWG0803341-3  
Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	10.4	10.0	104	71-120
Chlorobenzene	10.2	10.0	102	74-115
1,1,1,2-Tetrachloroethane	10.5	10.0	105	71-118
Ethylbenzene	10.5	10.0	105	71-118
m,p-Xylenes	21.2	20.0	106	73-119
o-Xylene	10.9	10.0	109	74-120
Styrene	10.7	10.0	107	75-123
Bromoform	12.3	10.0	123	57-135
Isopropylbenzene	10.1	10.0	101	65-110
1,1,2,2-Tetrachloroethane	8.84	10.0	88	63-126
1,2,3-Trichloropropane	9.43	10.0	94	67-123
Bromobenzene	9.94	10.0	99	76-111
n-Propylbenzene	9.95	10.0	100	69-122
2-Chlorotoluene	9.79	10.0	98	72-120
4-Chlorotoluene	9.58	10.0	96	70-118
1,3,5-Trimethylbenzene	9.71	10.0	97	70-120
tert-Butylbenzene	9.98	10.0	100	72-118
1,2,4-Trimethylbenzene	10.0	10.0	100	72-121
sec-Butylbenzene	10.7	10.0	107	73-130
1,3-Dichlorobenzene	9.92	10.0	99	76-110
4-Isopropyltoluene	9.81	10.0	98	67-115
1,4-Dichlorobenzene	9.67	10.0	97	74-112
n-Butylbenzene	9.97	10.0	100	62-123
1,2-Dichlorobenzene	9.87	10.0	99	75-110
1,2-Dibromo-3-chloropropane	10.5	10.0	105	49-124
1,2,4-Trichlorobenzene	10.7	10.0	107	66-115
1,2,3-Trichlorobenzene	11.2	10.0	112	64-120
Naphthalene	10.7	10.0	107	58-132
Hexachlorobutadiene	10.3	10.0	103	61-124
1,3,5-Trichlorobenzene	42.2	40.0	105	46-133

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

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

## **1,4-Dioxane by GC/MS**



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

**1,4-Dioxane by GC/MS**

**Sample Name:** CSW-WA1-023  
**Lab Code:** K0802880-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8270C SIM

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,4-Dioxane	0.94		0.50	0.260	1	04/04/08	04/09/08	KWG0803108	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Dioxane-d8	78	55-100	04/09/08	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** 04/01/2008  
**Date Received:** 04/03/2008

**1,4-Dioxane by GC/MS**

**Sample Name:** Duplicate  
**Lab Code:** K0802880-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8270C SIM

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,4-Dioxane	0.87		0.50	0.260	1	04/04/08	04/09/08	KWG0803108	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Dioxane-d8	62	55-100	04/09/08	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Collected:** NA  
**Date Received:** NA

**1,4-Dioxane by GC/MS**

**Sample Name:** Method Blank  
**Lab Code:** KWG0803108-3  
**Extraction Method:** METHOD  
**Analysis Method:** 8270C SIM

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,4-Dioxane	ND	U	0.50	0.260	1	04/04/08	04/09/08	KWG0803108	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Dioxane-d8	63	55-100	04/09/08	Acceptable

**Comments:** \_\_\_\_\_

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880

**Surrogate Recovery Summary  
 1,4-Dioxane by GC/MS**

**Extraction Method:** METHOD  
**Analysis Method:** 8270C SIM

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
CSW-WA1-023	K0802880-001	78
Duplicate	K0802880-002	62
Method Blank	KWG0803108-3	63
Lab Control Sample	KWG0803108-1	56
Duplicate Lab Control Sample	KWG0803108-2	63

**Surrogate Recovery Control Limits (%)**

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Sur1 = 1,4-Dioxane-d8 55-100

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Results flagged with an asterisk (\*) indicate values outside control criteria.  
 Results flagged with a pound (#) indicate the control criteria is not applicable.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Environmental Chemistry Consulting Servi  
**Project:** Kuhlman Electric  
**Sample Matrix:** Water

**Service Request:** K0802880  
**Date Extracted:** 04/04/2008  
**Date Analyzed:** 04/09/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary  
 1,4-Dioxane by GC/MS**

**Extraction Method:** METHOD  
**Analysis Method:** 8270C SIM

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG0803108

Analyte Name	Lab Control Sample KWG0803108-1 Lab Control Spike			Duplicate Lab Control Sample KWG0803108-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,4-Dioxane	16.0	25.0	64	17.6	25.0	70	56-107	9	30

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

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