(360) 577-7222

(360) 636-1068 fax



November 18, 2008

Analytical Report for Service Request No: K0810178

Joe Kabale Environmental Chemistry Consulting Services, Inc. 2525 Advance Rd. Madison, WI 53718

#### **RE:** Kuhlman Electric

Dear Joe:

Enclosed are the results of the samples submitted to our laboratory on October 16, 2008. For your reference, these analyses have been assigned our service request number K0810178.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. 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.

Respectfully submitted,

#### **Columbia Analytical Services, Inc.**

Gregory Salata, Ph.D. Project Chemist

GS/ln

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cc: Chris Slagle, Martin and Slagle, Black Mountain, NC

## 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
Μ	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

Program	Number
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**

Client:Environmental Chemistry Consulting Services, Inc. Service Request No.:K0810178Project:Kuhlman ElectricDate Received:10/16/08Sample Matrix: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 II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

#### Sample Receipt

Two water samples were received for analysis at Columbia Analytical Services on 10/16/08. 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 and Trichlorofluoromethane in ICAL ID 7782. 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 7.9%. 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.

#### **Continuing Calibration Verification (CCV) Exceptions:**

The CAS control criterion for 1,2-Dibromo-3-chloropropane was not met in CCV J:\MS18\1027F003.D. In accordance with CAS standard operating procedures, an 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, and the field samples analyzed in this sequence did not contain the analyte in question, the data quality has not been significantly affected. No further corrective action was feasible.

#### Lab Control Sample Exceptions:

The advisory criterion was exceeded for cis-1,3-Dichloropropene in Laboratory Control Sample (LCS) KWG0811472-3. As per the CAS/Kelso Standard Operating Procedure (SOP) for this method, this compound is not included in the subset of analytes used to control the analysis. The recovery information reported for this analyte 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.

#### 1,4-Dioxane by EPA Method 8270C

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

Approved by Celefille Martin	Date 11/2010
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## Chain of Custody Documentation

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RCOC #1 06/03

Columbia Analytical Services, Inc. Cooler Receipt and Preservation Form	PCG	2
ient / Project: Kuhlman Electric, Service Request KO8 10178		
:ceived: 10/110/08 Opened: 10/110/08 By: #2		
Samples were received via? US Mail Fed Ex UPS DHL GH GS PDX Courier Samples were received in: (circle) Cooler Box Envelope Other	" Hand Dei NA	livered
Were <u>custody seals</u> 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	$\overline{(N)}$
Is shipper's air-bill filed? If not, record air-bill number:	NA (Y)	N
Temperature of cooler(s) upon receipt (°C):		
Temperature Blank (°C):         5.30		100ABu
If applicable, list Chain of Custody Numbers:		
Packing material used. Inserts Baggies Bubble Wrap Gel Packs (Vet Ice Sleeves Other		
Were custody papers properly filled out (ink. signed, etc.)?	NA (Y)	Ν
Did all bottles arrive in good condition (unbroken)? Indicate in the table below.	NA Y	N
Were all sample labels complete (i.e analysis, preservation, etc.)?	NA M	N
Did all sample labels and tags agree with custody papers? Indicate in the table below	NA Y	Ν
Were appropriate bottles/containers and volumes received for the tests indicated?	NA (Y)	N
Were the pH-preserved bottles tested* received at the appropriate pH? Indicate in the table below	(NA) Y	Ν
Were VOA vials and 1631 Mercury bottles received without headspace? Indicate in the table below.	NA (Y)	Ν
Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?	(NA) Y	Ν
Was C12/Res negative?	(NA) Y	Ň

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
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Sample ID	Bottle Count	Out of Temp			рH	Reagent	Volume added	Reagent Lot Number	Initial
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ves not include all pH preserved sample aliquois received. See sample receiving SOP (SMO-GEN). ditional Notes, Discrepancies, & Resolutions:\_\_\_\_\_

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## Volatile Organic Compounds EPA Method 8260B

#### Analytical Results

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

 Service Request:
 K0810178

 Date Collected:
 10/14/2008

 Date Received:
 10/16/2008

#### **Volatile Organic Compounds**

Sample Name:	CSW-WA1-029	Units:	0
Lab Code:	K0810178-001	Basis:	
Extraction Method: Analysis Method:	EPA 5030B 8260B	Level:	Low

				Dilution	Date	Date	Extraction	
Analyte Name	Result	Q	MRL	Factor	Extracted	Analyzed	Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Chloromethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Vinyl Chloride	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Bromomethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Chloroethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Trichlorofluoromethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Acetone	ND	U	20	1	10/27/08	10/27/08	KWG0811472	
1,1-Dichloroethene	1.4		0.50	1	10/27/08	10/27/08	KWG0811472	
Carbon Disulfide	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Methylene Chloride	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
trans-1,2-Dichloroethene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1-Dichloroethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
2-Butanone (MEK)	ND	U	20	1	10/27/08	10/27/08	KWG0811472	
2,2-Dichloropropane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
cis-1,2-Dichloroethene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Chloroform	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Bromochloromethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,1-Trichloroethane (TCA)	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1-Dichloropropene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Carbon Tetrachloride	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dichloroethane (EDC)	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Benzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Trichloroethene (TCE)	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dichloropropane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Bromodichloromethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Dibromomethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
2-Hexanone	ND		20	1	10/27/08	10/27/08	KWG0811472	
cis-1,3-Dichloropropene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	*
Toluene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
trans-1,3-Dichloropropene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,2-Trichloroethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
4-Methyl-2-pentanone (MIBK)	ND		20	- 1	10/27/08	10/27/08	KWG0811472	
1.3-Dichloropropane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
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**Comments:** 

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Analytical Results

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

 Service Request:
 K0810178

 Date Collected:
 10/14/2008

 Date Received:
 10/16/2008

#### **Volatile Organic Compounds**

Sample Name:	CSW-WA1-029	Units:	0
Lab Code:	K0810178-001	Basis:	
Extraction Method: Analysis Method:	EPA 5030B 8260B	Level:	Low

			Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	Factor	Extracted	Analyzed	Lot	Note
Tetrachloroethene (PCE)	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Dibromochloromethane	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dibromoethane (EDB)	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Chlorobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Ethylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
m,p-Xylenes	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
o-Xylene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Styrene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Bromoform	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Isopropylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2,3-Trichloropropane	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Bromobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
n-Propylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
2-Chlorotoluene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
4-Chlorotoluene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,3,5-Trimethylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
tert-Butylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2,4-Trimethylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
sec-Butylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,3-Dichlorobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
4-Isopropyltoluene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,4-Dichlorobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
n-Butylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dichlorobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	10/27/08	10/27/08	KWG0811472	*
1.2.4-Trichlorobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2,3-Trichlorobenzene	ND U	0.50	. 1	10/27/08	10/27/08	KWG0811472	
Naphthalene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Hexachlorobutadiene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,3,5-Trichlorobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
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\* See Case Narrative

#### Comments:

Merged

2 of 3

#### Analytical Results

Client:Environmental Chemistry Consulting ServiProject:Kuhlman ElectricSample Matrix:Water

 Service Request:
 K0810178

 Date Collected:
 10/14/2008

 Date Received:
 10/16/2008

#### **Volatile Organic Compounds**

Sample Name:	CSW-WA1-029
Lab Code:	K0810178-001

Units:	ug/I
<b>Basis</b> :	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	90	75-120	10/27/08	Acceptable
Toluene-d8	102	80-128	10/27/08	Acceptable
4-Bromofluorobenzene	82	75-117	10/27/08	Acceptable

**Comments:** 

Merged

Analytical Results

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

 Service Request:
 K0810178

 Date Collected:
 10/16/2008

#### **Volatile Organic Compounds**

Sample Name:	CSW-DUPLICATE	Units:	0
Lab Code:	K0810178-002	Basis:	
Extraction Method: Analysis Method:	EPA 5030B 8260B	Level:	Low

				Dilution	Date	Date Analyzed	Extraction Lot	Note
Analyte Name	Result	202000000000000000000000000000000000000	MRL	Factor	Extracted	and the second se	KWG0811472	INOLC
Dichlorodifluoromethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Chloromethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472 KWG0811472	
Vinyl Chloride	ND	U	0.50	1	10/27/08	10/27/08		
Bromomethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Chloroethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Trichlorofluoromethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Acetone	ND	U	20	1	10/27/08	10/27/08	KWG0811472	
1,1-Dichloroethene	1.3		0.50	1	10/27/08	10/27/08	KWG0811472	
Carbon Disulfide	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Methylene Chloride	ND	IJ	0,50	1	10/27/08	10/27/08	KWG0811472	
trans-1,2-Dichloroethene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1-Dichloroethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
· · · · · · · · · · · · · · · · · · ·	ND		20	1	10/27/08	10/27/08	KWG0811472	
2-Butanone (MEK)	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
2,2-Dichloropropane cis-1,2-Dichloroethene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
-			0.50	1	10/27/08	10/27/08	KWG0811472	
Chloroform	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Bromochloromethane	ND ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,1-Trichloroethane (TCA)					10/27/08	10/27/08	KWG0811472	
1,1-Dichloropropene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Carbon Tetrachloride	ND		0.50	1 1	10/27/08	10/27/08	KWG0811472	
1,2-Dichloroethane (EDC)	ND		0.50				KWG0811472	
Benzene	ND		0.50	1	10/27/08	10/27/08		
Trichloroethene (TCE)	ND		0.50	1	10/27/08	10/27/08	KWG0811472 KWG0811472	
1,2-Dichloropropane	ND	U	0.50	1	10/27/08	10/27/08		
Bromodichloromethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Dibromomethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
2-Hexanone	ND	U	20	1	10/27/08	10/27/08	KWG0811472	
cis-1,3-Dichloropropene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	*
Toluene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
trans-1,3-Dichloropropene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,2-Trichloroethane		) U	0.50	1	10/27/08	10/27/08	KWG0811472	
4-Methyl-2-pentanone (MIBK)		) U	20	1	10/27/08	10/27/08	KWG0811472	
1,3-Dichloropropane		) U	0.50	1	10/27/08	10/27/08	KWG0811472	
			···· ·					

#### **Comments:**

Merged

Form 1A - Organic

Analytical Results

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

Service Request: K0810178 Date Collected: Date Received: 10/16/2008

### **Volatile Organic Compounds**

Sample Name:	CSW-DUPLICATE	Units:	0
Lab Code:	K0810178-002	Basis:	
Extraction Method: Analysis Method:	EPA 5030B . 8260B	Level:	Low

				Dilution	Date	Date	Extraction	
Analyte Name	Result	Q	MRL	Factor	Extracted	Analyzed	Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Dibromochloromethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dibromoethane (EDB)	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Chlorobenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,1,2-Tetrachloroethane	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Ethylbenzene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
m,p-Xylenes	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
o-Xylene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Styrene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
Bromoform	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Isopropylbenzene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2,3-Trichloropropane	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Bromobenzene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
n-Propylbenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
2-Chlorotoluene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
4-Chlorotoluene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,3,5-Trimethylbenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
tert-Butylbenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2,4-Trimethylbenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
sec-Butylbenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,3-Dichlorobenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
4-Isopropyltoluene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,4-Dichlorobenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
n-Butylbenzene	. ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dichlorobenzene	ND		0.50	1	10/27/08	10/27/08	KWG0811472	
1,2-Dibromo-3-chloropropane	ND		2.0	1	10/27/08	10/27/08	KWG0811472	*
1,2,4-Trichlorobenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,2,3-Trichlorobenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Naphthalene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
Hexachlorobutadiene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,3,5-Trichlorobenzene	ND	U	0.50	1	10/27/08	10/27/08	KWG0811472	

\* See Case Narrative

**Comments:** 

Merged

Analytical Results

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

Service Request: K0810178 Date Collected: Date Received: 10/16/2008

## **Volatile Organic Compounds**

Sample Name:	CSW-DUPLICATE
Lab Code:	K0810178-002

Units:	ug/I
<b>Basis</b> :	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	75-120	10/27/08	Acceptable
Toluene-d8	102	80-128	10/27/08	Acceptable
4-Bromofluorobenzene	82	75-117	10/27/08	Acceptable

**Comments:** 

Merged

Form 1A - Organic

Analytical Results

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

Service Request: K0810178 Date Collected: NA Date Received: NA

#### **Volatile Organic Compounds**

Sample Name:	Method Blank	Units:	0
Lab Code:	KWG0811472-4	Basis:	
Extraction Method: Analysis Method:	EPA 5030B 8260B	Level:	Low

Analyte NameNC U0.50110/27/0810/27/08KWG0811472DichlorodifluoromethaneND U0.50110/27/0810/27/08KWG0811472Vinyl ChlorideND U0.50110/27/0810/27/08KWG0811472BromomethaneND U0.50110/27/0810/27/08KWG0811472ChloroethaneND U0.50110/27/0810/27/08KWG0811472ChloroethaneND U0.50110/27/0810/27/08KWG0811472TrichlorofluoromethaneND U0.50110/27/0810/27/08KWG0811472AcetoneND U0.50110/27/0810/27/08KWG0811472I,1-DichloroetheneND U0.50110/27/0810/27/08KWG0811472Carbon DisulfideND U0.50110/27/0810/27/08KWG0811472Methylene ChlorideND U0.50110/27/0810/27/08KWG0811472I,1-DichloroetheneND U0.50110/27/0810/27/08KWG0811472Z-Butanone (MEK)ND U0.50110/27/0810/27/08KWG08114722.2-DichloroetheneND U0.50110/27/0810/27/08KWG08114722.2-DichloroetheneND U0.50110/27/0810/27/08KWG08114722.2-DichloroetheneND U0.50110/27/0810/27/08KWG08114722.3-DichloroetheneND U0.5011				Dilution	Date	Date	Extraction	
Dichlorodillutoroniethane         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Chloromethane         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Vinyl Chloride         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Bromomethane         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Chloroethane         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Trichlorofluoromethane         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Acetone         ND U         0.50         1         10/27/08         KWG0811472           I,1-Dichloroethene         ND U         0.50         1         10/27/08         KWG0811472           Carbon Disulfide         ND U         0.50         1         10/27/08         KWG0811472           Methylene Chloride         ND U         0.50         1         10/27/08         KWG0811472           I,1-Dichloroethene         ND U         0.50         1         10/27/08         KWG0811472 <t< th=""><th>alyte Name</th><th>Result Q</th><th>MRL</th><th>Factor</th><th>Extracted</th><th>and the second se</th><th></th><th>Note</th></t<>	alyte Name	Result Q	MRL	Factor	Extracted	and the second se		Note
Chilorofinemate         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Bromomethane         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Chloroethane         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Chloroethane         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Trichlorofluoromethane         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Acetone         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           1,1-Dichloroethene         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Carbon Disulfide         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Methylene Chloride         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           1,1-Dichloroethene         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           2Butanone (MEK)         ND_U         0.50	chlorodifluoromethane	ND U	0.50	1				
Vinyi Chloride         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Bromomethane         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Chloroethane         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Trichlorofluoromethane         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           Acetone         ND_U         0.50         1         10/27/08         10/27/08         KWG0811472           1,1-Dichloroethene         ND_U         0.50         1         10/27/08         KWG0811472           Carbon Disulfide         ND_U         0.50         1         10/27/08         KWG0811472           Methylene Chloride         ND_U         0.50         1         10/27/08         KWG0811472           I,1-Dichloroethene         ND_U         0.50         1         10/27/08         KWG0811472           Z-Buchloroethene         ND_U         0.50         1         10/27/08         KWG0811472           1,1-Dichloroethene         ND_U         0.50         1         10/27/08         KWG0811472           2-Butanone (MEK)	loromethane	ND U	0.50	1				
BromomethaneNDU0.50110/27/08KWG0811472ChloroethaneNDU0.50110/27/08KWG0811472TrichlorofluoromethaneNDU0.50110/27/08KWG0811472AcetoneNDU20110/27/0810/27/08KWG08114721,1-DichloroetheneNDU0.50110/27/0810/27/08KWG0811472Carbon DisulfideNDU0.50110/27/0810/27/08KWG0811472Methylene ChlorideNDU0.50110/27/0810/27/08KWG0811472I,1-DichloroetheneNDU0.50110/27/0810/27/08KWG0811472Methylene ChlorideNDU0.50110/27/0810/27/08KWG0811472I,1-DichloroetheneNDU0.50110/27/0810/27/08KWG0811472J,1-DichloroetheneNDU0.50110/27/0810/27/08KWG0811472J,2-DichloroetheneNDU0.50110/27/0810/27/08KWG08114722Butanone (MEK)NDU20110/27/0810/27/08KWG08114722.2-DichloropropaneNDU0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneNDU0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneNDU0.50110/27/0810/27/08 <t< td=""><td></td><td>ND U</td><td>0.50</td><td>1</td><td>10/27/08</td><td>10/27/08</td><td>KWG0811472</td><td></td></t<>		ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Chloroethane         ND U         0.50         1         10/27/08         KWG0811472           Trichlorofluoromethane         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Acetone         ND U         20         1         10/27/08         10/27/08         KWG0811472           1,1-Dichloroethene         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Carbon Disulfide         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Methylene Chloride         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           I,1-Dichloroethene         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           Methylene Chloride         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           1,1-Dichloroethane         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           2-Butanone (MEK)         ND U         0.50         1         10/27/08         10/27/08         KWG0811472           2,2-Dichloropropane         ND U         0.50         1	omomethane	ND U	0.50	1				
IncluiorNDU0.00110/27/0810/27/08KWG0811472AcetoneNDU0.50110/27/0810/27/08KWG08114721,1-DichloroetheneNDU0.50110/27/0810/27/08KWG0811472Carbon DisulfideNDU0.50110/27/0810/27/08KWG0811472Methylene ChlorideNDU0.50110/27/0810/27/08KWG0811472trans-1,2-DichloroetheneNDU0.50110/27/0810/27/08KWG08114721,1-DichloroethaneNDU0.50110/27/0810/27/08KWG08114722-Butanone (MEK)NDU20110/27/0810/27/08KWG08114722,2-DichloropropaneNDU0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneNDU0.50110/27/0810/27/08KWG0811472		ND U	0.50	1				
AcceloneND U20110/27/0810/27/08KWG08114721,1-DichloroetheneND U0.50110/27/0810/27/08KWG0811472Carbon DisulfideND U0.50110/27/0810/27/08KWG0811472Methylene ChlorideND U0.50110/27/0810/27/08KWG0811472trans-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG08114721,1-DichloroetheneND U0.50110/27/0810/27/08KWG08114722-Butanone (MEK)ND U20110/27/0810/27/08KWG08114722,2-DichloropropaneND U0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG0811472	chlorofluoromethane	ND U	0.50	1	10/27/08	10/27/08		
1,1-DichloroetheneND U0.50110/27/0810/27/08KWG0811472Carbon DisulfideND U0.50110/27/0810/27/08KWG0811472Methylene ChlorideND U0.50110/27/0810/27/08KWG0811472trans-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG08114721,1-DichloroethaneND U0.50110/27/0810/27/08KWG08114722-Butanone (MEK)ND U20110/27/0810/27/08KWG08114722,2-DichloropropaneND U0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG0811472	etone	ND U	20	1				
Carbon DisulfideND U0.50110/27/0810/27/08KWG0811472Methylene ChlorideND U0.50110/27/0810/27/08KWG0811472trans-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG08114721,1-DichloroethaneND U0.50110/27/0810/27/08KWG08114722-Butanone (MEK)ND U20110/27/0810/27/08KWG08114722,2-DichloropropaneND U0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG0811472		ND U	0.50	1	10/27/08			
Methylehe Chloride     ND     U     0.50     1     10/27/08     KWG0811472       trans-1,2-Dichloroethene     ND     U     0.50     1     10/27/08     KWG0811472       1,1-Dichloroethane     ND     U     0.50     1     10/27/08     KWG0811472       2-Butanone (MEK)     ND     U     20     1     10/27/08     10/27/08     KWG0811472       2,2-Dichloropropane     ND     U     0.50     1     10/27/08     10/27/08     KWG0811472       cis-1,2-Dichloroethene     ND     U     0.50     1     10/27/08     10/27/08     KWG0811472		ND U	0.50	1	10/27/08	10/27/08		
trans-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG08114721,1-DichloroethaneND U0.50110/27/0810/27/08KWG08114722-Butanone (MEK)ND U20110/27/0810/27/08KWG08114722,2-DichloropropaneND U0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG0811472	thylene Chloride	ND U	0.50	1	10/27/08			
1,1-DichloroethaneND U0.50110/27/0810/27/08KWG08114722-Butanone (MEK)ND U20110/27/0810/27/08KWG08114722,2-DichloropropaneND U0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG0811472		ND U	0.50	1	10/27/08			
2-Butanole (MEK)     ND U     20     1     10/27/08     10/27/08     KWG0811472       2,2-Dichloropropane     ND U     0.50     1     10/27/08     10/27/08     KWG0811472       cis-1,2-Dichloroethene     ND U     0.50     1     10/27/08     10/27/08     KWG0811472		ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
2,2-DichloropropaneND U0.50110/27/0810/27/08KWG0811472cis-1,2-DichloroetheneND U0.50110/27/0810/27/08KWG0811472	Butanone (MEK)	ND U	20	1	10/27/08			
cis-1,2-Dichloroethene ND U 0.50 1 10/27/08 10/27/08 KWG0811472		ND U	0.50	1	10/27/08			
Chloroform ND U 0.50 1 10/27/08 10/27/08 KWG0811472	* *	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
	loroform	ND U	0.50	1				
Bromochloromethane ND U 0.50 1 10/27/08 10/27/08 KWG0811472		ND U	0.50	1				
1,1,1-Trichloroethane (TCA) ND U 0.50 1 10/27/08 KWG0811472		ND U	0.50	1	10/27/08	10/27/08		
1,1-Dichloropropene ND U 0.50 1 10/27/08 10/27/08 KWG0811472	-Dichloropropene	ND U	0.50	1				
Carbon Tetrachloride ND U 0.50 1 10/27/08 KWG0811472		ND U	0.50	1				
1,2-Dichloroethane (EDC) ND U 0.50 1 10/27/08 KWG0811472	2-Dichloroethane (EDC)	ND U	0.50	1	10/27/08	10/27/08		
Benzene ND U 0.50 1 10/27/08 10/27/08 KWG0811472	nzene	ND U	0.50	1	10/27/08			
Trichloroethene (TCE) ND U 0.50 1 10/27/08 10/27/08 KWG0811472		ND U	0.50	1	10/27/08			
1,2-Dichloropropane ND U 0.50 1 10/27/08 KWG0811472		ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Bromodichloromethane ND U 0.50 1 10/27/08 KWG0811472	omodichloromethane	ND U	0.50	1				
Dibromomethane ND U 0.50 1 10/27/08 KWG0811472		ND U	0.50	1	10/27/08			
2-Hexanone ND U 20 1 10/27/08 KWG0811472		ND U	20	1	10/27/08	10/27/08		
cis-1.3-Dichloropropene ND U 0.50 I 10/2//08 10/2//08 KWGGG1472	-1.3-Dichloropropene	ND U	0.50	1	10/27/08			*
Toluene ND U 0.50 1 10/27/08 10/27/08 KWG0811472		ND U	0.50	1				
trans-1,3-Dichloropropene ND U 0.50 1 10/27/08 KWG0811472		ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1.1.2-Trichloroethane ND U 0.50 1 10/27/08 KWG0811472		ND U	0.50	1				
4-Methyl-2-pentanone (MIBK) ND U 20 1 10/27/08 KWG0811472			20	1				
1,3-Dichloropropane ND U 0.50 1 10/27/08 KWG0811472		ND U	0.50	1	10/27/08	10/27/08	KWG0811472	

#### Comments:

Merged

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#### Analytical Results

Client: Project: Sample Matrix:	Environmental Chemistry Consulting Servi Kuhlman Electric Water	~15	Service Request: Date Collected: Date Received:	NA
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### **Volatile Organic Compounds**

Sample Name:	Method Blank	Units:	NA
Lab Code:	KWG0811472-4	Basis:	
Extraction Method: Analysis Method:	EPA 5030B 8260B	Level:	Low

			Dilution	Date	Date Analyzed	Extraction Lot	Note
Analyte Name	Result Q	and the second	Factor	Extracted	monocommenter and a second	KWG0811472	11010
Tetrachloroethene (PCE)	ND U	0.50	1	10/27/08	10/27/08 10/27/08	KWG0811472	
Dibromochloromethane	ND U		1	10/27/08		KWG0811472 KWG0811472	
1,2-Dibromoethane (EDB)	ND U	0,50	1	10/27/08	10/27/08		
Chlorobenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
Ethylbenzene	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
m,p-Xylenes	ND U	0.50	1	10/27/08	10/27/08	KWG0811472	
o-Xylene	ND U		1	10/27/08	10/27/08	KWG0811472	
Styrene	ND U		1	10/27/08	10/27/08	KWG0811472	
	ND U		1	10/27/08	10/27/08	KWG0811472	
Bromoform	ND U		1	10/27/08	10/27/08	KWG0811472	
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND U		1	10/27/08	10/27/08	KWG0811472	
	ND U		1	10/27/08	10/27/08	KWG0811472	
1,2,3-Trichloropropane	ND U ND U		1	10/27/08	10/27/08	KWG0811472	
Bromobenzene	ND U ND U		1	10/27/08	10/27/08	KWG0811472	
n-Propylbenzene			1	10/27/08	10/27/08	KWG0811472	
2-Chlorotoluene	ND U		1	10/27/08	10/27/08	KWG0811472	
4-Chlorotoluene	ND U		1	10/27/08	10/27/08	KWG0811472	
1,3,5-Trimethylbenzene	ND U				10/27/08	KWG0811472	
tert-Butylbenzene	ND U		1	10/27/08	10/27/08	KWG0811472	
1,2,4-Trimethylbenzene	ND U		1	10/27/08	10/27/08	KWG0811472	
sec-Butylbenzene	ND L	J 0.50	1	10/27/08			
1.3-Dichlorobenzene	ND U		1	10/27/08	10/27/08	KWG0811472 KWG0811472	
4-Isopropyltoluene	ND U		1	10/27/08	10/27/08		
1,4-Dichlorobenzene	ND U	J 0.50	1	10/27/08	10/27/08	KWG0811472	
n-Butylbenzene	ND U	J 0.50	1	10/27/08	10/27/08	KWG0811472	
1.2-Dichlorobenzene	ND U		1	10/27/08	10/27/08	KWG0811472	
1,2-Dibromo-3-chloropropane	ND U		1	10/27/08	10/27/08	KWG0811472	*
1.2.4-Trichlorobenzene	ND U		1	10/27/08	10/27/08	KWG0811472	
1,2,3-Trichlorobenzene	ND U	<del>.</del>	1	10/27/08	10/27/08	KWG0811472	
Naphthalene	ND U		1	10/27/08	10/27/08	KWG0811472	
	ND U		1	10/27/08	10/27/08	KWG0811472	
Hexachlorobutadiene	ND U ND U	-	1	10/27/08	10/27/08	KWG0811472	
1,3,5-Trichlorobenzene		0.50	*				

\* See Case Narrative

Comments:

Merged

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Analytical Results

Client:Environmental Chemistry Consulting ServiProject:Kuhlman ElectricSample Matrix:Water

Service Request: K0810178 Date Collected: NA Date Received: NA

## **Volatile Organic Compounds**

Sample Name: Lab Code:	Method Blank KWG0811472-4	Units: Basis:	•

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	89	75-120	10/27/08	Acceptable
Toluene-d8	100	80-128	10/27/08	Acceptable
4-Bromofluorobenzene	83	75-117	10/27/08	Acceptable

Comments:

Merged

#### QA/QC Report

Client:Environmental Chemistry Consulting ServiProject:Kuhlman ElectricSample Matrix:Water

Service Request: K0810178

#### Surrogate Recovery Summary Volatile Organic Compounds

<b>Extraction Method:</b>	EPA 5030B
Analysis Method:	8260B

Units: PERCENT Level: Low

Sample Name	Lab Code	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>
CSW-WA1-029	K0810178-001	90	102	82
CSW-DUPLICATE	K0810178-002	92	102	82
Method Blank	KWG0811472-4	89	100	83
Batch QC	K0810166-013	90	101	82
Batch QCMS	KWG0811472-1	94	104	85
Batch QCDMS	KWG0811472-2	94	104	85
Lab Control Sample	KWG0811472-3	97	105	85

Surrogate Recovery Control Limits (%)

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

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

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

QA/QC Report

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

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

Sample Name:	Batch QC	Units:	
Lab Code:	K0810166-013	Basis:	
Extraction Method:	EPA 5030B	Level:	
Analysis Method:	8260B	Extraction Lot:	

	Sample	K۷	atch QCMS VG0811472- Matrix Spike	1	KV	ntch QCDMS VG0811472-2 cate Matrix S	2	%Rec		RPD
Analyte Name	Result	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	ND	94.4	100	94	108	100	108	67-147	14	30
· · · · · · · · · · · · · · · · · · ·	ND	85.3	100	85	95.0	100	95	69-126	11	30
Benzene	ND	83.3	100	83	94.5	100	95	56-137	13	30
Trichloroethene (TCE)	ND	83.5	100	84	92.9	100	93	66-128	11	30
Toluene	ND	87.8	100	88	95.1	100	95	68-120	8	30
Chlorobenzene	ND	87.5	100	83	86.7	100	87	67-116	5	30
1,2-Dichlorobenzene Naphthalene	ND	82.3	100	80	82.1	100	82	61-137	2	30

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

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

1 of 1

Service Request: K0810178

Date Extracted:10/27/2008Date Analyzed:10/27/2008

#### QA/QC Report

Client:Environmental Chemistry Consulting ServiProject:Kuhlman ElectricSample Matrix:Water

#### Lab Control Spike Summary Volatile Organic Compounds

<b>Extraction Method:</b>	EPA 5030B
Analysis Method:	8260B

Units:	ug/L
<b>Basis</b> :	NA
Level:	Low
<b>Extraction Lot:</b>	KWG0811472

Service Request: K0810178

Date Extracted: 10/27/2008

Date Analyzed: 10/27/2008

	Lab Control Sample KWG0811472-3 Lab Control Spike			%Rec
Analyte Name	Result	Expected	%Rec	Limits
Dichlorodifluoromethane	6.34	10.0	63	21-156
Chloromethane	6.04	10.0	60	45-135
Vinyl Chloride	8.45	10.0	85	59-135
Bromomethane	9.80	10.0	98	24-144
Chloroethane	7.32	10.0	73	60-128
Trichlorofluoromethane	8.70	10.0	87	54-129
Acetone	37.7	50.0	75	53-129
1,1-Dichloroethene	8.78	10.0	88	70-136
Carbon Disulfide	13.5	20.0	68	64-129
Methylene Chloride	8.72	10.0	87	64-137
trans-1,2-Dichloroethene	8.65	10.0	87	70-121
1,1-Dichloroethane	7.58	10.0	76	72-122
2-Butanone (MEK)	37.7	50.0	75	56-137
2,2-Dichloropropane	6.21	10.0	62	48-133
cis-1,2-Dichloroethene	8.22	10.0	82	76-125
Chloroform	8.17	10.0	82	71-118
Bromochloromethane	8.21	10.0	82	72-123
1,1,1-Trichloroethane (TCA)	7.56	10.0	76	65-126
1,1-Dichloropropene	7.80	10.0	78	71-119
Carbon Tetrachloride	7.30	10.0	73	58-133
1,2-Dichloroethane (EDC)	8.20	10.0	82	69-125
Benzene	8.11	10.0	81	74-118
Trichloroethene (TCE)	8.07	10.0	81	71-122
1,2-Dichloropropane	7.52	10.0	75	73-123
Bromodichloromethane	7.52	10.0	75	72-127
Dibromomethane	7.28	10.0	73	71-124
2-Hexanone	31.0	50.0	62	44-135
cis-1,3-Dichloropropene	6.59	10.0	66 *	71-125
Toluene	8.04	10.0	80	74-117
trans-1,3-Dichloropropene	5.72	10.0	57	56-121
1.1.2-Trichloroethane	8.02	10.0	80	73-122
4-Methyl-2-pentanone (MIBK)	33.0	50.0	66	57-129
1,3-Dichloropropane	8.24	10.0	82	74-120
Tetrachloroethene (PCE)	9.19	10.0	92	65-121
Dibromochloromethane	7.45	10.0	75	67-124
Dioioniochioromethane	1.15			

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

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QA/QC Report

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

#### Lab Control Spike Summary Volatile Organic Compounds

<b>Extraction Method:</b>	EPA 5030B
Analysis Method:	8260B

Units: ug/L Basis: NA Level: Low Extraction Lot: KWG0811472

Service Request: K0810178

**Date Extracted:** 10/27/2008 **Date Analyzed:** 10/27/2008

	Lab Control Sample KWG0811472-3 Lab Control Spike		%Rec	
Analyte Name	Result	Expected	%Rec	Limits
1,2-Dibromoethane (EDB)	8.00	10.0	80	71-120
Chlorobenzene	8.44	10.0	84	74-115
1,1,1,2-Tetrachloroethane	7.72	10.0	77	71-118
Ethylbenzene	8.50	10.0	85	71-118
m,p-Xylenes	17.1	20.0	86	73-119
o-Xylene	8.12	10.0	81	74-120
Styrene	7.92	10.0	79	75-123
Bromoform	5.83	10.0	58	57-135
Isopropylbenzene	7.53	10.0	75	65-110
1,1,2,2-Tetrachloroethane	7.14	10.0	71	63-126
1,2,3-Trichloropropane	7.52	10.0	75	67-123
Bromobenzene	8.35	10.0	84	76-111
n-Propylbenzene	7.97	10.0	80	69-122
2-Chlorotoluene	7.86	10.0	79	72-120
4-Chlorotoluene	7.66	10.0	77	70-118
1,3,5-Trimethylbenzene	7.91	10.0	79	70-120
tert-Butylbenzene	7.77	10.0	78	72-118
1,2,4-Trimethylbenzene	7.94	10.0	79	72-121
sec-Butylbenzene	7.70	10.0	77	73-130
1.3-Dichlorobenzene	8.13	10.0	81	76-110
4-Isopropyltoluene	7.63	10.0	76	67-115
1,4-Dichlorobenzene	7.97	10.0	80	74-112
n-Butylbenzene	7.81	10.0	78	62-123
1,2-Dichlorobenzene	8.10	10.0	81	75-110
1,2-Dibromo-3-chloropropane	5.75	10.0	58	49-124
1,2,4-Trichlorobenzene	8.20	10.0	82	66-115
1,2,3-Trichlorobenzene	8.66	10.0	87	64-120
	7.59	10.0	76	58-132
Naphthalene Hexachlorobutadiene	8.34	10.0	83	61-124
	39.2	40.0	98	46-133
1,3,5-Trichlorobenzene	37.2	<b>H</b> U.U	20	10 100

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

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#### Analytical Results

Client:	Environmental Chemistry Consulting Servi	Service Request:	K0810178
Project:	Kuhlman Electric	<b>Date Collected:</b>	10/14/2008
Sample Matrix:	Water	Date Received:	10/16/2008

## 1,4-Dioxane by GC/MS

Sample Name: Lab Code:	CSW-WA1-029 K0810178-001					Units: ug/L Basis: NA	
Extraction Method: Analysis Method:	EPA 3510C 8270C SIM				]	Level: Low	
			Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	Factor	Extracted	Analyzed	Lot	Note
Analyte Name 1,4-Dioxane	Result Q 0.75	<b>MRL</b> 0.50					Note

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
1,4-Dioxane-d8	75	55-100	10/29/08	Acceptable	

Comments:

#### Analytical Results

Client:	Environmental Chemistry Consulting Servi	Service Request:	K0810178
Project:	Kuhlman Electric	Date Collected:	
Sample Matrix:	Water	Date Received:	10/16/2008

## 1,4-Dioxane by GC/MS

Sample Name: Lab Code:	CSW-DUPLICATE K0810178-002					<b>Units:</b> ug/L <b>Basis:</b> NA	
Extraction Method: Analysis Method:	EPA 3510C 8270C SIM				]	Level: Low	
Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,4-Dioxane	0.79	0.50	feed.	10/21/08	10/29/08	KWG0811207	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Dioxane-d8	75	55-100	10/29/08	Acceptable

Comments:

1 of 1

#### Analytical Results

Client:	Environmental Chemistry Consulting Servi	Service Request:	K0810178
Project:	Kuhlman Electric	<b>Date Collected:</b>	NA
Sample Matrix:	Water	Date Received:	NA

## 1,4-Dioxane by GC/MS

Sample Name: Lab Code:	Method Blank KWG0811207-7						Units: ug/L Basis: NA	
Extraction Method: Analysis Method:	EPA 3510C 8270C SIM					]	Level: Low	
Analyte Name	Result	Q	MRL	<b>Dilution</b> Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,4-Dioxane	ND	U	0.50	1	10/21/08	10/29/08	KWG0811207	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Dioxane-d8	85	55-100	10/29/08	Acceptable

#### Comments:

QA/QC Report

Client:Environmental Chemistry Consulting ServiProject:Kuhlman ElectricSample Matrix:Water

#### Service Request: K0810178

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

<b>Extraction Me</b>	ethod:	EPA 3510C	
Analysis Meth	od:	8270C SIM	

Units: PERCENT Level: Low

Sample Name	Lab Code	<u>Sur1</u>
CSW-WA1-029	K0810178-001	75
CSW-DUPLICATE	K0810178-002	75
Method Blank	KWG0811207-7	85
CSW-DUPLICATEMS	KWG0811207-1	79
CSW-DUPLICATEDMS	KWG0811207-2	80
Lab Control Sample	KWG0811207-3	80

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Dioxane-d8

55-100

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

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

Form 2A - Organic

#### QA/QC Report

Client:Environmental Chemistry Consulting ServiProject:Kuhlman ElectricSample Matrix:Water

 Service Request:
 K0810178

 Date Extracted:
 10/21/2008

 Date Analyzed:
 10/29/2008

#### Matrix Spike/Duplicate Matrix Spike Summary 1,4-Dioxane by GC/MS

Sample Name: Lab Code:	CSW-DUPLICATE K0810178-002							Units: Basis:	-	
Extraction Method: Analysis Method:	EPA 3510C 8270C SIM						Extract	Level: ion Lot:	Low KWG08	311207
	Sample	CSW-DUPLICATEMS KWG0811207-1 Matrix Spike		KV	DUPLICATE VG0811207-2 cate Matrix S	2	%Rec		RPD	
Analyte Name	Result	Result	Expected	%Rec	Result	Expected	%Rec	Limits		Limit
1,4-Dioxane	0.79	17.0	25.0	65	17.4	25.0	66	53-105	2	30

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

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

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

1 of 1

QA/QC Report

Client:Environmental Chemistry Consulting ServiProject:Kuhlman ElectricSample Matrix:Water

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

Extraction Method: Analysis Method:		Units: Basis:	0
		Level:	Low
		Extraction Lot:	KWG0811207
	Lab Control Sample		

	KW Lab		%Rec	
Analyte Name	Result	Expected	%Rec	
1,4-Dioxane	16.7	25.0	67	56-107

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 of 1

Service Request: K0810178

Date Extracted: 10/21/2008

Date Analyzed: 10/29/2008