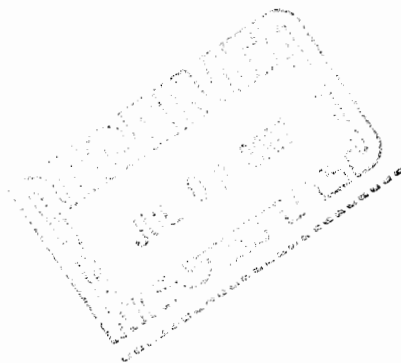


June 1, 2007

Robert Martin  
Martin and Slagle  
P.O. Box 1023  
Black Mountain, NC 28711



Dear Mr. Martin,

Enclosed is the Technical Memorandum for VOC work recently performed at the Kuhlman Electric Corporation (KEC) facility in Crystal Springs, MS. If you have any questions concerning this information, give me a call.

Sincerely,

*fa* Joseph Kubale

Enclosure

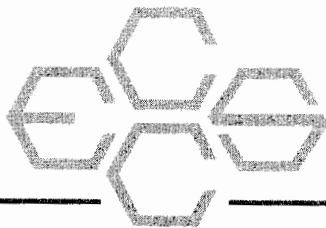
Environmental Chemistry Consulting Services, Inc.

2525 Advance Road • Madison, WI 53718 • Phone (608) 221-8700 • FAX (608) 221-4889

**Technical Memorandum**

**Kuhlman Electric Corporation (KEC)**

**Crystal Springs, Mississippi**



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## TECHNICAL MEMORANDUM

June 1, 2007

To: Robert Martin  
Martin and Slagle

From: Joseph Kubale *JK*  
ECCS

Re: Field Analytical Methods  
1,4-Dioxane  
Kuhlman Electric Corporation (KEC)  
Crystal Springs, MS

### Introduction

This Technical Memorandum provides documentation of the field analytical test methods used to analyze well water samples collected September 21, 2006 near the Kuhlman Electric Corporation (KEC) facility in Crystal Springs, MS. The samples were analyzed direct injection GC/MSD/SIM for the 1,4-Dioxane.

### Narrative

#### Waters

Water samples were analyzed for 1,4-Dioxane by direct injection GC/MSD/SIM.

The report limit for 1,4-Dioxane is 5.0 $\mu$ g/L for water samples.

A summary of test results is provided in Table 1. A summary of method blanks and matrix spike/matrix spike duplicate data is provided in Table 2.

In addition copies of the chain of custody sheets can be found in appendix A.

## 1,4-Dioxane Method Summary

### Water Samples

Water samples were provided by the client to the field lab in 40mL VOC vials. A 0.8mL aliquot of the sample was spiked with internal standard/surrogate solution and analyzed by direct inject GC/MSD/SIM.

### GC/MSD Procedure:

Identification of the target compound was done by matching retention times, quantitation and qualifier ion relative responses to that of an authentic standard. Quantitation is accomplished by comparing the response of the major (quantitation) ion relative to an internal standard using a seven point calibration curve. These levels equate to 0.5, 1.0, 2.5, 5.0, 10, 50 and 100 µg/L for water samples.

A Hewlett-Packard 5890 Series II gas chromatograph with a 30m x 0.32mm 1.8µ film, RTX-624 micro-capillary column interfaced to a Hewlett-Packard 5972 MSD was used. The data system included a Hewlett-Packard Enviroquant chromatography workstation for data handling.

Quality control consisted of the following items:

- Initial calibration with % relative standard deviation less than 15% of individual response factors obtained from analysis of calibration standards
- Continuing Calibration Verification standards analyzed at a frequency of every ten samples
- Surrogate standard additions to samples
- Blank samples analyzed at a minimum of one per day
- Matrix spike and Matrix Spike Duplicate samples analyzed for every twenty samples
- Information documented in Field Logbook 150.

**Table 1**

**Sample Results – September'06**

TABLE 1  
Kuhlman Electric - Crystal Springs, Mississippi - Volatiles Detected in Water

VOLATILES	Depth	Date Collected	Time Collected	Date Analyzed	Reporting Limit ug/L	W1696		W1710		W1711		W1712		W1714		W1715		W1716		W1717	
						CSW	FB	CSW	WA1	CSW	WA2	CSW	WA3	CSW	WA8	CSW	Dup	CSW	TP	CSW	Dup
		21-Sep-06	10:55	21-Sep-06																	
		22-Sep-06		22-Sep-06																	
1,4-Dioxane	5.0					< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Surrogates:																					
1,4-Dioxane-D8	%					96.4	99.7	104	102	87.5	89.2	96.8	90.4								

**Table 2**

**QC Results -- September'06**

TABLE 2  
QC Report

Lab # associated with qc samples: W1696 and  
W1710 through W1712  
Matrix W1714 through W1717

Matrix Spike Duplicate Blank LCS  
W1712 W1712

Date Analyzed: 09/22/06 09/22/06 09/22/06

Compound	% Rec		% Rec	RPD			ug/L
1,4-Dioxane	72.6%		76.8%	5.6%			< 5.0



## **Appendix A**

### **Chain of Custody Sheets for Samples**



**Environmental Chemistry  
Consulting Services, Inc.**

2525 Advance Road  
Madison, WI 53718  
Phone 608-221-8700 FAX 608-221-4889

**CHAIN OF CUSTODY**

No. **012487** \*  
Page 1 of 1

Turn Around (circle one) Normal Rush  
Report Due:

Project Number: \_\_\_\_\_  
 Project Name: **KUHLMAN ELECTRIC**  
 Project Location: **CPYSTAC SPRINGS, MS**  
 Sampled By (Print): **CHUCK PERL**  
 Mail Report To: \_\_\_\_\_  
 Company: **MARTIN & SCAGB**  
 Address: \_\_\_\_\_  
 P.O. No.: \_\_\_\_\_ Quote No.: \_\_\_\_\_

Sample Description	Collection		Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
	Date	Time						
CSW-FB-004	5/26/06	1055	W	4	A	8260B/1,4-DIOXANE		W1696
CSW-WA1-004	5/26/06	1030						W1710
CSW-WA2-004	5/26/06	1050						W1711
CSW-WA3-004	5/26/06	0820						W1712
<del>CSW-WA4-004</del>							NOZ SAND PAPER POWDER WORK	<del>W1713</del>
CSW-WA8-004	5/26/06	0910						W1714
CSW-DUPPLICATE-001	5/26/06	-						W1715
CSW-TP-004	5/26/06	1130						W1716
CSW-DUPPLICATE-002	5/26/06	-						W1717
TRIP BCAR	-	-						W1718

\*Preservation Code  
 A=None B=HCL C=H2SO4  
 D=HNO3 E=EnCore F=Methanol  
 G=NaOH O=Other(Indicate)

Relinquished By: **Charles O. Perl** Date/Time: **9/16/06 1230**  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: **R. Polon 215E06** Date/Time: **1230**  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Receipt Temp: \_\_\_\_\_  
 Temp Blank Y N

Custody Seal: Present/Absent Seal #s \_\_\_\_\_  
 Shipped Via: \_\_\_\_\_