September 24, 2008

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,

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

TECHNICAL MEMORANDUM

September 24, 2008

To: Robert Martin
Martin and Slagle

From: Joseph Kubale
ECCS

Re: Analytical Methods
Volatile Organic Compounds (VOC) , 1,4-Dioxane
Kuhlman Electric Corporation (KEC)
Crystal Springs, MS

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Introduction

This Technical Memorandum provides documentation of the analytical test methods used to analyze water samples collected in September 2008 during the city well groundwater sampling event near the Kuhlman Electric Corporation (KEC) facility in Crystal Springs, MS. The samples were analyzed by purge and trap GC/MSD for the VOCs listed below and by direct injection GC/MSD/SIM for 1,4-Dioxane.

Narrative

Waters
Water samples were analyzed for VOCs directly by purge and trap GC/MSD and for 1,4-Dioxane by direct injection GC/MSD/SIM.

The following report limits were used for water samples. The reporting limit units are in ug/L.

	Purge and Trap GC/MSD
Dichlorodifluoromethane	1.0
Chloromethane	1.0
Vinyl chloride	1.0
Bromomethane	1.0
Chloroethane	1.0
Trichlorofluoromethane	1.0

1,1-Dichloroethene	1.0
Methylene chloride	1.0
trans-1,2-Dichloroethene	1.0
1,1-Dichloroethane	1.0
cis-1,2-Dichloroethene	1.0
2,2-Dichloropropane	1.0
Bromochloromethane	1.0
Chloroform	1.0
1,1,1-Trichloroethane	1.0
1,1-Dichloropropene	1.0
Carbon tetrachloride	1.0
Benzene	1.0
1,2-Dichloroethane	1.0
Trichloroethene	1.0
1,2-Dichloropropane	1.0
Dibromomethane	1.0
Bromodichloromethane	1.0
cis-1,3-Dichloropropene	1.0
Toluene	1.0
trans-1,3-Dichloropropene	1.0
1,1,2-Trichloroethane	1.0
Tetrachloroethene	1.0
1,3-Dichloropropane	2.0
Dibromochloromethane	1.0
1,2-Dibromoethane	1.0
Chlorobenzene	1.0
1,1,1,2-Tetrachloroethane	1.0
Ethyl benzene	1.0
Xylenes, total	2.0
Styrene	1.0
Bromoform	2.0
Isopropylbenzene	1.0
1,1,2,2-Tetrachloroethane	2.0
Bromobenzene	1.0
1,2,3-Trichloropropane	2.0
n-Propylbenzene	1.0
2-Chlorotoluene	1.0
1,3,5-Trimethylbenzene	1.0
4-Chlorotoluene	1.0
tert-Butylbenzene	1.0
1,2,4-Trimethylbenzene	1.0
sec-Butylbenzene	1.0
1,3-Dichlorobenzene	1.0
p-Isopropyltoluene	1.0
1,4-Dichlorobenzene	1.0
n-Butylbenzene	1.0
1,2-Dichlorobenzene	1.0
1,2-Dibromo-3-chloropropane	2.0
1,3,5-Trichlorobenzene	1.0
1,2,4-Trichlorobenzene	1.0
Hexachlorobutadiene	1.0

	Purge and Trap GC/MSD
Naphthalene	3.0
1,2,3-Trichlorobenzene	1.0
	Direct Injection GC/MSD/SIM
1,4-Dioxane	1.0

A summary of volatile test results is provided in Table 1. A summary of 1,4-Dioxane results is provided in table 2. A summary of method blanks and matrix spike/matrix spike duplicate data is provided in Table 3 and 4, respectively.

In addition copies of the chain of custody sheets and shipping sheets can be found in appendix A through C.

A) Chain of custody sheets for samples
B) FEDEX shipping label for Columbia Analytical Services, Inc.
C) Chain of custody sheets for samples sent to Columbia Analytical Services, Inc.

VOC Method Summary

Water Samples

Water samples were provided by the client to the lab in 40mL VOC vials. A 10mL aliquot of the sample was withdrawn from the vial with a 10mL Luer-Lok ™ syringe. 10 µL of a 25µg/mL surrogate and internal standard solution was added to the sample in the 10 mL syringe. The sample was then immediately loaded onto a Tekmar ALS 2016 autosampler with a Tekmar LSC 2000 purge and trap concentrator for GC\MSD analysis.

GC/MSD Procedure:

Identification of target compounds was done by matching retention times and mass spectra of peaks found in samples to those found in a VOC calibration standard using the internal standards as time reference peaks. Quantitation was performed by the internal standard technique using a seven point standard curve generated from 5, 10, 20, 50, 100, 250, and 500 ng standards. These levels equate to 0.5, 1.0, 2.0, 5.0, 10, 25 and 50 µg/L for water samples.

A Hewlett-Packard 5890 gas chromatograph with a 30m x 0.32mm 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 or less
- Surrogate standard additions to samples
- Blank and LCS samples analyzed every twenty samples or less with a minimum of one per day per matrix.
- MS/MSD samples analyzed every twenty samples or less per matrix.
- Information documented in Logbook 150.

1,4-Dioxane Method Summary

Water Samples

Water samples were provided by the client to the lab in 1L amber bottle. 200 grams of sample was transferred to the filtering apparatus, spiked with 40uL 25ug/mL surrogate solution and 40uL 25ug/mL spike solution (if necessary) then filtered through a 3M 2272 activated carbon disk. The activated carbon disk was placed in a 3 dram vial containing 8mL methanol and sonicated for 15 minutes. A 0.8mL aliquot of the sample extract was spiked with 10uL 25ug/mL internal standard solution and analyzed by direct inject GC/MSD/SIM.

GC/MSD Procedure:

Identification of the target compound was done by matching retention times, quantitaion 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 in internal standard using a seven point calibration curve. These levels equate to 0.5, 1.0, 2.5, 5.0, 10, 50 and 100 ug/L for water samples.

A Hewlett-Packard 5890 Series II gas chromatograph with a 30m x 0.32mm 1.8u 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 or less
- Surrogate standard additions to samples
- Blank and LCS samples analyzed every twenty samples or less with a minimum of one per day per matrix.
- MS/MSD samples analyzed every twenty samples or less per matrix.
- Information documented in Logbook 196.

Table 1

Sample Results Volatiles– September

TABLE 1

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

VOLATILES	Reporting Limit ug/L	W2428 CSW WA8 028 - 9-Sep-08 8:15 9-Sep-08	W2429 CSW WA3 028 - 9-Sep-08 8:27 9-Sep-08	W2430 CSW WA1 028 - 9-Sep-08 8:40 9-Sep-08	W2431 CSW WA2 028 - 9-Sep-08 8:48 9-Sep-08	W2432 CSW WA5 023 - 9-Sep-08 9:22 9-Sep-08	W2433 CSW WA6 023 - 9-Sep-08 9:38 9-Sep-08	W2434 CSW TP 028 - 9-Sep-08 9:55 9-Sep-08	W2435 CSW FB 028 - 9-Sep-08 8:52 9-Sep-08	W2436 CSW Duplicate - 9-Sep-08 - 9-Sep-08
Depth		-	-	-	-	-	-	-	-	
Date Collected		9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08
Time Collected		8:15	8:27	8:40	8:48	9:22	9:38	9:55	8:52	-
Date Analyzed		9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08
Dichlorodifluoromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	1.0	< 1.0	< 1.0	**1.2**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.3**
Methylene Chloride	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Toluene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.3**	< 1.0	< 1.0
1,2-Dibromoethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethyl Benzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

TABLE 1

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

		W2428	W2429	W2430	W2431	W2432	W2433	W2434	W2435	W2436
		CSW	CSW	CSW	CSW	CSW	CSW	CSW	CSW	CSW
		WA8	WA3	WA1	WA2	WA5	WA6	TP	FB	Duplicate
		028	028	028	028	023	023	028	028	
	Depth	-	-	-	-	-	-	-	-	
	Date Collected	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08
	Time Collected	8:15	8:27	8:40	8:48	9:22	9:38	9:55	8:52	-
	Date Analyzed	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08
	Reporting Limit									
VOLATILES	ug/L									
Xylenes, Total	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Styrene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Isopropylbenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Bromobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
n-Propylbenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Butylbenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,3,5-Trichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Surrogates:										
Dibromofluoromethane	%	103	103	100	103	103	103	102	104	103
Toluene-D8	%	98.8	100	102	103	103	103	101	101	101
4-Bromofluorobenzene	%	92.6	92.3	97.2	95.6	93.8	94.7	94.2	93.5	97.4

Table 2

Sample Results 1,4-Dioxane– September

TABLE 2

Kuhlman Electric - Crystal Springs, Mississippi - 1,4-Dioxane Detected in Water

		W2428	W2429	W2430	W2431	W2432	W2433	W2434	W2435	W2436
		CSW	CSW	CSW	CSW	CSW	CSW	CSW	CSW	CSW
		WA8	WA3	WA1	WA2	WA5	WA6	TP	FB	Duplicate
		028	028	028	028	023	023	028	028	
	Depth	-	-	-	-	-	-	-	-	
	Date Collected	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08	9-Sep-08
	Time Collected	8:15	8:27	8:40	8:48	9:22	9:38	9:55	8:52	-
	Date Analyzed	10-Sep-08	10-Sep-08	10-Sep-08	10-Sep-08	10-Sep-08	10-Sep-08	10-Sep-08	10-Sep-08	10-Sep-08
VOLATILES	Reporting Limit ug/L									
1,4-Dioxane	1.0	< 1.0	< 1.0	**1.1**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.0**
Surrogates:										
1,4-Dioxane-D8	%	92.3	94.2	90.4	90.1	94.1	80.0	92.1	88.0	86.1

Table 3

QC Results Volatiles– September

TABLE 3
QC Report

Lab # associated with qc samples: W2428 through W2436

	Matrix Spike W2428	Matrix Spike Duplicate W2428	Blank
Date Analyzed:	09/10/08	09/10/08	09/09/08

Compound	% Rec		% Rec	RPD		ug/L
Dichlorodifluoromethane	103%		104%	0.8%		< 1.0
Chloromethane	111%		106%	4.8%		< 1.0
Vinyl chloride	106%		104%	1.3%		< 1.0
Bromomethane	106%		104%	1.3%		< 1.0
Chloroethane	108%		104%	3.6%		< 1.0
Trichlorofluoromethane	110%		109%	0.7%		< 1.0
1,1-Dichloroethene	104%		101%	3.3%		< 1.0
Methylene chloride	100%		99.4%	1.0%		< 1.0
trans-1,2-Dichloroethene	105%		104%	0.2%		< 1.0
1,1-Dichloroethane	100%		102%	2.0%		< 1.0
cis-1,2-Dichloroethene	96.2%		98.6%	2.5%		< 1.0
2,2-Dichloropropane	101%		101%	0.4%		< 1.0
Bromochloromethane	97.2%		93.4%	4.0%		< 1.0
Chloroform	101%		100%	0.8%		< 1.0
1,1,1-Trichloroethane	102%		102%	0.2%		< 1.0
1,1-Dichloropropene	98.8%		101%	2.0%		< 1.0
Carbon tetrachloride	103%		107%	3.2%		< 1.0
Benzene	102%		100%	1.8%		< 1.0
1,2-Dichloroethane	100%		96.8%	3.3%		< 1.0
Trichloroethene	97.4%		99.8%	2.4%		< 1.0
1,2-Dichloropropane	95.0%		96.6%	1.7%		< 1.0
Dibromomethane	93.6%		90.2%	3.7%		< 1.0
Bromodichloromethane	95.8%		94.4%	1.5%		< 1.0
cis-1,3-Dichloropropene	89.6%		90.4%	0.9%		< 2.0
Toluene	99.8%		102%	1.8%		< 1.0
trans-1,3-Dichloropropene	89.8%		89.4%	0.4%		< 1.0
1,1,2-Trichloroethane	92.2%		91.0%	1.3%		< 1.0
Tetrachloroethene	94.8%		97.2%	2.5%		< 1.0
1,3-Dichloropropane	90.2%		90.6%	0.4%		< 1.0
Dibromochloromethane	87.4%		88.4%	1.1%		< 1.0
1,2-Dibromoethane	87.2%		86.0%	1.4%		< 1.0
Chlorobenzene	101%		100%	1.2%		< 1.0
1,1,1,2-Tetrachloroethane	99.8%		97.6%	2.2%		< 1.0
Ethyl benzene	100%		99.6%	0.4%		< 1.0
Xylenes, Total	100%		101%	1.2%		< 2.0
Styrene	96.0%		96.2%	0.2%		< 1.0
Bromoform	87.2%		84.8%	2.8%		< 2.0

TABLE 3
QC Report

Lab # associated with qc samples: W2428 through W2436

	Matrix Spike W2428		Matrix Spike Duplicate W2428			Blank
Date Analyzed:	09/10/08		09/10/08			09/09/08

Compound	% Rec		% Rec	RPD		ug/L
Isopropylbenzene	95.8%		96.2%	0.4%		< 1.0
1,1,2,2-Tetrachloroethane	88.6%		91.6%	3.3%		< 2.0
Bromobenzene	96.4%		96.0%	0.4%		< 1.0
1,2,3-Trichloropropane	94.0%		93.0%	1.1%		< 2.0
n-Propylbenzene	100%		100%	0.2%		< 1.0
2-Chlorotoluene	100.6%		99.2%	1.4%		< 1.0
1,3,5-Trimethylbenzene	98.2%		96.6%	1.6%		< 1.0
4-Chlorotoluene	98.8%		98.0%	0.8%		< 1.0
tert-Butylbenzene	96.2%		94.8%	1.5%		< 1.0
1,2,4-Trimethylbenzene	96.8%		95.2%	1.7%		< 1.0
sec-Butylbenzene	97.4%		96.4%	1.0%		< 1.0
1,3-Dichlorobenzene	101%		105%	4.1%		< 1.0
p-Isopropyltoluene	98.6%		102%	3.4%		< 1.0
1,4-Dichlorobenzene	97.8%		101%	3.4%		< 1.0
n-Butylbenzene	103%		108%	4.6%		< 1.0
1,2-Dichlorobenzene	95.4%		99.0%	3.7%		< 1.0
1,2-Dibromo-3-chloropropane	90.2%		88.8%	1.6%		< 2.0
1,3,5-Trichlorobenzene	94.4%		99.8%	5.6%		< 1.0
1,2,4-Trichlorobenzene	87.2%		92.8%	6.2%		< 1.0
Hexachlorobutadiene	96.8%		95.8%	1.0%		< 1.0
Naphthalene	81.6%		86.0%	5.3%		< 3.0
1,2,3-Trichlorobenzene	90.0%		94.6%	5.0%		< 1.0

Table 4

QC Results 1,4-Dioxane– September

TABLE 4
QC Report

Lab # associated with qc samples: W2428 through W2436

	Matrix Spike	Matrix Spike Duplicate		LCS	Blank
	W2428	W2428			
Date Extracted:	09/09/08	09/09/08		09/09/08	09/09/08
Date Analyzed:	09/10/08	09/10/08		09/10/08	09/10/08

Compound	% Rec		% Rec	RPD		% Rec	ug/L
1,4-Dioxane	89.9%		86.7%	3.6%		93.5%	< 1.0

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

City Wells

No. 013764 *

Page 1 of 1

Project Number:		Mail Report To:	Turn Around (circle one) Normal Rush
Project Name: KUHLMAN ELECTRIC		Company: MARTIN + SLAGLE	Report Due:
Project Location: CRYSTAL SPRINGS		Address:	Invoice To:
Sampled By (Print): Chuck Paul			Company:
			Address:
			P.O. No.: Quote No.:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
CSW-WA8-028	9/9/08	0815	W	4	A	1,4 Dioxane + PZ608		W2428
CSW-WA3-028		0827		4	A			W2429
CSW-WA1-028		0840		7	A/B			W2430
CSW-WA2-028		0848		7	A/B			W2431
CSW-WA5-023		0922		4	A			W2432
CSW-WA6-023		0938		4	A			W2433
CSW-TP-028		0955		7	A/B			W2434
CSW-FB-028		0952		4	A			W2435
DUPLICATE	↓	—	↓	7	A/B	↓		W2436

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

Relinquished By: Chuck & M Paul	Date/Time: 9/9/08 1000	Received By:	Date/Time: 9/9/08 1000
Relinquished By:	Date/Time:	Received By:	Date/Time:

Custody Seal: Present/Absent Intact/Not Intact Seal #'s

Shipped Vi

Receipt Temp:
Temp Blank Y N on ice

WHITE - REPORT COPY YELLOW - LABORATORY COPY PINK - SAMPLER/SUBMITTER

Appendix B

FEDEX shipping label for Columbia Analytical Services, Inc.

FedEx Express **USA Airbill** FedEx Tracking Number **837784146430**

Form ID No. 0200

1 From *Please print and press hard.*

Date 9/9/08 Sender's FedEx Account Number 2262 8199 1

Sender's Name JOE KUBALE Phone (608) 345-1974

Company ECCS, INC

Address 2525 ADVANCE RD

Dept./Floor/Suite/Room

City MADISON State WI ZIP 53719

2 Your Internal Billing Reference
First 24 characters will appear on invoice.

3 To

Recipient's Name SAMPLE CUSTODIAN Phone (360) 577-7222

Company COLUMBIA ANALYTICAL

Address
To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address 1317 South 13th AVE

Dept./Floor/Suite/Room

City KELSO State WA ZIP 98626

Try online shipping at fedex.com

By using this Airbill you agree to the service conditions on the back of this Airbill and in our current Service Guide, including terms that limit our liability.

Questions? Visit our Web site at fedex.com
or call 1.800.Go.FedEx® 800.463.3339.

4a Express Package Service — *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [X] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service — *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging — * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [X] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] **SATURDAY Delivery** — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] **HOLD Weekday at FedEx Location** — NOT Available for FedEx First Overnight
- [ ] **HOLD Saturday at FedEx Location** — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* — Enter FedEx Acct. No. or Credit Card No. below

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 2262 8199 1 Exp. Date

Total Packages	Total Weight	Total Declared Value†
		$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. FedEx Use Only

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

446

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RETAIN THIS COPY FOR YOUR RECORDS.

Appendix C

Chain of Custody Sheets for samples sent to Columbia Analytical Services, Inc.

Columbia Analytical Services INC
An Employee - Owned Company

CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#:_____

PAGE 1 OF 1 COC #_____

PROJECT NAME: KUHLMAN ELECTRIC
PROJECT NUMBER:
PROJECT MANAGER: ROBERT MARTIN
COMPANY/ADDRESS: MARTIN + SLOAN
CITY/STATE/ZIP: BLACK MOUNTAIN NC.
E-MAIL ADDRESS:
PHONE #: FAX#:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☒	Hydrocarbons Gas☐ Diesel☐ (*see below) Oil☐	8021☐ BTEX☐	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM☐	1664 SGT☐	PCB's Aroclors☐	Congeners☐	Pesticides/Herbicides 608☐	8081A☐	8141A☐	8151A☐	Chlorophenolics - Tri☐	Tetra☐	8151M	PCP☐	PAHS 8310☐	SIM☐	Metals, Total or Dissolved (See list below)	Cyanide☐	Hex-Chrom☐	pH, Cond, Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐	AOX 1650☐ 506☐	1,4-Dioxane by 8270 SIM				REMARKS
CSW-WA1-020	9/9/08	0940		W	5			X																						X						
CSW-DUPLICATE	9/9/08	—		W	5			X																						X						
TRIP BLANK	—	—		W	1																															

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: Book with Ref

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

Book - Kuhlman Inv

1,4 Dioxane - needs to be reported

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
Printed N. / Firm	Printed Name / Firm	Printed Name / Firm	Printed Name

Project Groundwater **Lab** ECCS **Report ID #** _____

Property City Wells **Report Date** Aug 21, 2008

Report checked 8-26-08 ~~(Dawn)~~ **Field Book checked** _____ **Field Book Name** _____

Entered into Access data base NA **Database Checked** _____

Corrections requested _____ **date** _____ **done** _____

Corrections requested _____ **date** _____ **done** _____

Sample Dates	Description	Lab ID#
8-5-08	CSW-WA8-027	W23794
	CSW-WA3-027	W23795
	CSW-WA1-027	W23796
	CSW-WA2-027	W23797
	CSW-FB-027	W23798
	CSW-WA5-022	W23799
	CSW-WA6-022	W2400
	CSW-TP-027	W2401
	CSW-Duplicate	W2402
	Entered into table 1 & 2 IPRTL 8-26-08	

city wells Aug 08 has not been scanned