May 6, 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,

Kari-Ann Kubale

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

May 6, 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

Introduction

This Technical Memorandum provides documentation of the analytical test methods used to analyze water samples collected in April 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

	Purge and Trap GC/MSD
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 150.

Table 1

Sample Results Volatiles– April

TABLE 1

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

VOLATILES	Reporting Limit ug/L	W2247 CSW WA8 023 - 1-Apr-08 13:17 1-Apr-08	W2248 CSW WA3 023 - 1-Apr-08 13:27 1-Apr-08	W2249 CSW WA1 023 - 1-Apr-08 13:47 1-Apr-08	W2250 CSW WA2 023 - 1-Apr-08 14:00 1-Apr-08	W2251 CSW FB 023 - 1-Apr-08 13:58 1-Apr-08	W2252 CSW WA5 018 - 1-Apr-08 14:25 1-Apr-08	W2253 CSW WA6 018 - 1-Apr-08 14:37 1-Apr-08	W2254 CSW TP 023 - 1-Apr-08 14:50 1-Apr-08	W2255 CSW Duplicate - 1-Apr-08 1-Apr-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	**1.1**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.2**
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	< 1.0	< 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

VOLATILES	Reporting Limit ug/L	W2247 CSW WA8 023 - 1-Apr-08 13:17 1-Apr-08	W2248 CSW WA3 023 - 1-Apr-08 13:27 1-Apr-08	W2249 CSW WA1 023 - 1-Apr-08 13:47 1-Apr-08	W2250 CSW WA2 023 - 1-Apr-08 14:00 1-Apr-08	W2251 CSW FB 023 - 1-Apr-08 13:58 1-Apr-08	W2252 CSW WA5 018 - 1-Apr-08 14:25 1-Apr-08	W2253 CSW WA6 018 - 1-Apr-08 14:37 1-Apr-08	W2254 CSW TP 023 - 1-Apr-08 14:50 1-Apr-08	W2255 CSW Duplicate - 1-Apr-08 - 1-Apr-08
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	%	102	103	101	104	101	102	98.1	101	102
Toluene-D8	%	96.6	99.9	94.5	94.8	97.8	105	100	95.7	91.7
4-Bromofluorobenzene	%	95.2	98.8	94.8	95.8	98.8	104	96.5	96.3	95.2

Table 2

Sample Results 1,4-Dioxane– April

TABLE 2

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

VOLATILES	Reporting Limit ug/L	W2247 CSW WA8 023 - 1-Apr-08 13:17 2-Apr-08	W2248 CSW WA3 023 - 1-Apr-08 13:27 2-Apr-08	W2249 CSW WA1 023 - 1-Apr-08 13:47 2-Apr-08	W2250 CSW WA2 023 - 1-Apr-08 14:00 2-Apr-08	W2251 CSW FB 023 - 1-Apr-08 13:58 2-Apr-08	W2252 CSW WA5 018 - 1-Apr-08 14:25 2-Apr-08	W2253 CSW WA6 018 - 1-Apr-08 14:37 2-Apr-08	W2254 CSW TP 023 - 1-Apr-08 14:50 2-Apr-08	W2255 CSW Duplicate - 1-Apr-08 - 2-Apr-08
1,4-Dioxane	1.0	< 1.0	< 1.0	**1.2**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.3**
Surrogates:										
1,4-Dioxane-D8	%	111	97.9	98.5	112	102	99.4	95.6	102	111

Table 3

QC Results Volatiles– April

TABLE 3
QC Report

Lab # associated with qc samples: W2247 through W2255

	Matrix Spike W2247	Matrix Spike Duplicate W2247	Blank
Date Analyzed:	4/1/08	4/1/08	3/4/08

Compound	% Rec		% Rec	RPD		ug/L
Dichlorodifluoromethane	101%		91.2%	10.4%		< 1.0
Chloromethane	156%		114%	30.9%		< 1.0
Vinyl chloride	112%		100%	11.5%		< 1.0
Bromomethane	120%		99.8%	18.0%		< 1.0
Chloroethane	114%		103%	10.7%		< 1.0
Trichlorofluoromethane	99.4%		102%	3.0%		< 1.0
1,1-Dichloroethene	98.2%		103%	4.8%		< 1.0
Methylene chloride	114%		102%	11.1%		< 1.0
trans-1,2-Dichloroethene	101%		110%	8.9%		< 1.0
1,1-Dichloroethane	103%		105%	1.7%		< 1.0
cis-1,2-Dichloroethene	97.6%		101%	3.4%		< 1.0
2,2-Dichloropropane	93.8%		99.2%	5.6%		< 1.0
Bromochloromethane	101%		100%	0.6%		< 1.0
Chloroform	101%		103%	1.8%		< 1.0
1,1,1-Trichloroethane	99.0%		102%	3.2%		< 1.0
1,1-Dichloropropene	96.4%		100%	3.9%		< 1.0
Carbon tetrachloride	98.6%		98.0%	0.6%		< 1.0
Benzene	98.8%		100%	1.4%		< 1.0
1,2-Dichloroethane	101%		104%	2.3%		< 1.0
Trichloroethene	97.8%		99.8%	2.0%		< 1.0
1,2-Dichloropropane	101%		101%	0.6%		< 1.0
Dibromomethane	103%		99.2%	3.8%		< 1.0
Bromodichloromethane	101%		98.4%	2.8%		< 1.0
cis-1,3-Dichloropropene	100%		96.0%	4.5%		< 2.0
Toluene	102%		96.2%	5.5%		< 1.0
trans-1,3-Dichloropropene	102%		97.4%	4.6%		< 1.0
1,1,2-Trichloroethane	108%		101%	6.9%		< 1.0
Tetrachloroethene	98.0%		95.8%	2.3%		< 1.0
1,3-Dichloropropane	105%		99.0%	5.9%		< 1.0
Dibromochloromethane	104%		96.8%	7.0%		< 1.0
1,2-Dibromoethane	105%		97.4%	7.3%		< 1.0
Chlorobenzene	98.2%		101%	3.0%		< 1.0
1,1,1,2-Tetrachloroethane	93.4%		101%	7.4%		< 1.0
Ethyl benzene	95.2%		98.4%	3.3%		< 1.0
Xylenes, Total	97.4%		98.4%	1.0%		< 2.0
Styrene	96.8%		99.6%	2.9%		< 1.0
Bromoform	98.6%		96.8%	1.8%		< 2.0

TABLE 3
QC Report

Lab # associated with qc samples: W2247 through W2255

	Matrix Spike W2247	Matrix Spike Duplicate W2247			Blank
Date Analyzed:	4/1/08	4/1/08			3/4/08

Compound	% Rec		% Rec	RPD		ug/L
Isopropylbenzene	97.6%		98.0%	0.4%		< 1.0
1,1,2,2-Tetrachloroethane	105%		103%	2.5%		< 2.0
Bromobenzene	100%		98.4%	2.0%		< 1.0
1,2,3-Trichloropropane	108%		106%	2.2%		< 2.0
n-Propylbenzene	103%		101%	2.2%		< 1.0
2-Chlorotoluene	104%		102%	2.1%		< 1.0
1,3,5-Trimethylbenzene	104%		101%	3.3%		< 1.0
4-Chlorotoluene	106%		101%	4.8%		< 1.0
tert-Butylbenzene	102%		101%	1.2%		< 1.0
1,2,4-Trimethylbenzene	105%		102%	2.7%		< 1.0
sec-Butylbenzene	106%		102%	4.2%		< 1.0
1,3-Dichlorobenzene	95.4%		102%	6.5%		< 1.0
p-Isopropyltoluene	95.6%		102%	6.1%		< 1.0
1,4-Dichlorobenzene	98.0%		106%	8.2%		< 1.0
n-Butylbenzene	97.6%		102%	4.0%		< 1.0
1,2-Dichlorobenzene	98.8%		103%	4.5%		< 1.0
1,2-Dibromo-3-chloropropane	101%		100%	0.6%		< 2.0
1,3,5-Trichlorobenzene	92.6%		102%	9.3%		< 1.0
1,2,4-Trichlorobenzene	92.6%		102%	9.7%		< 1.0
Hexachlorobutadiene	94.2%		99.2%	5.2%		< 1.0
Naphthalene	92.8%		102%	9.1%		< 3.0
1,2,3-Trichlorobenzene	95.8%		103%	7.0%		< 1.0

Table 4

QC Results 1,4-Dioxane– April

TABLE 4
QC Report

Lab # associated with qc samples: W2247 through W2255

	Matrix Spike	Matrix Spike Duplicate		LCS	Blank
	W2248	W2248			
Date Extracted:	04/01/08	04/01/08		04/01/08	04/01/08
Date Analyzed:	04/02/08	04/02/08		04/02/08	04/02/08

Compound	% Rec		% Rec	RPD		% Rec	ug/L
1,4-Dioxane	113%		108%	4.5%		109%	< 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. 013565 *

Page 1 of 1

Project Number:		Mail Report To:	Turn Around (circle one) Normal Rush
Project Name: KUHLMAN ELECTRIC		Company: MARTIN & SCHAGLES	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-WA8-023	4/1/08	1317	W	4	A	8260B + 1,4 Dioxane		W2247
CSW-WA3-023		1327		7	A/B			W2248
CSW-WA1-023		1347		7	A/B			W2249
CSW-WA2-023		1400		4	A			W2250
CSW-FB-023		1358		4	A			W2251
CSW-WA5-018		1425		4	A			W2252
CSW-WA6-018		1437		4	A			W2253
CSW-TP-023		1450		7	A/B			W2254
DUPLICATE	↓	—	↓	7	A/B	↓		W2255

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

Relinquished By: Chuck Paul	Date/Time: 4/1/08 1500	Received By:	Date/Time: 4/1/08 1500
Relinquished By:	Date/Time:	Received By:	Date/Time:

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

Shipped Via:

Receipt Temp: Temp Blank Y N nice

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 837597992230

Form I.D. No. 0200

Sender's Copy

From (Please print and press hard)

Date 4/2/08

Sender's FedEx Account Number 226281991

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 53718

Your Internal Billing Reference

First 24 characters will appear on invoice

To

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

Company COLUMBIA ANALYTICAL

Address

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

Address 1317 So. 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

Includes 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:

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

FedEx Acct. No. / Credit Card No. | 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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Appendix C

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

CHAIN OF CUSTODY

Columbia Analytical Services
An Employee - Owned Company

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

PAGE 1 OF 1 SR#: _____ COC #: _____

PROJECT NAME: KUHLMAN ELECTRIC
PROJECT NUMBER:
PROJECT MANAGER: ROBERT MARTIN
COMPANY/ADDRESS: MARTIN & STAGLE
CITY/STATE/ZIP: POLARIS MOUNTAIN WE
E-MAIL ADDRESS:
PHONE #: FAX#:
SAMPLER'S SIGNATURE: Robert A. Martin

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 (*see below) Gas ☐ 8021 ☐ BTEX ☐ Diesel ☐ Oil ☐ Fuel Fingerprint (FIO) NW-HCID Screen Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ 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-WA1-023	4/1/08	1357		W	5			X														X				
DUPLICATE	4/1/08	—		W	5			X														X				

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: BIRCH WATER WE

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:

1,4 Dioxane by 8270 SIM - must meet 0.5 µg/L reporting limit
8260B list - Kuhlman list
notify lab w/ any questions

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Robert A. Martin	Signature:	Signature:	Signature:
Date/Time: 4/1/08 1400	Date/Time:	Date/Time:	Date/Time:
Printed Name: Robert A. Martin	Printed Name:	Printed Name:	Printed Name:
Firm: MSE	Firm:	Firm:	Firm: