STATE OF MISSISSIPPI
DAVID RONALD MUSGROVE, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

November 21, 2001

VIA FACSIMILE AND US MAIL

Mary E. McAlister, Esquire
Daivd Nutt & Associates
666 North Street, Suite 102A
Jackson, MS 39202

Re: *Kellum, et al. Vs. Kuhlman Corporation, et al.*
USDC for the Southern District of Mississippi, Jackson Div.,
Civil Action No. 3:01CV464BN

Dear Meg:

This letter is in response to your letter and summary report concerning dioxin and furan contamination. MDEQ staff has reviewed the sampling data and feels that there may be a correlation between the polychlorinated biphenyls (PCBs) and the dioxin/furans found in the soils at 108 Tucker Street, 104 Forrest Street, and 107 Forrest Street. Staff still is investigating why the dioxins/furans are present. It would have been helpful to our investigation if dioxin/furan analysis was completed on one of the two properties that are uncontaminated (103 Tucker Street and 100 Pearl Street) to determine background dioxin/furan concentrations in the area.

The dioxin/furan concentrations found by 3TM at the three properties referenced above are within the allowable risk range designated by MDEQ of 4.26 ppt to 426 ppt. Additionally, the Environmental Protection Agency's dioxin cleanup level for residential property is 1 ppb (1000 ppt) (a less stringent standard than MDEQ's). The highest level found at the properties (189 ppt) is well below the EPA level and is in the lower part of the MDEQ acceptable range. Therefore, MDEQ feels there is no need to for any emergency sampling or removal activity.

The PCB concentrations found by 3TM at the three properties are generally in the same range as those found by Borg Warner during their sampling. The following table summarizes the sample results:

PROPERTY	3TM SAMPLE	RESULT	B/W SAMPLE	RESULT
108 Tucker St.	HA01 – HA09	1.48 to 16.9 ppm	DP-994	2 to 51 ppm
107 Forrest St.	HA20 – HA24 HA25 – HA29	1.5 to 20 ppm 0.16 to 3.31 ppm	DP-848 DP-846	0.72 to 15 ppm 0.67 to 30 ppm
104 Forrest St.	HA30 HA31 HA32	108 ppm 1.7 ppm 9.9 ppm	DP-820 DP-821 DP-818	11 to 70 ppm 0.46 to 26 ppm 10 to 36 ppm

The three properties are within the drainage ditch delineation area and will be remediated to the residential PCB level of 1 ppm. As DEQ has stated previously, the remediation around the Kuhlman Electric site will be proceeding from the Kuhlman site down the ditch to the lake and beyond if needed as the contaminated soils are tracked downstream of the site. The remediation is proceeding from the site downgradient to prevent the recontamination of property.

Dioxins/furans behave like PCBs in that they attach to the soils and sediments and move with the soils and sediments. Therefore, remediation of the properties to remove the PCBs will remove the dioxins/furans.

MDEQ and Kuhlman currently are discussing whether or not to test the site for dioxin. If you need additional information, please do not hesitate to contact me at 961-5340.

Sincerely,

Kelli M. Dowell

Kelli M. Dowell
Attorney

cc: Tony Russell, MDEQ
Tom Lupo, Esq.
Scott Schang, Esq.
Robert Lawrence, Esq.

FILE COPY

STATE OF MISSISSIPPI
DAVID RONALD MUSGROVE, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

March 14, 2001

Robert Edwards
1112 North Taylor Avenue
Oak Park, Illinois 60302

RE: soil sampling

Dear Mr. Edwards:

Please find attached the report for the soil sampling conducted at 108 Tucker Street, Crystal Springs, MS. The report includes the following:

1. a map showing the sampling locations, and
2. a table containing the sample results for the analysis conducted by a mobile laboratory, Environmental Chemistry Consulting Services, and split sample results for the analysis conducted by a fixed laboratory, Paradigm Analytical Laboratories, Inc.

If you have any questions, concerning this matter, please contact Gretchen Zmitrovich at (601) 961-5240.

Sincerely,

Tony Russell, Chief
Uncontrolled Sites Section

Enclosure

Kuhlman Electric-108 Tucker (Edwards)-report_3-14-01 (gz)

OFFICE OF POLLUTION CONTROL
POST OFFICE BOX 10385 • JACKSON, MISSISSIPPI 39289-0385 • TEL: (601) 961-5171 • FAX: (601) 354-6612 • www.deq.state.ms.us
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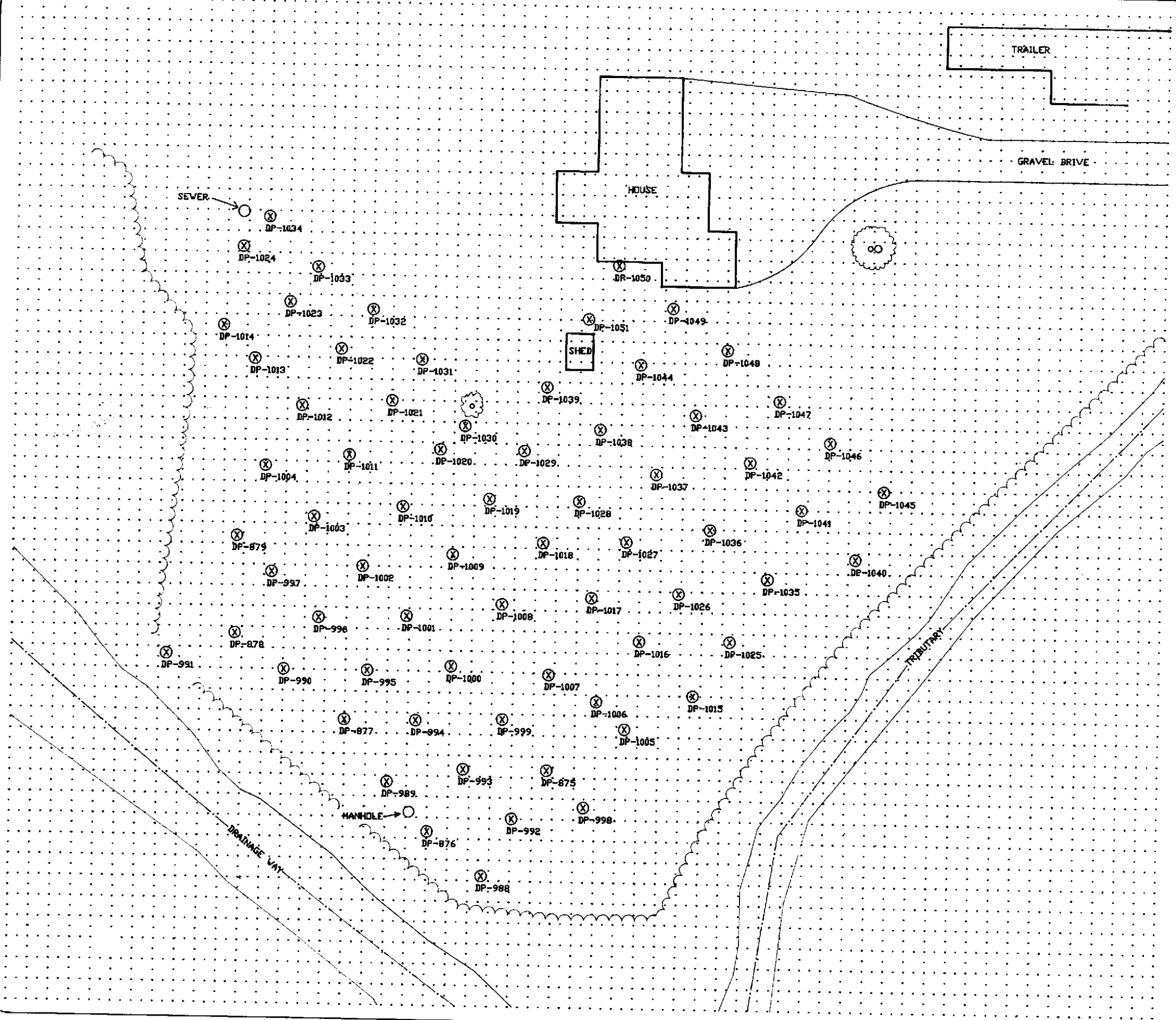

LEGEND AND SYMBOLS

- PROPERTY LINE
- TREE
- EMBANKMENT SLOPE
- DP-XXX — DIRECT PUSH SAMPLE LOCATION AND NUMBER
- UNDERBRUSH AND TREES

OWNER
ROBERTA FITZGERALD ESTATE PROPERTY
108 TUCKER STREET
PARCEL NO. 144
COPIAH COUNTY, MISSISSIPPI
TENANT
EARL AND BETTY KENDRICK

PREPARED FOR:
BorgWarner Inc.

CADD FILE: FITZGERALD.DWG
Geo-Environmental Associates, LLC | MARTIN&SLAGLE
PO Box 1023
Black Mountain NC 28711
828.669.3929 828.669.5289

SCALE 1"=30'
PROJECT NO. BW00-1
1 OF 1

SAMPLE LOCATION MAP
FIELD SURVEY DATE: 11/01/00

COPIAH COUNTY

BY/PG	DATE	DRAWN BY	REVISION	ORD

[redacted]ITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
875	0.5	01-Nov-00	02-Nov-00	2.6		
	1.5	01-Nov-00	03-Nov-00	19		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	16-Nov-00	<0.10		
876	0.5	01-Nov-00	03-Nov-00	4.9	17-Nov-00	3.6
	1.5	01-Nov-00	02-Nov-00	3.5		
Dupe 11-01	0.5	01-Nov-00	04-Nov-01	4.9	17-Nov-00	2.6
877	0.5	01-Nov-00	03-Nov-00	3.9		
	1.5	01-Nov-00	03-Nov-00	5.4		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	16-Nov-00	<0.10		
878	0.5	01-Nov-00	02-Nov-00	3.3	18-Nov-00	1.6
	1.5	01-Nov-00	02-Nov-00	<0.10	18-Nov-00	<.094
879	0.5	01-Nov-00	02-Nov-00	3.8	18-Nov-00	1.7
	1.5	01-Nov-00	03-Nov-00	<0.10		
989	0.5	04-Nov-00	06-Nov-00	6.8	18-Nov-00	2.4
	1.5	04-Nov-00	06-Nov-00	2.1	18-Nov-00	0.89
	5	16-Nov-00	17-Nov-00	2.8		
	7	16-Nov-00	17-Nov-00	<0.10		
	8	16-Nov-00	17-Nov-00	<0.10		
991	0.5	04-Nov-00	06-Nov-00	4.5		
	1.5	04-Nov-00	06-Nov-00	8.3		
	3	15-Nov-00	16-Nov-00	0.40		
	4	15-Nov-00	16-Nov-00	0.13		
990	0.5	04-Nov-00	06-Nov-00	3.3		
	1.5	04-Nov-00	06-Nov-00	5.6		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	16-Nov-00	<0.10		
997*	0.5	04-Nov-00	06-Nov-00	3.0	18-Nov-00	1.3
	1.5	04-Nov-00	06-Nov-00	<0.10		
988	0.5	04-Nov-00	06-Nov-00	9.9		
	1.5	04-Nov-00	06-Nov-00	5.6	18-Nov-00	3.8
992	0.5	06-Nov-00	06-Nov-00	3.9		
	1.5	06-Nov-00	06-Nov-00	4.9		
	3	06-Nov-00	06-Nov-00	1.8		
	4	06-Nov-00	07-Nov-00	3.2		
	5	15-Nov-00	16-Nov-00	0.80		
	6	15-Nov-00	16-Nov-00	3.8		
	7**	15-Nov-00	16-Nov-00	<0.10		
993	0.5	06-Nov-00	06-Nov-00	1.4		
	1.5	06-Nov-00	08-Nov-00	7.9		
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

[redacted]TZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
994	0.5	06-Nov-00	06-Nov-00	2.0		
	1.5	06-Nov-00	06-Nov-00	51	21-Nov-00	55
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		
	7	15-Nov-00	16-Nov-00	<0.10		
995	0.5	06-Nov-00	06-Nov-00	3.0		
	1.5	06-Nov-00	06-Nov-00	6.3	21-Nov-00	2.8
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		
996	0.5	06-Nov-00	06-Nov-00	3.8		
	1.5	06-Nov-00	06-Nov-00	1.7		
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		
998	0.5	06-Nov-00	06-Nov-00	1.0		
	1.5	06-Nov-00	07-Nov-00	3.6		
	3	06-Nov-00	07-Nov-00	0.62		
	4	06-Nov-00	08-Nov-00	<0.10		
999	0.5	06-Nov-00	07-Nov-00	3.7		
	1.5	06-Nov-00	08-Nov-00	13		
999	3	06-Nov-00	07-Nov-00	2.6		
	4	06-Nov-00	08-Nov-00	<0.10		
1000	0.5	06-Nov-00	07-Nov-00	2.2		
	1.5	06-Nov-00	08-Nov-00	30		
	3	06-Nov-00	07-Nov-00	0.33		
	4	06-Nov-00	08-Nov-00	<0.10		
1001	0.5	06-Nov-00	08-Nov-00	5.6		
	1.5	06-Nov-00	08-Nov-00	7.0		
	3	06-Nov-00	07-Nov-00	0.13		
	4	06-Nov-00	08-Nov-00	0.19	18-Nov-00	<.110
1002	0.5	06-Nov-00	08-Nov-00	7.7		
	1.5	06-Nov-00	07-Nov-00	2.8	21-Nov-00	3.1
	3	06-Nov-00	07-Nov-00	<0.10	18-Nov-00	<.010
	4	06-Nov-00	NA	NA		
1003	0.5	06-Nov-00	07-Nov-00	1.7		
	1.5	06-Nov-00	07-Nov-00	3.0		
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
1004	0.5	06-Nov-00	07-Nov-00	0.41		
	1.5	06-Nov-00	07-Nov-00	1.8		
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
1013	0.5	06-Nov-00	07-Nov-00	2.4		
	1.5	06-Nov-00	07-Nov-00	<0.10	21-Nov-00	0.14

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

[redacted]TZGERALD ESTATE PROPERTY[redacted]
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
1014	0.5	06-Nov-00	07-Nov-00	0.64		
	1.5	06-Nov-00	07-Nov-00	<0.10	21-Nov-00	0.14
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
DUPE 11-06	1.5	06-Nov-00	07-Nov-00	0.12	21-Nov-00	0.14
1012	0.5	07-Nov-00	08-Nov-00	0.19		
	1.5	07-Nov-00	08-Nov-00	<0.10		
	3	07-Nov-00	08-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1011	0.5	07-Nov-00	08-Nov-00	0.13		
	1.5	07-Nov-00	08-Nov-00	<0.10		
	3	07-Nov-00	08-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1010	0.5	07-Nov-00	08-Nov-00	0.59		
	1.5	07-Nov-00	08-Nov-00	0.30		
	3	07-Nov-00	08-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1009	0.5	07-Nov-00	07-Nov-00	0.27		
	1.5	07-Nov-00	07-Nov-00	1.9		
	3	07-Nov-00	07-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1008	0.5	07-Nov-00	07-Nov-00	0.13		
	1.5	07-Nov-00	08-Nov-00	5.2		
	3	07-Nov-00	07-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1007	0.5	07-Nov-00	07-Nov-00	0.12		
	1.5	07-Nov-00	08-Nov-00	22		
	3	07-Nov-00	07-Nov-00	0.92		
	4	07-Nov-00	14-Nov-00	0.15		
1006	0.5	07-Nov-00	07-Nov-00	0.16		
	1.5	07-Nov-00	07-Nov-00	0.40		
	3	07-Nov-00	07-Nov-00	3.2		
	4	07-Nov-00	08-Nov-00	0.11		
1005	0.5	07-Nov-00	07-Nov-00	0.27		
	1.5	07-Nov-00	08-Nov-00	8.9		
	3	07-Nov-00	07-Nov-00	1.4		
	4	07-Nov-00	08-Nov-00	<0.10		
1015	0.5	07-Nov-00	08-Nov-00	<0.10		
	1.5	07-Nov-00	08-Nov-00	0.23		
	3	07-Nov-00	08-Nov-00	10	30-Nov-00	6.1
	4	07-Nov-00	08-Nov-00	0.31	07-Dec-00	0.35

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

[redacted]TZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
DUPE 11-07	3	07-Nov-00	08-Nov-00	**6.6**	21-Nov-00	**6.4**
1044	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1043	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1042	0.5	14-Nov-00	14-Nov-00	0.22		
	1.5	14-Nov-00	14-Nov-00	**1.0**		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1041	0.5	14-Nov-00	14-Nov-00	0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1040	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1039	0.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.110
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1034	0.5	14-Nov-00	14-Nov-00	0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.100
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1033	0.5	14-Nov-00	14-Nov-00	<0.40 J	30-Nov-00	<.100
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1032	0.5	14-Nov-00	14-Nov-00	0.16		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1031	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.092
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1030	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1029	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1038	0.5	14-Nov-00	14-Nov-00	<0.40 J		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1037	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.100
	3	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.01
	4	14-Nov-00	NA	NA		
1036	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1035	0.5	14-Nov-00	15-Nov-00	<0.10		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1025	0.5	14-Nov-00	15-Nov-00	<0.10		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	0.13		
	4	14-Nov-00	15-Nov-00	0.34		
	5	16-Nov-00	17-Nov-00	<0.10		
	7	16-Nov-00	17-Nov-00	<0.10		
	8	16-Nov-00	17-Nov-00	<0.10		
1026	0.5	14-Nov-00	15-Nov-00	<0.10		
	1.5	14-Nov-00	15-Nov-00	0.18		
	3	14-Nov-00	15-Nov-00	0.31	07-Dec-00	<.140
	4	14-Nov-00	15-Nov-00	<0.10		
1027	0.5	14-Nov-00	15-Nov-00	0.46		
	1.5	14-Nov-00	15-Nov-00	0.62	07-Dec-00	0.29
	3	14-Nov-00	15-Nov-00	0.37		
	4	14-Nov-00	15-Nov-00	<0.10		
1028	0.5	14-Nov-00	15-Nov-00	0.25	07-Dec-00	0.21
	1.5	14-Nov-00	15-Nov-00	<0.10	07-Dec-00	<.10
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
DUPE 11-14	1.5	14-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.110
1016	0.5	00-Jan-00	15-Nov-00	0.12		

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	1.5	14-Nov-00	15-Nov-00	0.51		
	3	14-Nov-00	15-Nov-00	1.1		
	4	14-Nov-00	15-Nov-00	<0.10		
1017	0.5	14-Nov-00	15-Nov-00	0.48		
	1.5	14-Nov-00	15-Nov-00	14	30-Nov-00	3
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1018	0.5	14-Nov-00	15-Nov-00	0.23		
	1.5	14-Nov-00	15-Nov-00	0.68		
	3	14-Nov-00	15-Nov-00	0.12	07-Dec-00	0.24
	4	14-Nov-00	15-Nov-00	<0.10		
1019	0.5	14-Nov-00	15-Nov-00	0.16		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1020	0.5	14-Nov-00	15-Nov-00	0.12		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1021	0.5	14-Nov-00	15-Nov-00	0.18		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.110
	4	14-Nov-00	NA	NA		
1022	0.5	14-Nov-00	15-Nov-00	<1.0 J		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.099
	4	14-Nov-00	NA	NA		
1023	0.5	14-Nov-00	15-Nov-00	0.30		
	1.5	14-Nov-00	15-Nov-00	0.25		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1024	0.5	14-Nov-00	15-Nov-00	0.23	30-Nov-00	<.110
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1045	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10		
	3	15-Nov-00	15-Nov-00	<0.10		
1046	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.10
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1047	0.5	15-Nov-00	15-Nov-00	<0.10		

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	1.5	15-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.10
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
DUPE 11-15	1.5	15-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.099
1048	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10		
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1049	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10		
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1050	0.5	15-Nov-00	16-Nov-00	<10.0 J		
	1.5	15-Nov-00	16-Nov-00	<0.10		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1051	0.5	15-Nov-00	16-Nov-00	<0.10		
	1.5	15-Nov-00	16-Nov-00	<0.10		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		

* Field Lab data report identified sample as DP992.
Field notes and corresponding sample collection times
confirm that sample results are for sample 997.
** Field Lab data report identified sample as DP994.
Field notes and corresponding sample collection times
confirm that sample results are for sample DP 992 @ 7' BGS.

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

BorgWarner Inc. 200 South Michigan Avenue Chicago Illinois 60604 Telephone 312 322 8500

AH-00-1638

VIA UPS NEXT DAY AIR

BorgWarner

December 20, 2000

Anastasia Hamel
Director, Environmental Programs
BorgWarner Inc.
11955 East Nine Mile Road
Warren, Michigan 48089

Ms. Gretchen Zmitrovich
Mississippi Department of Environmental Quality
Office of Pollution Control
101 West Capitol Street
Jackson, Mississippi 39201

Re: **Progress Report of Assessment and Remediation Activities**
Kuhlman Electric Corporation and Residential Properties
Crystal Springs, Mississippi

Dear Ms. Zmitrovich:

This is a progress report to summarize the assessment and remediation activities related to PCB contamination at Crystal Springs, Mississippi. BorgWarner's last update was October 31, 2000. As you are aware, pursuant to the indemnity agreement between Kuhlman Electric Corporation (KEC) and BorgWarner Inc., BorgWarner has continued the assessment at the KEC plant and began the assessment of residential properties along a drainage channel downgradient of the plant. BorgWarner has also been actively remediating those properties adjacent to the KEC plant for which access was previously granted and sampling was complete.

BorgWarner, as it stated in its October 31, 2000 letter to the Mississippi Department of Environmental Quality (MDEQ), remains committed to working closely with MDEQ, USEPA, local government and KEC in a cooperative manner to accomplish the tasks necessary for the protection of human health and the environment, to the extent that the circumstances are covered by its contractual indemnity to KEC. BorgWarner will continue to seek MDEQ's guidance and direction in its current and future intended activities and to promptly share information.

ACTIONS TAKEN AND PLANNED

1. Delineation of Residential Properties along Jackson and Lee Avenues

BorgWarner promptly and voluntarily began sampling and delineation activities at the residential and commercial properties, adjoining the KEC plant that appeared to or reportedly have been affected by runoff or by the removal of soil from the KEC plant prior to October 6, 1999.

Under MDEQ's supervision, BorgWarner conducted delineation activities of these properties during the month of August, 2000. A total of eighteen (18) properties were investigated, which were:

1. Perry Smith, 219 North Jackson Street
2. Stringer Funeral Home, 301 North Jackson Street
3. Stringer Rental Property, 303 North Jackson Street
4. Harold and Suzanne Warren, 403 North Jackson Street
5. Elnor Wright, 401 North Jackson Street
6. Sonny Reeves, 405 North Jackson Street
7. Brent Property, 403 Lee Avenue
8. Louie Lang/David Vinson, 407 North Jackson Street
9. Jerry Youngblood, 100 Lamar St.
10. Medical Clinic, Lee Avenue
11. Edwards Property, 406 Lee Avenue
12. Garment Shop, 414 Lee Avenue
13. Frazier Property, 405 Lee Avenue
14. Duplex Property, 408/410 Lee Avenue
15. Kellum Property, 412 Lee Avenue
16. Dabney/Smith Property, 215 North Jackson
17. Cooper Property, 409 North Jackson
18. Larry and Carol Wright, 305 North Jackson

BorgWarner acted under the continuous guidance and direction of the MDEQ with respect to delineation activities at the residential and commercial properties adjoining the KEC plant. Split samples were analyzed and QA/QC procedures were implemented by two laboratories experienced with polychlorinated biphenyl analysis. Samples were frequently split with on-site MDEQ representatives for MDEQ's independent analysis, which to our knowledge consistently correlated with BorgWarner's on-site and off-site laboratory analytical results.

The delineation activities were conducted utilizing the " US EPA, Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual," May 1996 (EISOPQAM), sampling and analytical protocols. A copy of the work plan with procedures used in the field and applicable sections of the EISOPQAM are attached to this report for reference purposes.

Upon completing the delineation activities, BorgWarner compiled and submitted the analytical results on October 2, 2000 to MDEQ and US EPA, Region IV. Subsequently, BorgWarner began to schedule the remediation of residential and commercial properties adjacent to the KEC plant and along Jackson and Lee Avenues for which access was granted with the assistance of MDEQ and City of Crystal Springs Mayor Webb and where an attorney and/or an independent consultant were not involved in performing conflicting sampling activities.

2. Remediation of Residential Properties

On October 16, 2000 BorgWarner initiated remediation activities at the Medical Center and the Dabney/Smith properties, which are adjacent to the KEC plant. Remediation of the Newman Duplex, on Lee Avenue, began on November 30, 2000. Remediation of these properties involved excavation and disposal of all soil containing 1.0 part per million (ppm) or greater of PCBs in accordance with MDEQ's established clean-up criteria for residential properties. All soils containing greater than 1 ppm PCBs but less than 50 ppm PCBs were profiled and disposed of at the BFI's "Little Dixie" Subtitle D Landfill in Madison County, Mississippi after MDEQ and US EPA, Region IV approvals were obtained.

Following excavation, all excavated areas were sampled to confirm that impacted soil had been removed. In correspondence regarding disposal requirements, Craig Brown of US EPA, Region IV, stated that the excavated soils did not meet the definition of "PCB remediation waste." Under this definition, the remediation activities fell under the management criteria and guidelines set by MDEQ. As a result, the remediation and confirmation of clean-up standards established by MDEQ guidance were adopted and implemented in all of BorgWarner's residential remediation activities. A grid with ten-foot (10) sampling point centers was used to confirm that impacted soils had been removed at each site.

The remediation of the Dabney/Smith, the Medical Center and the Newman duplex property resulted in the removal of 1400 tons of soil, which was disposed of at the BFI "Little Dixie" Subtitle D Landfill and replaced with 1500 tons of certified clean soil. During the remediation activities, the on-site laboratory analyzed 324 soil samples in the month of November and the fixed-base laboratory analyzed 32 quality control samples.

Vegetation, such as live oak trees, was treated with specialty equipment for maximum protection and to minimize damage to the root systems. Soil surrounding the live oak tree roots was removed using an "Air Shovel"™, a unique technology adopted specifically for this purpose. The Air Shovel™ uses a pressure spray to dislodge soil from around the roots while a vacuum system removes the soil and water by vacuuming into a tank. This method of soil removal has performed effectively with minimal damage to the tree's root system as was confirmed by the landscaping contractor and arborist. However, this process, regardless of its effectiveness, is very tedious and as a result only the tree on the Dabney/Smith property was completed during the second half of November. One other live oak tree, located on the Medical Center property, remains to be treated in a similar fashion and is scheduled for January 2001.

Landscaping and replacement of structures (sheds, car ports, etc.) on both the Medical Center and the Dabney/Smith properties are continuing and will most likely be completed by the end of December 2000. Both properties have been surveyed and the fence between the Dabney/Smith and Medical Center properties is currently being re-installed. Landscaping has been completed on the Newman duplex property.

Third party independent sampling activities commissioned by the Nutt & Associates Law Firm have interfered with planned remediation activities along Lee Avenue, specifically at the Frazier's, Edward's, and Kellum's properties. The Garment Shop is a more complicated matter for two reasons. First, the impacted soil at the Garment Shop is located at the property line between it and the Kellum residence and second, the Kellum elm tree roots extend to the Garment Shop property itself. BorgWarner has filed a Freedom of Information Act request to MDEQ in an effort to obtain a copy of the recently submitted report generated by these independent parties.

BorgWarner, after its evaluation of the sampling results and data contained within the third party report, will begin discussions with the attorney(s) representing each resident (mentioned above) along Lee Avenue in an attempt to resolve the matter, including confirmation that all sampling results have been disclosed, and whether further sampling is necessary, and confirm access to then remediate those properties. BorgWarner also plans to keep MDEQ appraised of any developments and any progress or if no progress is being made with the attorney(s) involved.

BorgWarner will schedule delineation activities for the Gas Station, which is at the corner of Lee Avenue next to the Garment Shop, Mayor Webb's residence and the drainage pathway to the south. BorgWarner will inform MDEQ of the timing for those activities.

3. Drainage Channel Properties

Beginning on October 30th through the end of November, BorgWarner collected and analyzed soil samples from nine properties situated along the drainage channel leading from the north side of KEC's plant site to Lake Chautauqua. The properties were:

1. Sojourner Property, 111 McPherson Street
2. Weathersby Property, 101 Forest Street
3. Robert Williams Property (Lonnie Williams' residence), 103 Forest Street
4. Flossie McMurray Property (Ralph Williams residence), 104 Forest Street
5. Ralph Williams Rental Property, 107 Forest Street
6. Richard Williams Property, 102 Forest Street
7. Roberta Fitzgerald Estate Property, (R.P Edwards point of contact) 108 Tucker Street Property currently is being rented to the Kendrick family.
8. Welch Property, 501 Camp Street
9. Orister Harris Property, 311 West Railroad Avenue

A total of 650 soil samples was collected from these properties and analyzed by the on-site laboratory. The fixed-base laboratory analyzed an additional 65 samples for confirmation and quality control purposes. These preliminary assessment activities were conducted in the same manner as the Kuhlman plant preliminary site assessment and the KEC plant adjacent residential properties; and utilizing the "EPA, Region IV Environmental Investigations Standard Operating

Procedures and Quality Assurance Manual", May 1996 (EISOPQAM), sampling and analytical protocols.

Preliminary results available at this time indicate that six of the nine properties that were sampled will require certain remediation. Four properties, including the Sojourner, Williams' rental, Harris and Welch properties, will require remediation under the MDEQ guidelines since the highest concentrations detected are less than 50 ppm. Two properties, including the M&Murray and R. P. Edwards properties, have soil with PCB concentrations greater than 50 ppm and therefore will require remediation under the TSCA rules. The following is a list of properties where concentrations greater than 1.0 ppm PCB were detected as well as the highest detected concentration on each property:

Property	Highest Detected Concentration
Sojourner	2.6 ppm
Williams rental	30.0 ppm
Harris	1.2 ppm
Welch	8.4 ppm
M&Murray	70.0 ppm
R. P. Edwards	51.0 ppm

Data from this sampling event are being evaluated and once quality control measures are completed the data will be tabulated. Site-specific reports containing collected data, maps of sampling locations, and work plans for remediation, if required, for each individual site are also being prepared and will be submitted to MDEQ and US EPA, Region IV by January 12, 2001.

It is anticipated that additional sampling will be required along the drainage channel. Several undeveloped properties, either abutting the drainage channel or through which the drainage channel runs, will be sampled to delineate the extent of possibly impacted soil and determine the potential for future runoff to Lake Chautauqua. The Department will be kept appraised as to the timing for this additional investigation and sampling activity.

4. KEC Plant

After an initial phase of sampling in the areas identified by KEC's construction activities and the related equipment decontamination zone, BorgWarner conducted further, substantial sampling activities in the south and north parking lot areas as well as the former above ground storage tank area. These delineation activities, other than any possible data gaps, have been completed. The results are currently being tabulated and compared for correlation purposes between the on-site and off-site laboratories, prior to being issued to MDEQ. Should any data gaps exist, BorgWarner will conduct further sampling activities.

This additional data will be incorporated as an addendum to the *Preliminary Site Assessment Report,* submitted to MDEQ in July 2000. Comments to the *Preliminary Site Assessment Report* made by MDEQ will also be addressed and included in the addendum submittal. It is anticipated that the addendum report will be submitted to MDEQ by February 12, 2001.

5. Lake Chautauqua

BorgWarner intends to consider delineation of the sediments at Lake Chautauqua, ecological assessment, and surface water sampling, to the extent appropriate after receipt of the pending "Task Force" report. These activities will not begin on any great scale until the Task Force report is evaluated.

6. Groundwater Delineation

BorgWarner intends to delineate the nature and extent of any groundwater contamination relative to the KEC plant. Groundwater delineation will take place at the time that remediation at the KEC plant commences. It is critical that the protective cover at the KEC plant site is not disturbed for the time being and that the groundwater investigation is addressed when BorgWarner is actively remediating on the KEC plant property. This approach will ensure that sediments from the KEC Plant do not travel to the drainage channel and Lake Chautauqua.

BorgWarner remains dedicated to continuing its open communication with MDEQ and US EPA, Region IV and looks forward to the meeting with MDEQ and City of Crystal Springs Mayor Webb and other Crystal Springs representatives on January 17, 2001 (at 8:30 a.m.) to further discuss any of the above and share its plans for future activities.

Should you have any questions or comments, please contact me directly at (810) 497-4503 at your earliest convenience.

Very truly yours,

Anastasia Hamel

Anastasia Hamel
Director, Environmental Programs
BorgWarner Inc.

Attachments:

1. Work Plan – Preliminary Assessment and Remediation
2. Craig Brown, US EPA, Region IV letter to BFI

cc: J. Banks, MDEQ
T. Russell, MDEQ
K. Dowell, Esq., MDEQ
C. Brown, US EPA Region IV
H. Webb, Mayor Crystal Springs
Laurene H. Horiszny, Esq.
Robert Martin, MSGA
Thomas D. Lupo, Esq.
Scott E. Schang, Esq.
Mickey Crockett, KEC
Al Thomas, KEC

WORKPLAN FOR THE PRELIMINARY ASSESSMENT AND REMEDIATION OF PCB CONTAMINATION IN SOIL KUHLMAN ELECTRIC CORPORATION FACILITY AND RESIDENTIAL COMMERCIAL PROPERTIES IN CRYSTAL SPRINGS, MISSISSIPPI

As established by the Mississippi Department of Environmental Quality (MDEQ) guidelines in connection with this project, all work related to the preliminary assessment of the extent of contamination at the Kuhlman Electric Corporation (KEC) facility and work related to the preliminary assessment and confirmation of remedial actions at KEC adjacent residential/commercial properties and residential properties along the drainage channel (leading from the north side of KEC's facility to Lake Chautauqua) has been performed in accordance with the *Environmental Protection Agency (EPA), Region IV "Environmental Investigations, Standard Operating Procedures and Quality Assurance Manual", May 1996 (EISOPQAM).*

Copies of relevant and applicable portions of the EISOPQAM are maintained on site during all field activities and all field personnel are trained in its implementation. Remedial action confirmation sampling grids were established using *MDEQ Guidance Document, Verification of Soil Remediation, Environmental Response Division, Waste Management Division, April 1994, Revision 1.* Specifically, sampling grids were based on Part 2-Medium and Large Site Soil Cleanup Verification, "Establishing Grid Interval."

Field operations were performed under the site-specific Health and Safety Plan guidelines. Modified Level "D" Personal Protective Equipment (PPE) was utilized by all personnel working within the investigative area.

Sampling Objectives

The soil-sampling objective is to establish the vertical and horizontal extent of contamination resulting from historical facility operations. In the KEC facility case, the soil-sampling objective included historical use of polychlorinated biphenyl (PCB). All sampling procedures were conducted in accordance with the US EPA, Region IV EISOPQAM. Sampling procedures included the collection of soil samples on a twenty foot triangular grid, where possible, at discreet depth intervals. Surface and subsurface soil samples were collected using GeoProbe® MacroProbe™ direct push sampling equipment. The GeoProbe® system uses a hydraulically driven hammer to advance a hollow, split-barrel sampler to the desired depth. The sampler contains an acetate liner in which a sample of the cored soil is retained. The MacroProbe™ corer retains a 1.25-inch diameter continuous 4 feet in length core sample. Once sampling is completed, the direct-push boring holes are backfilled with bentonite chips in unpaved areas, and with grout in parking lots and other paved areas.

Throughout the delineation activities each direct-push boring was sampled at 0.5-3.0 feet below ground surface (bgs) and at 3.0-6.0 feet bgs. Selected borings were completed to depths varying from 8-12 feet bgs and sampled in these deeper intervals to evaluate the vertical distribution of contaminants.

Additional sampling of dust, stream and drainage ditch sediments, surface water and ground water were collected, as warranted, in accordance with applicable EISOPQAM guidelines.

Analytical Methods

Samples that were collected were analyzed for PCBs by the on-site, mobile laboratory, Environmental Chemistry Consulting Services (ECCS) of Madison, Wisconsin. Initially soil samples were also analyzed for chlorinated benzenes until data confirmed that chlorinated benzene contamination is not at issue in samples with low concentrations of PCBs (generally <20 ppm). At least 10% of all samples were split and sent to a fixed-base laboratory, Paradigm Analytical Laboratories, Inc. (PAL) of Wilmington, North Carolina for analysis of the same parameters as for the on-site mobile laboratory to corroborate the results of laboratory analyses for quality control and quality assurance measures. Both the on-site and fixed-base laboratories used the same standard EPA approved analytical methods. PCBs were analyzed by Modified Environmental Protection Agency (EPA) Method 8080/81 and chlorinated benzene compounds were analyzed by EPA Method 8270. Volatile organic compounds (VOCs) were analyzed by EPA Method 8260 for samples suspected of being impacted by other industrial processes solvents unrelated to PCBs. Select soil samples were also analyzed for silver, by EPA Method 6010B, and cyanide, by EPA Method 9012A.

Surface water samples were analyzed by PAL for PCBs using EPA Method 8080/81. Semivolatile organic compounds (SVOCs) were analyzed by EPA Method 8270, Volatile Organic Compounds (VOCs) were analyzed by EPA Method 8260, silver by EPA Method 6010B, and cyanide using Standard Method 4500 Cn-E. Perched ground water was analyzed for PCBs, SVOCs, and VOCs by the same methods as indicated above for surface water.

Quality Control

The following is the list of key personnel dedicated to this project:

Project Manager:	Mr. Robert Martin, Martin & Slagle GeoEnvironmental Associates, LLC
Duties:	Responsible for management of project including all field coordination efforts.
Field Sample Custodian:	Mr. Robert Martin, Christine Slagle, Martin & Slagle GeoEnvironmental Associates, LLC
Duties:	Maintaining custody of samples, completing sample labels, Chain-of-Custody record.
Field Team Leader:	Mr. Robert Martin, Martin & Slagle GeoEnvironmental Associates, LLC
Duties:	Responsible for all activities related to the collection of samples.
Samplers:	Tim Fitzpatrick, Christine Slagle, Robert Martin
Duties:	Individuals responsible for the actual collection of samples.
Laboratory Sample Custodian:	Mr. Michael Linskens, ECCS Mr. Nicolas Schertz, ECCS Ms. Erin Staagard, PAL
Duties:	Individuals responsible for accepting custody of samples from the field sample custodian.

Quality Assurance Objectives for Data

Data for this project is being generated by two separate entities. The on-site data is generated by ECCS in their mobile laboratory. The fixed-base laboratory, PAL in Wilmington, North Carolina, generates the analytical results for the split samples.

The data quality objectives are pre-defined for the ECCS data in that Mississippi considers all mobile lab data screening level data. ECCS uses the same equipment and methodology as the fixed-base laboratories with the exception of the mini-extraction modification. Mobile laboratory data is validated by comparison of a minimum of 10% split samples with PAL. Following this procedure, the data qualifies as screening data with definitive confirmation under US EPA, Region IV EISOPQAM guidelines.

All samples sent to PAL were collected as follows: The sample was transferred from the GeoProbe® clean, unused, acetate sample liner into the labeled 4 ounce (oz) amber glass soil jar. The sample jar was then transferred to the mobile lab where ECCS personnel homogenized the sample prior to taking an aliquot for analysis. Due to the limited sample volume required by the ECCS mini-extraction and the low volatility of the chemicals of concern, the initial sampling jar was resealed (after ECCS personnel removed the amount of sample needed for their analysis), refrigerated and then sent to PAL; meaning PAL analyzed the sample from the exact same sample jar as ECCS.

Equipment rinsate samples were collected for evaluation of cross-contamination potential from ineffective decontamination procedures. These were prepared by pouring distilled water over the sampling equipment after decontamination and collecting and preserving the rinsate that was generated. Equipment rinseate samples were collected in accordance with the EPA, Region IV EISOPQAM guidelines.

Field blank samples were collected by filling sampling containers that were kept in the transition zone with distilled water. Field blanks determine the presence of ambient contaminants that may not be directly related to concentrations of contaminants in the sample media.

Blind duplicate soil samples were collected for analysis and sent to both laboratories. Blind duplicates were collected by homogenizing an aliquot of sample in a disposable plastic container and splitting the homogenized sample into two containers. After ECCS took their aliquot of these samples, the remainder of the sample was sent to PAL for analysis.

SAMPLE CONTROL AND FIELD RECORDS

Sample Identification

All samples sent to PAL for analysis conform to the labeling requirements under section 3.2.1 of the EISOPQAM.

8.3.1 Chain of Custody Procedures

Samples were logged as they were collected from the geoprobe liners. Date, time and sample litholgy were recorded on each log. Samples were then transferred to 4 oz amber glass jars and the jars transferred to a small sample cooler, which was taken to the mobile lab by field personnel in charge of sample handling. Sample identification (ID), date and time sampling occurred were recorded in the field logbook before transferring the samples to the mobile lab. Upon arrival at the mobile lab, the samples were transferred to the ECCS sample custodian who logged each sample on ECCS chain of custody forms. Each sample was assigned a unique ECCS internal ID number for tracking purposes. After analysis, the samples were transferred to either a sample refrigerator in the mobile lab or stored in coolers with ice until they were either shipped to PAL for confirmation analysis or readied for disposal. For samples sent to PAL, a new chain of custody form was completed by field personnel in charge of sample handling.

8.3.2 Field Records

Field records were kept in accordance with procedures and guidelines specified in section 3.5 of EISOPQAM.

8.4 Analytical Procedures

For analysis of samples in the field, ECCS used EPA Method 8082m, modified for quantitation of chlorinated benzenes and the mini extraction procedure.

PAL used EPA Method 8082 for quantitation of PCBs. For chlorinated benzenes, it used EPA Method 8270. While Method 8270 does not cover all the chlorinated benzenes, it provides confirmation of the ones it does detect and has the added benefit of supplying an analysis of a broad range of other semivolatile organic compounds.

For the analysis of cyanide EPA Method 9012A was employed and for silver EPA Method 6010B.

Selected samples were analyzed by EPA Method 8260, primarily to confirm that volatile organic compounds were not present in the samples or part of the site contaminants.

8.5 Laboratory Quality Assurance/Quality Control (QA/QC)

QA/QC procedures for both labs were found to be virtually identical. Summaries of each laboratory procedures follow.

ECCS:

- Continuous calibration standards analyzed every ten samples or less and at the end of a run.
- Blank samples and laboratory control samples (LCS) analyzed every twenty samples or less with a minimum of one per day.
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples analyzed every twenty samples or less with a minimum of one per day.

PAL:

- Continuous calibration standards analyzed at least once every 12 hour shift plus a minimum of every 20 samples gas chromatography/mass spectroscopy (GC/MS) criteria follows method specific tuning requirements per EPA Method 8270.
- Blank and LCS samples analyzed every 20 samples or less with a minimum of one per day.
- MS/MSD samples analyzed every 20 samples or less with a minimum of one per day.

8.6 Data Validation and Reporting

As discussed in section 8.2, the primary validation of the ECCS data was accomplished through comparison with the data from PAL.

Since Hexachlorobenzene and 1,2,4-Trichlorobenzene are the only chlorinated benzenes on the standard Method 8270 list, these two compounds and total PCBs were the parameters tracked for the data validation procedure.

Overall, the correlation to this point of the investigation and remediation activities has been excellent with the majority of sample splits showing Relative Percent Differences (RPDs) of less than 100. Considering the inherent variability of soil as a matrix, achieving 93% acceptable split data spanning several orders of magnitude of concentration serves to justify the use of the on-site data as definitive quality.

FILE COPY

RobMartin001@aol.com on 01/25/2001 02:28:20 PM

To: Gretchen_Zmitrovich@deq.state.ms.us
cc: ahamel@afs.bwauto.com

Subject: RevisedAnalitical Tables for Crystal Springs

Dear Gretchen:

Attached is a full set of analytical tables for the residences located along the drainage way. Six tables were revised to include data on deep samples collected from these sites. The revised tables are for the following properties:

Welch
Harris
Fitzgerald
Sojourner
Ralph Williams
McMurray

If you have any comments or questions, please call me at (828) 669-3929.

Sincerely,
Robert

. downgradientfinalrev1.xls

FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
875	0.5	01-Nov-00	02-Nov-00	2.6		
	1.5	01-Nov-00	03-Nov-00	19		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	16-Nov-00	<0.10		
876	0.5	01-Nov-00	03-Nov-00	4.9	17-Nov-00	3.6
	1.5	01-Nov-00	02-Nov-00	3.5		
Dupe 11-01	0.5	01-Nov-00	04-Nov-01	4.9	17-Nov-00	2.6
877	0.5	01-Nov-00	03-Nov-00	3.9		
	1.5	01-Nov-00	03-Nov-00	5.4		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	16-Nov-00	<0.10		
878	0.5	01-Nov-00	02-Nov-00	3.3	18-Nov-00	1.6
	1.5	01-Nov-00	02-Nov-00	<0.10	18-Nov-00	<.094
879	0.5	01-Nov-00	02-Nov-00	3.8	18-Nov-00	1.7
	1.5	01-Nov-00	03-Nov-00	<0.10		
989	0.5	04-Nov-00	06-Nov-00	6.8	18-Nov-00	2.4
	1.5	04-Nov-00	06-Nov-00	2.1	18-Nov-00	0.89
	5	16-Nov-00	17-Nov-00	2.8		
	7	16-Nov-00	17-Nov-00	<0.10		
	8	16-Nov-00	17-Nov-00	<0.10		
991	0.5	04-Nov-00	06-Nov-00	4.5		
	1.5	04-Nov-00	06-Nov-00	8.3		
	3	15-Nov-00	16-Nov-00	0.40		
	4	15-Nov-00	16-Nov-00	0.13		
990	0.5	04-Nov-00	06-Nov-00	3.3		
	1.5	04-Nov-00	06-Nov-00	5.6		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	16-Nov-00	<0.10		
997*	0.5	04-Nov-00	06-Nov-00	3.0	18-Nov-00	1.3
	1.5	04-Nov-00	06-Nov-00	<0.10		
988	0.5	04-Nov-00	06-Nov-00	9.9		
	1.5	04-Nov-00	06-Nov-00	5.6	18-Nov-00	3.8
992	0.5	06-Nov-00	06-Nov-00	3.9		
	1.5	06-Nov-00	06-Nov-00	4.9		
	3	06-Nov-00	06-Nov-00	1.8		
	4	06-Nov-00	07-Nov-00	3.2		
	5	15-Nov-00	16-Nov-00	0.80		
	6	15-Nov-00	16-Nov-00	3.8		
	7**	15-Nov-00	16-Nov-00	<0.10		
993	0.5	06-Nov-00	06-Nov-00	1.4		
	1.5	06-Nov-00	08-Nov-00	7.9		
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		

NA = Not Analyzed
J = Elevated detection limit due to toxaphene interference

Rev. 1

FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
994	0.5	06-Nov-00	06-Nov-00	2.0		
	1.5	06-Nov-00	06-Nov-00	51	21-Nov-00	55
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		
	7	15-Nov-00	16-Nov-00	<0.10		
995	0.5	06-Nov-00	06-Nov-00	3.0		
	1.5	06-Nov-00	06-Nov-00	6.3	21-Nov-00	2.8
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		
996	0.5	06-Nov-00	06-Nov-00	3.8		
	1.5	06-Nov-00	06-Nov-00	1.7		
	3	06-Nov-00	06-Nov-00	<0.10		
	4	06-Nov-00	NA	NA		
998	0.5	06-Nov-00	06-Nov-00	1.0		
	1.5	06-Nov-00	07-Nov-00	3.6		
	3	06-Nov-00	07-Nov-00	0.62		
	4	06-Nov-00	08-Nov-00	<0.10		
999	0.5	06-Nov-00	07-Nov-00	3.7		
	1.5	06-Nov-00	08-Nov-00	13		
999	3	06-Nov-00	07-Nov-00	2.6		
	4	06-Nov-00	08-Nov-00	<0.10		
1000	0.5	06-Nov-00	07-Nov-00	2.2		
	1.5	06-Nov-00	08-Nov-00	30		
	3	06-Nov-00	07-Nov-00	0.33		
	4	06-Nov-00	08-Nov-00	<0.10		
1001	0.5	06-Nov-00	08-Nov-00	5.6		
	1.5	06-Nov-00	08-Nov-00	7.0		
	3	06-Nov-00	07-Nov-00	0.13		
	4	06-Nov-00	08-Nov-00	0.19	18-Nov-00	<.110
1002	0.5	06-Nov-00	08-Nov-00	7.7		
	1.5	06-Nov-00	07-Nov-00	2.8	21-Nov-00	3.1
	3	06-Nov-00	07-Nov-00	<0.10	18-Nov-00	<.010
	4	06-Nov-00	NA	NA		
1003	0.5	06-Nov-00	07-Nov-00	1.7		
	1.5	06-Nov-00	07-Nov-00	3.0		
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
1004	0.5	06-Nov-00	07-Nov-00	0.41		
	1.5	06-Nov-00	07-Nov-00	1.8		
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
1013	0.5	06-Nov-00	07-Nov-00	2.4		
	1.5	06-Nov-00	07-Nov-00	<0.10	21-Nov-00	0.14

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FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
1014	0.5	06-Nov-00	07-Nov-00	0.64		
	1.5	06-Nov-00	07-Nov-00	<0.10	21-Nov-00	0.14
	3	06-Nov-00	07-Nov-00	<0.10		
	4	06-Nov-00		NA		
DUPE 11-06	1.5	06-Nov-00	07-Nov-00	0.12	21-Nov-00	0.14
1012	0.5	07-Nov-00	08-Nov-00	0.19		
	1.5	07-Nov-00	08-Nov-00	<0.10		
	3	07-Nov-00	08-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1011	0.5	07-Nov-00	08-Nov-00	0.13		
	1.5	07-Nov-00	08-Nov-00	<0.10		
	3	07-Nov-00	08-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1010	0.5	07-Nov-00	08-Nov-00	0.59		
	1.5	07-Nov-00	08-Nov-00	0.30		
	3	07-Nov-00	08-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1009	0.5	07-Nov-00	07-Nov-00	0.27		
	1.5	07-Nov-00	07-Nov-00	1.9		
	3	07-Nov-00	07-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1008	0.5	07-Nov-00	07-Nov-00	0.13		
	1.5	07-Nov-00	08-Nov-00	5.2		
	3	07-Nov-00	07-Nov-00	<0.10		
	4	07-Nov-00	NA	NA		
1007	0.5	07-Nov-00	07-Nov-00	0.12		
	1.5	07-Nov-00	08-Nov-00	22		
	3	07-Nov-00	07-Nov-00	0.92		
	4	07-Nov-00	14-Nov-00	0.15		
1006	0.5	07-Nov-00	07-Nov-00	0.16		
	1.5	07-Nov-00	07-Nov-00	0.40		
	3	07-Nov-00	07-Nov-00	3.2		
	4	07-Nov-00	08-Nov-00	0.11		
1005	0.5	07-Nov-00	07-Nov-00	0.27		
	1.5	07-Nov-00	08-Nov-00	8.9		
	3	07-Nov-00	07-Nov-00	1.4		
	4	07-Nov-00	08-Nov-00	<0.10		
1015	0.5	07-Nov-00	08-Nov-00	<0.10		
	1.5	07-Nov-00	08-Nov-00	0.23		
	3	07-Nov-00	08-Nov-00	10	30-Nov-00	6.1
	4	07-Nov-00	08-Nov-00	0.31	07-Dec-00	0.35

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Rev. 1

FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
DUPE 11-07	3	07-Nov-00	08-Nov-00	6.6	21-Nov-00	6.4
1044	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1043	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1042	0.5	14-Nov-00	14-Nov-00	0.22		
	1.5	14-Nov-00	14-Nov-00	1.0		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1041	0.5	14-Nov-00	14-Nov-00	0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1040	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1039	0.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.110
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1034	0.5	14-Nov-00	14-Nov-00	0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.100
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1033	0.5	14-Nov-00	14-Nov-00	<0.40 J	30-Nov-00	<.100
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1032	0.5	14-Nov-00	14-Nov-00	0.16		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1031	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.092
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1030	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		

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Rev. 1

FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1029	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1038	0.5	14-Nov-00	14-Nov-00	<0.40 J		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1037	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.100
	3	14-Nov-00	14-Nov-00	<0.10	30-Nov-00	<.01
	4	14-Nov-00	NA	NA		
1036	0.5	14-Nov-00	14-Nov-00	<0.10		
	1.5	14-Nov-00	14-Nov-00	<0.10		
	3	14-Nov-00	14-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1035	0.5	14-Nov-00	15-Nov-00	<0.10		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1025	0.5	14-Nov-00	15-Nov-00	<0.10		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	0.13		
	4	14-Nov-00	15-Nov-00	0.34		
	5	16-Nov-00	17-Nov-00	<0.10		
	7	16-Nov-00	17-Nov-00	<0.10		
	8	16-Nov-00	17-Nov-00	<0.10		
1026	0.5	14-Nov-00	15-Nov-00	<0.10		
	1.5	14-Nov-00	15-Nov-00	0.18		
	3	14-Nov-00	15-Nov-00	0.31	07-Dec-00	<.140
	4	14-Nov-00	15-Nov-00	<0.10		
1027	0.5	14-Nov-00	15-Nov-00	0.46		
	1.5	14-Nov-00	15-Nov-00	0.62	07-Dec-00	0.29
	3	14-Nov-00	15-Nov-00	0.37		
	4	14-Nov-00	15-Nov-00	<0.10		
1028	0.5	14-Nov-00	15-Nov-00	0.25	07-Dec-00	0.21
	1.5	14-Nov-00	15-Nov-00	<0.10	07-Dec-00	<.10
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
DUPE 11-14	1.5	14-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.110
1016	0.5	00-Jan-00	15-Nov-00	0.12		

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FITZGERALD ESTATE PROPERTY
108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	1.5	14-Nov-00	15-Nov-00	0.51		
	3	14-Nov-00	15-Nov-00	1.1		
	4	14-Nov-00	15-Nov-00	<0.10		
1017	0.5	14-Nov-00	15-Nov-00	0.48		
	1.5	14-Nov-00	15-Nov-00	14	30-Nov-00	3
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1018	0.5	14-Nov-00	15-Nov-00	0.23		
	1.5	14-Nov-00	15-Nov-00	0.68		
	3	14-Nov-00	15-Nov-00	0.12	07-Dec-00	0.24
	4	14-Nov-00	15-Nov-00	<0.10		
1019	0.5	14-Nov-00	15-Nov-00	0.16		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1020	0.5	14-Nov-00	15-Nov-00	0.12		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1021	0.5	14-Nov-00	15-Nov-00	0.18		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.110
	4	14-Nov-00	NA	NA		
1022	0.5	14-Nov-00	15-Nov-00	<1.0 J		
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.099
	4	14-Nov-00	NA	NA		
1023	0.5	14-Nov-00	15-Nov-00	0.30		
	1.5	14-Nov-00	15-Nov-00	0.25		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1024	0.5	14-Nov-00	15-Nov-00	0.23	30-Nov-00	<.110
	1.5	14-Nov-00	15-Nov-00	<0.10		
	3	14-Nov-00	15-Nov-00	<0.10		
	4	14-Nov-00	NA	NA		
1045	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10		
	3	15-Nov-00	15-Nov-00	<0.10		
1046	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.10
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1047	0.5	15-Nov-00	15-Nov-00	<0.10		

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108 Tucker Street
Crystal Springs, Mississippi
PCB Concentrations Detected in Soil

			Field Laboratory		Fixed Laboratory	
Sample ID	Sample Depth (ft bgs)	Date Collected	Date Analyzed	Concentration (mg/kg)	Date Analyzed	Concentration (mg/kg)
	1.5	15-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.10
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
DUPE 11-15	1.5	15-Nov-00	15-Nov-00	<0.10	30-Nov-00	<.099
1048	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10		
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1049	0.5	15-Nov-00	15-Nov-00	<0.10		
	1.5	15-Nov-00	15-Nov-00	<0.10		
	3	15-Nov-00	15-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1050	0.5	15-Nov-00	16-Nov-00	<10.0 J		
	1.5	15-Nov-00	16-Nov-00	<0.10		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		
1051	0.5	15-Nov-00	16-Nov-00	<0.10		
	1.5	15-Nov-00	16-Nov-00	<0.10		
	3	15-Nov-00	16-Nov-00	<0.10		
	4	15-Nov-00	NA	NA		

* Field Lab data report identified sample as DP992.
Field notes and corresponding sample collection times confirm that sample results are for sample 997.
** Field Lab data report identified sample as DP994.
Field notes and corresponding sample collection times confirm that sample results are for sample DP 992 @ 7' BGS.

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Rev. 1

FILE COPY

CITY OF CRYSTAL SPRINGS
P.O. BOX 473
210 EAST RAILROAD AVE.
CRYSTAL SPRINGS, MS 39059

FAX COVER SHEET

DATE: 10/17/00 TIME: _____

TO: Gretchen SEG PHONE: 961-5240

FAX: 961-5300

FROM: Kim PHONE: 601/892-1210

CITY OF CRYSTAL SPGS FAX: 601/892-4870

RE: See Attached

Number of pages including cover sheet: 2

Message

Thanks!

CRYSTAL SPRINGS RESIDENTS MEETING SCHEDULE CONCERNING PCB TESING (OCTOBER 18, 2000)

1. Beulah Sojourner
   111 McPherson Street
   Time 8:30 A.M.

2. Property owner: Flossie W. McMurray
   (2 lots) Lives out of town
   Son – Ralph Williams
   Renter – Kevin Jones
   Time 8:45 A.M.

3. Wanda Williams
   102 Forest Street
   Time 9:00 A.M.

4. Ms. Weathersby
   101 Forest Street
   Daughter lives in trailer
   Mattie Weathersby
   101A Forest Street
   Time 9:15 A.M.

5. Lonnie Williams
   103 Forest Street
   Time 9:30 A.M.

6. Earl and Betty Kendrick
   108 Tucker Street
   Time 9:45 A.M.

7. Paulette Welch
   501 Camp Street
   Time 10:00 A.M.

DEQ needs to assess need for testing on other properties