SITE ASSESSMENT REPORT

Puckett Street Properties
Crystal Springs, Mississippi

Prepared for

BorgWarner Inc.

October 2005

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Prepared by
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October 2005

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1.0 EXECUTIVE SUMMARY

The Kuhlman Electric Corporation (KEC) plant in Crystal Springs, Mississippi was constructed and has been owned and operated as a transformer manufacturing plant since the 1950s by KEC or its predecessors (collectively "KEC"). KEC continued to own and operate the plant in March 1999 when BorgWarner Inc. purchased the stock of Kuhlman Corporation, the parent of KEC, and thereafter as well. Seven months later, on October 5, 1999, Kuhlman Corporation sold KEC's stock to KEC Acquisition Corporation. BorgWarner and Kuhlman Corporation indemnified KEC, KEC Acquisition Corporation and their affiliates for historic contamination at the site and have, under the purchase agreement, exercised their right to control any remediation of such contamination.

Previous environmental assessments conducted at the KEC plant site indicated that soil impacted with polychlorinated biphenyl (PCB) Aroclor 1260 was present on-site. PCB impacted soil was reportedly transported and deposited on the properties located at 106 Puckett Street in Crystal Springs, Mississippi.

On August 28, 2001 3TM International, Inc. collected twenty soil samples at 106 Puckett Street. One of the samples had a concentration of PCBs as Aroclor 1260 at 1.83 milligrams per kilogram (mg/Kg), which is above the 1 mg/kg standard established by the Mississippi Department of Environmental Quality (MDEQ). The 3TM International, Inc. (3TM) report was submitted to MDEQ with a cover letter dated October 18, 2004. Upon receipt of the 3TM report MDEQ, on October 25, 2004, requested that BorgWarner investigate the soils at the 106 Puckett Street property. At MDEQ's request, on January 17, 2005 BorgWarner began soil-sampling activities at 106 Puckett Street.

Nine of the 36 soil samples collected from 106 Puckett Street on January 17 and 18, 2005, had PCB concentrations greater than 1 mg/Kg. Based on these results, the assessment was expanded on February 25, and 26 to include properties at 104 and 110

Puckett Street and additional areas at 106 Puckett Street. Nineteen of the 84 samples collected had PCB concentrations greater than 1 mg/Kg.

A site characterization work plan to complete the assessment by delineating the vertical and horizontal extent of contamination at the 104, 106 and 110 Puckett Street and adjacent properties was prepared and submitted to MDEQ for approval in April 2005. The site characterization was conducted from July 14 to 22, 2005 and September 6, 2005 in accordance with the *Data Summary and Site Characterization Work Plan, 104, 106, and 110 Puckett Street,* approved by the MDEQ in May 2005.

Based on the information gathered during previous investigations and this site characterization assessment, it was determined that:

1. The property at 104 Puckett Street is impacted by PCB to a maximum depth of 0 to 12" below ground surface (bgs). An area along the northwest property boundary had PCB concentrations greater than 1 mg/Kg.

2. The property at 106 Puckett Street is impacted by PCB to a maximum depth of 0 to 12" bgs, with the exception of one location (MWP-027) at the far northwestern corner on the property boundary, which is impacted by PCB to a maximum depth of 12 to 24" bgs. Multiple locations along the eastern and southern property boundaries had PCB concentrations greater than 1 mg/Kg. One sample location in the far northwestern corner of the property boundary had a PCB concentration above 50 mg/Kg at 0 to 12" bgs.

3. The property at 110 Puckett Street is impacted by PCB to a maximum depth of 0 to 12" bgs. Multiple samples collected in the roadside ditch along the southern property boundary had PCB concentrations greater than 1 mg/Kg. PCB levels

above 1 mg/Kg were also present in the northeast quadrant of the property near the boundary with 106 Puckett Street.

4. The property identified as Parcel 17 is impacted by PCB to a maximum depth of 0 to 12" bgs. This property is located to the north of 106 and 110 Puckett Street. Locations along the southeastern quadrant of this property had PCB concentrations greater than 1 mg/Kg.

5. The property identified as Parcel 21 has not been impacted by PCB. This property is located to the west of the 110 Puckett Street site.

6. The roadside ditch on the City of Crystal Springs right-of-way property to the south of 106 and 110 Puckett Street sites is impacted by PCB to a maximum depth of 0 to 12" bgs. It appears that this ditch has been impacted from storm water runoff carrying PCB-containing sediments from the 106 and 110 Puckett Street sites into the ditch.

7. The vertical and horizontal extent of PCB contamination is fully delineated at the 104, 106 and 110 Puckett Street sites and adjacent properties.

2.0 INTRODUCTION

2.1 Site Description

The subject properties are located along Puckett Street, Crystal Springs, Copiah County, MS 39059, with the center of the project sites being at state plane coordinates N 907265 and longitude E 2289656. The sites are located within the town limits of Crystal Springs. The town center is located approximately 0.5 miles south of the properties (Figure 1).

The sites assessed during this investigation include single family residential properties at 104, 106 and 110 Puckett Street and vacant, wooded properties known as Tax Parcel 21 located on the west side of Puckett Street and Tax Parcel 17 located north of the 104, 106 and 110 Puckett Street.

2.2 Background

The Kuhlman Electric Corporation (KEC) plant in Crystal Springs, Mississippi was constructed and has been owned and operated as a transformer manufacturing plant since the 1950s by KEC or its predecessors (collectively "KEC"). KEC continued to own and operate the plant in March 1999 when BorgWarner Inc. purchased the stock of Kuhlman Corporation, the parent of KEC, and thereafter as well. Seven months later, on October 5, 1999, Kuhlman Corporation sold KEC's stock to KEC Acquisition Corporation. BorgWarner and Kuhlman Corporation indemnified KEC, KEC Acquisition Corporation and their affiliates for historic contamination at the site and have, under the purchase agreement, exercised their right to control any remediation of such contamination.

Previous environmental assessments conducted at the KEC plant site indicated that soil contaminated with polychlorinated biphenyl (PCB) Aroclor 1260 was present on-site. PCB impacted soil was reportedly transported and deposited on the property located at 106 Puckett Street in Crystal Springs, Mississippi.

2.3 Summary of Previous Work Performed at the 106 Puckett Street Property

On August 28, 2001 3TM International, Inc. collected twenty soil samples at 106 Puckett Street (Figure 1). One of the samples had a concentration of PCBs as Aroclor 1260 at 1.83 milligrams per kilogram (mg/Kg), which is the above 1 mg/Kg standard established by the Mississippi Department of Environmental Quality (MDEQ). The 3TM International, Inc. (3TM) report was submitted to MDEQ with a cover letter dated October 18, 2004. Upon receipt of the 3TM report MDEQ, on October 25, 2004, requested that BorgWarner investigate the soils at the 106 Puckett Street property. At MDEQ's request, on January 17, 2005 BorgWarner began soil sampling activities at 106 Puckett Street.

On January 17 and 18, 2005, a total of 36 soil samples were collected and analyzed for PCBs from 106 Puckett Street. Laboratory results indicated that nine samples had PCB concentrations greater than 1 mg/Kg.

On February 25 and 26, 2005 the assessment was expanded to include samples from the side yards of adjacent properties of 104 and 110 Puckett Street, as well as the backyard of the 106 Puckett Street north to the fence line. A total of 84 soil samples were collected during this second sampling event. Soil samples were collected at depths ranging from 0-1 foot below ground surface (bgs) and 1-2 feet bgs. Analytical results from the expanded assessment indicated that of the 84 samples collected, 19 samples had PCB concentrations greater than 1 mg/Kg. One of the 19 samples had a PCB concentration of 51 mg/Kg. All samples with PCB concentrations greater than 1 mg/Kg were collected from 0-1 foot bgs except one sample collected in the northwest corner of the property boundary of 106 Puckett Street. Sample locations and corresponding analytical results are presented on Figure 2. Summaries of the analytical results are presented in Tables 1, 2, and 3. Laboratory reports are included in Appendix 1, and the Data Evaluation Report is included in Appendix 2.

2.4 Site Assessment Objective

Based on the results of the previous site investigations, performed at the Puckett Street properties, characterization activities were expanded to include adjacent properties. A site characterization work plan to complete the assessment by delineating the vertical and horizontal extent of contamination at the 106 and 110 Puckett Street and adjacent properties to the north, west and southwest was prepared and submitted to MDEQ for approval in April 2005. The site characterization was completed in accordance with the *Site Characterization Work Plan* dated April 2005 and approved by the MDEQ in May 2005.

The site characterization objective for the Puckett Street properties was to determine the horizontal and vertical extent of impacted soil. Soil samples were collected along the roadside ditch located on the south side of the 106 and 110 Puckett Street properties. Samples were also collected to the north and northeast, south and southwest of the areas previously sampled and on adjacent properties to a depth until the horizontal and vertical extent of impacted soil was delineated.

3.0 ASSESSMENT ACTIVITIES

3.1 Summary of Work Performed

The assessment activities conducted at the Puckett Street properties were performed from July 14, 2005 to July 22, 2005. The assessment activities included:

1. Completion of the delineation of the vertical and horizontal extent of PCB impacted soils on the 106 and 110 Puckett Street properties using direct push and hand auger sampling methods; and,

2. Delineation of the extent of PCB impacted soils on adjacent properties located north, west, south and southwest of the 106 and 110 Puckett Street sites using direct push and hand auger sampling methods.

3.2 Direct Push and Hand Auger Soil Sampling

Samples were collected on the 106 and 110 Puckett Street properties with depth at locations previously determined to have PCB concentrations exceeding 1 mg/Kg at the surface using direct-push sampling techniques. Sampling continued vertically until the detectable PCB concentrations were less than 1 mg/Kg. Samples were also collected at 110 Puckett Street at locations not previously sampled. Additionally, samples were collected on the adjacent properties located north, west, south and southwest of 106 and 110 Puckett Street to determine if PCB was present in the soil and to determine the vertical and horizontal extent of contamination, if any.

The samples were collected, by the field geologist, between July 14 and July 22, 2005 with a direct-push sampling rig and hand auger. The direct push rig utilizes GeoProbe® and MacroProbe™ equipment that uses a hydraulically driven hammer to advance a hollow stainless steel sampler to the desired depth. The sample is retained in an acetate

sleeve from which the sample is taken at the desired depth interval. A total of 18 additional samples were collected from nine locations on the 110 Puckett Street property from areas to the north and northeast of those previously sampled. A total of 52 samples were collected from 35 locations along the ditch line to the north of Puckett Street on City of Crystal Springs right-of-way property (the property adjacent to the south and southwest of 106 and 110 Puckett Street. Twenty samples were collected from 10 locations on the property identified in the Copiah County, Mississippi tax records as Parcel 21 (the adjacent property to the west of 110 Puckett Street) and, 30 samples were collected from 15 locations on the property identified by Copiah County, Mississippi tax records as Parcel 17 (the adjacent property to the north of 106 and 110 Puckett Street).

Each sample location was surveyed utilizing a robotic total station to locate each sample point that was then mapped on the state plane coordinate system. A registered land surveyor laid out all of the necessary baselines for control.

Each sample point was assigned a unique location number based on the survey. The vertical extent of PCB-impacted soil was determined by collecting samples vertically through the sub-grade at each location where PCB concentrations were greater than 1 mg/Kg at the surface. Vertical sampling continued at each location until the PCB concentration was less than 1 mg/Kg.

Sample point locations were determined on a 20-foot grid to delineate the lateral extent of contamination to the north, south and southwest of the 106 and 110 Puckett Street properties. Samples collected from 110 Puckett Street and adjacent properties to the north, west, south and southwest were advanced to a maximum depth of 12 to 24 inches below ground surface (bgs). Figure 2 shows locations of all sampling points for all sampling events along with PCB concentrations for each sample collected.

4.0 SITE CHARACTERISTICS

4.1 Source Area

According to one Puckett Street property owner, soil was removed by the owner from the KEC site and used for fill material on the property. Based on information gathered from previous investigations at the KEC plant, it appears that soil located on the Puckett Street properties has been impacted by the same PCB compound previously used at the KEC plant. The roadside ditch line to the south and southwest of the 104, 106 and 110 Puckett Street properties has been impacted by PCB apparently from deposition of sediments from storm water runoff from the Puckett Street properties.

4.2 Regional Geology/Hydrogeology

Sediments consisting of fine-grained sands with local lenses of clay and gravel underlie Crystal Springs and the surrounding area. These red and orange sediments comprise the Citronelle Formation. The Citronelle Formation covers approximately 30 percent of Copiah County and is present at ground surface in the vicinity of Crystal Springs. Gravel, mainly consisting of chert and quartz is present throughout the formation near Crystal Springs and is heavily mined in the surrounding area. The thickness of this formation ranges from a few feet to a maximum of 100 feet with average depths ranging from 20 to 80 feet. Thickness of the unit is controlled by erosion of surface soils. The thinner segments are located in washes and drainage channels, while the thicker portions are located on topographically high areas. The Citronelle formation lies unconformably over the Catahoula Formation in the vicinity of Crystal Springs with the base elevations of the Citronelle ranging from 375 feet mean sea level (msl) to about 430 msl.

According to published literature, the uppermost aquifer in the area of Crystal Springs exists under phreatic conditions (unconfined) and rises into the Citronelle Formation. Groundwater generally exists near the base of the Citronelle. Since the surficial aquifer

is under phreatic conditions, no extensive clay confining units are anticipated above this first aquifer. Depth to groundwater ranges from 20 to greater than 100 feet with more than half of the water levels measured in wells deeper than 50 feet. Average rainfall totals 57.2 inches per year in the Copiah County area, of which approximately 44 inches evaporate. Precipitation that does not evaporate or does not run off into streams and drainages recharges the surficial aquifer.

The region surrounding Crystal Springs is situated in a recharge zone of the Coastal Low Lands Aquifer System. Average recharge into the aquifer system ranges from 0.17 to 0.66 inches per year while discharge rates range from 0 to 0.17 inches per year. The discharge deficit is the result of large water well withdrawals used to meet agricultural demands.

Eight municipal water supply wells are currently in operation within 1.5 miles of the Puckett Street properties. Seven of the municipal wells are used for drinking water and one is used as a water supply for the municipal pool.

4.3 Study Area Geology

The Citronelle Formation covers approximately 30 percent of Copiah County and is present at ground surface in Crystal Springs. The formation is characterized by red and orange sediments. Gravel, mainly consisting of chert and quartz is present throughout the formation near Crystal Springs and is heavily mined in the surrounding area. The thickness of this formation ranges from a few feet to a maximum of 100 feet with average depths ranging from 20 to 80 feet. Thickness of the unit is controlled by erosion of surface soils. The thinner segments are located in washes and drainage ditches/channels, while the thicker portions are located on topographically elevated areas.

4.4 Study Area Hydrogeology

Based on subsurface investigations conducted in Crystal Springs, the depth to the water table beneath upland areas is approximately 60-65 feet bgs. Localized perched groundwater exists at numerous areas above small clay lenses deposited within the Citronelle Formation. The depth to perched groundwater ranges from just beneath ground surface to approximately 20 feet. During site assessment activities, Geoprobe™ direct push soil borings were advanced to a maximum depth of 12 feet bgs, and ground water was not encountered.

5.0 NATURE AND EXTENT OF CONTAMINATION

The constituent of concern in the soil at the Puckett Street and adjacent properties is polychlorinated biphenyl (PCB). PCB is a mixture of many biphenyls with varying degrees of chlorination. The variety used as an insulator fluid by KEC in the transformer manufacturing process was "Aroclor 1260." Aroclor 1260, in its pure form, is a sticky soft resin with a light yellow color and weak odor. It is relatively insoluble in water (0.0020 to 0.080 mg/l) but is soluble in most organic solvents (Montgomery, 1990). PCB is immobile in ground water. It attaches to soil particles; particularly soils with high organic content, and can become mobile in the environment through wind and water erosion of contaminated soil.

5.1 Direct Push and Hand Auger Soil Sampling

During this and previous assessments of Puckett Street properties, a total of 222 direct push or hand auger soil samples were collected from 95 separate locations. Of these, 36 samples were collected from 18 locations on the 106 Puckett Street property on January 17 and 18, 2005 and 84 samples were collected from 42 locations on the 104, 106 and 110 Puckett Street properties on February 25 and 26, 2005. During the latest assessment, on July 14 to July 22, 2005, a total of 99 samples were collected from 69 locations on Puckett Street properties. Of these, 18 samples from nine locations were collected on the 110 Puckett Street property; 30 samples from 15 locations were collected from property known as Parcel 17 adjacent to the north of the 106 and 110 Puckett Street properties; 20 samples from 10 locations were collected from property known as Parcel 21 adjacent to the west of the 110 Puckett Street property; and 31 samples from 35 locations were collected along the roadside ditch line along the north side of Puckett Street and southwest of the106 and 110 Puckett Street properties. On September 6, 2005 three additional samples were collected from one location previously sampled on the 106 Puckett Street property.

Refer to *Data Summary and Site Characterization Workplan, 104,106, and 110 Puckett Street, April 2005* for data tables and laboratory data sheets pertaining to sampling results obtained prior to July 14, 2005. Figure 2 shows all sample points with PCB concentrations for all sampling conducted in the Puckett Street study area.

5.1.1 104 Puckett Street

Laboratory results from the analysis of soil samples collected on February 25 and 26, 2005 indicate that PCB concentrations exceeded the MDEQ standard of 1 mg/Kg in one of the 20 samples collected on the 104 Puckett Street property. The sample exceeding the 1 mg/Kg PCB concentration was collected in the northwest corner of the site and in close proximity to the property boundary with 106 Puckett Street. During this assessment, soil samples were collected vertically in each location at 0 to 12" and 12 to 24" bgs. Only sample with a PCB concentration greater than 1 mg/Kg was collected at the 0 to 12" depth. No additional samples were collected from this property during this phase of work. Refer to *Data Summary and Site Characterization Workplan, 104,106, and 110 Puckett Street, April 2005* for data tables and laboratory data sheets pertaining to this property.

5.1.2 106 Puckett Street

Laboratory results of samples collected on January 17 and 18, 2005 indicate that PCB concentrations of 1 mg/Kg were exceeded in nine of the 36 samples collected on the 106 Puckett Street property. The samples were collected from 0 to12" bgs. Laboratory results of samples collected on February 25 and 26, 2005 indicate that PCB concentrations of 1 mg/Kg were exceeded in 10 of the twenty samples collected. One of the 10 samples that exceeded 1 mg/Kg PCB collected at the northwest corner of the property boundary (MWP-027) had a PCB concentration greater than 50 mg/Kg. On September 6, 2005 three additional samples were collected at depths of 2 to 3 feet, 3 to 4

feet and 4 to 5 feet bgs to fully determine vertical extent of contamination. Analytical results are summarized in Table 1.

5.1.3 110 Puckett Street

Laboratory results of samples collected on February 25 and 26, 2005 indicate that PCB concentrations of 1 mg/Kg were exceeded in 10 of the 44 samples collected on the 110 Puckett Street property. The samples were collected from 0 to12" bgs. Analytical results of samples collected on July 14 and 22, 2005 indicated that PCB concentrations of 1 mg/Kg were exceeded in three of the 18 samples collected during this sampling event. The samples were collected from 0 to 12" bgs. Analytical results are summarized in Table 2.

5.1.4 Parcel 17

Laboratory results of samples collected on July 20 and 22, 2005 indicate that PCB concentrations of 1 mg/Kg were exceeded in three of the 30 samples collected on property. The samples were collected from 0 to12" bgs. Analytical results are summarized in Table 3.

5.1.5 Parcel 21

No PCB concentrations greater than 1 mg/Kg were detected in any of the 20 samples collected on the property on July 14, 2005. Analytical results are summarized in Table 4.

5.1.6 City of Crystal Springs

Laboratory results of samples collected on July 15, 18 and 19, 2005 indicate that PCB concentrations of 1 mg/Kg were exceeded in four of the 31 samples collected on the City

of Crystal right-of-way property along the north side of Puckett Street. Analytical results are summarized in Table 5.

5.2 Summary of Delineation

The initial investigations and subsequent site characterization assessment utilizing hand auger and direct push sampling methods confirm that the soil that was placed on the 106 and 110 Puckett Street properties contains PCB concentrations greater than 1 mg/Kg. One location on the 106 Puckett Street property had PCB concentrations greater than 50 mg/Kg at 0 to 12" bgs.

PCB concentrations greater than 1 mg/Kg were also detected at 104 Puckett Street, 110 Puckett Street property north of 106 and 110 Puckett Street known as Parcel 17 and property along the roadside ditch line on City of Crystal Springs right-of-way to the south and southwest of the 106 and 110 Puckett Street properties.

6.0 CONTAMINANT FATE AND TRANSPORT

6.1 Migration Routes

Migration routes, for the PCB impacted soil deposited as fill on the 106 and 110 Puckett Street properties included:

- Airborne dust with adsorbed PCB;
- Surface and stormwater runoff and soil erosion into drainage ditches and streams; and
- Deposition by mechanical means.

Airborne dust is not considered a significant concern under the current conditions. The 106 and 110 Puckett Street properties are grassed and unless the soils are mechanically disturbed the potential for significant quantities of airborne dust to be generated is low.

Surface water runoff and resultant soil erosion were the primary transport mechanisms for PCB from the 106 and 110 Puckett Street properties to the roadside ditch that travels along the north side of Puckett Street and down gradient from the subject properties. PCB was detected in soil samples along this ditch line to the south and southwest from 106 and 110 Puckett Street.

6.2 Contaminant Concentrations

PCB concentrations in the soil on the Puckett Street properties range from a low of non-detect (<0.1 mg/kg) to a high of 51 mg/Kg. PCB concentrations above the MDEQ maximum allowable limit of 1 mg/Kg are limited to the area delineated on Figure 2. The depth of impacted soil ranges from less than 1 foot to a maximum of 3 feet bgs.

6.3 Contaminant Migration

PCB impacted soil was originally brought to 106 Puckett Street by the landowner. The 106 and 110 Puckett Street properties slope gently from the northeast to the south and southwest. The site relief is approximately five feet. Storm water runoff flows generally toward the south and southwest and enters a roadside drainage ditch on the north side of Puckett Street. Soils in the ditch have PCB concentrations greater than 1 mg/Kg as a result of storm water runoff from the 106 and 110 Puckett Street properties. The topography also slopes gently toward the north of 106 Puckett Street. Stormwater runoff has transported PCB across the property line of 106 Puckett Street onto Parcel 17 to the north.

7.0 QUALITY ASSURANCE/QUALITY CONTROL RESULTS

As established by the MDEQ guidelines, all work related to the characterization of the Puckett Street and adjacent properties assessed during this investigation was 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 were maintained on site during all field activities. All field personnel were trained in EISOPQAM implementation.

7.1 Site Characterization Assessment Objectives

The site characterization objective for the Puckett Street properties was to determine the horizontal and vertical extent of impacted soil. Soil samples were collected along the roadside ditch located on the south side of the 106 and 110 Puckett Street properties. Samples were also collected to the north and northeast, south and southwest of the areas previously sampled, and on adjacent properties to a depth until the horizontal and vertical extent of impacted soil was delineated.

Soil samples were collected by the field geologist at the locations and frequency described in Section 2.2 of the *Site Characterization Workplan,* dated April 2005, approved by MDEQ in May 2005.

7.2 Analytical Methods

Samples were analyzed for PCB by the on-site laboratory, Environmental Chemistry Consulting Services (ECCS) of Madison, Wisconsin. At least 10% of all samples were split and sent to the off-site laboratory, Paradigm Analytical Laboratories, Inc. (PAL) in Wilmington, North Carolina for PCB analysis. This measure was taken to corroborate the results of the on-site laboratory analyses.

The on-site laboratory analyzed the soil samples using a mini-extraction procedure followed by gas chromatography based on EPA Method 8082 for PCB. The procedure incorporates all the quality control rigors of the full 8082 method including quantification based on 6-point calibration with continuing calibration verification, surrogate method performance monitoring, method blanks, laboratory control samples (LCS), and matrix spike (MS)/matrix spike duplicate (MSD) samples.

The off-site laboratory analyzed all soil samples for PCB using EPA Method 8082.

7.3 Key Personnel

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

Project Manager: Robert Martin, L.G. Martin & Slagle GeoEnvironmental Associates, L.L.C.

Duties: Responsible for project management.

Field Manager: Charles Peel, P.G. Peel Consulting, P.L.L.C.

Duties: Overall management of field investigation and remedial activities. Collection of samples. Maintenance of all field logs and records.

On-site laboratory

Manager: Richard Johnson, Environmental Chemistry Consulting Services, Inc.

Duties: Responsible for accepting custody of samples from the field personnel. Maintenance of laboratory records. Sample analysis.

QA/QC Coordinator: Christine Slagle, Martin & Slagle GeoEnvironmental Associates, L.L.C.

Duties: Review daily sample logs. Confirm that QC samples are collected and sampling protocols are met. Assure that data quality objectives are met.

7.4 Quality Assurance Objectives for Data

The data quality objectives were pre-defined for the ECCS data in that MDEQ considers all on-site laboratory data as screening level data. ECCS uses the same equipment and methodology as the off-site laboratory with the exception of the mini-extraction modification. Ten percent of the samples collected were split and submitted to Paradigm Analytical for confirmation analysis. Following this procedure, the data were qualified as screening data with definitive confirmation under EPA Region IV EISOPQAM guidelines.

Samples designated for further analysis by Paradigm were mixed thoroughly by the sample collectors (in a zip lock bag and/or stainless steel bowl) and delivered to the on-site laboratory where ECCS took its aliquot for analysis. After the analysis, ECCS reserved some sample for contingency purposes and sent the remainder to Paradigm for analysis. Paradigm therefore, analyzed the exact same sample as ECCS.

Equipment rinsates were collected for evaluation of cross-contamination potential. These were prepared by pouring distilled water over the sampling equipment after

decontamination of equipment, and collecting, preserving, and analyzing the rinsates generated.

Field blanks were collected. These were prepared by filling sample containers, kept in the transition zone, with distilled water.

Blind duplicate soil samples were collected for analysis and sent to both laboratories. Blind duplicates were collected by homogenizing an aliquot of sample and splitting the homogenized sample into 2 separate containers. After ECCS retained its aliquot of the sample, the remainder of the sample was sent to Paradigm for analysis.

7.5 Sample Control and Field Records

7.5.1 Sample Identification

Each sample was assigned a unique alpha-numeric identifier, based on location and depth of collection point that was clearly recognizable by both laboratories. Sample labels conformed to the labeling requirements under Section 3.2.1 of the EISOPQAM.

7.5.2 Chain of Custody Procedures

The field geologist recorded the sample ID, date, and time sampled in the field logbook at the time of collection. Samples were placed on ice in a cooler and transferred, under proper chain of custody, to the on-site laboratory. Upon arrival at the laboratory, the samples were transferred to the ECCS laboratory manager 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 a sample refrigerator in the on-site laboratory until they were either sent to Paradigm for confirmation analysis or disposed of. For samples sent to Paradigm, a new chain of custody was filled out prior to the sample transfer.

7.5.3 Field Records

Field records were kept in accordance with procedures specified in Section 3.5 of EISOPQAM.

7.6 Laboratory Quality Assurance/ Quality Control

QA/QC for both laboratories was identical. Summaries of each laboratory's procedures follow:

ECCS (On-site Laboratory):

- Continuing calibration standards analyzed every ten samples or less and at the end of a run.
- Blank and LCS samples analyzed every twenty samples or less with a minimum of one per day.
- MS/MSD samples analyzed every twenty samples or less with a minimum of one per day.

Paradigm (Off-site Laboratory):

- Continuing calibration standards analyzed at least once every 12-hour shift plus a minimum of every 20 samples.
- Blank and LCS samples analyzed every twenty sample or less with a minimum of one per day.
- MS/MSD samples analyzed every twenty samples or less with a minimum of one per day.

7.7 Data Review and Validation

All laboratory reports were reviewed for reporting accuracy and consistency with laboratory QA/QC protocols. The primary validation of data was accomplished through comparison of the data from the on-site laboratory versus the off-site laboratory. The relative percent differences (RPDs) between the on-site and the off-site laboratory results for split samples were calculated for each pair of split samples and compared to a 100 % RPD acceptability threshold. The RPDs for duplicate samples analyzed by the on-site and off-site laboratories were calculated and compared to a 50% acceptability threshold. A detailed discussion of the comparability of the on-site and off-site laboratory results and data validation calculations is included in Appendix 2.

8.0 SUMMARY AND CONCLUSIONS

An assessment was conducted to delineate PCB impacted soils at several properties on Puckett Street in Crystal Springs, MS. Field sampling was conducted during four events in January 2005, February 2005, July 2005 and September 2005. During this and previous assessments of Puckett Street properties, a total of 222 direct push or hand auger soil samples were collected from 95 separate locations. As the result of this assessment, the vertical and horizontal extent of PCB concentrations in soils has been delineated at 104, 106 and 110 Puckett Street and adjacent properties to the, north, west, south and southwest. The site characterization activities confirmed that there has been impact to the adjacent property identified as Parcel 17 located north of the 106 and 110 Puckett Street properties. The roadside drainage ditch to the south and southwest of the 106 and 110 Puckett Street properties on the City of Crystal Springs right-of-way has been impacted by deposition of PCB-containing sediments from storm water runoff from the 106 and 110 Puckett Street properties.

The areas assessed during the additional site characterization activities conducted in July 2005 and September 2005 described in this report include the following:

- Property at 106 and 110 Puckett Street.
- Property identified as Parcel 17. This property is adjacent to the 106 and 110 Puckett Street sites to the north.
- Property identified as Parcel 21. This property is adjacent to the 110 Puckett Street site to the west.

- The roadside drainage ditch along the north side of Puckett Street in the City of Crystal Springs right-of-way. This property is adjacent to the 106 and 110 Puckett Street properties to the south and southwest.

The following conclusions are based on the information gathered during the investigations at the Puckett Street properties:

1. Multiple locations on the 106 and 110 Puckett Street properties have soils that contain PCB concentrations greater than 1 mg/Kg. Of the samples collected on the 106 Puckett Street one sample had PCB concentrations greater than 50 mg/Kg. With the exception of this one area on the 106 Puckett Street property (sample location MWP-027), it appears that PCBs are present in the shallow surface soils to a maximum depth of 0 to 12" bgs. At sample location MWP-027, the soil is impacted by PCB to a maximum depth of 24 to 36" bgs.

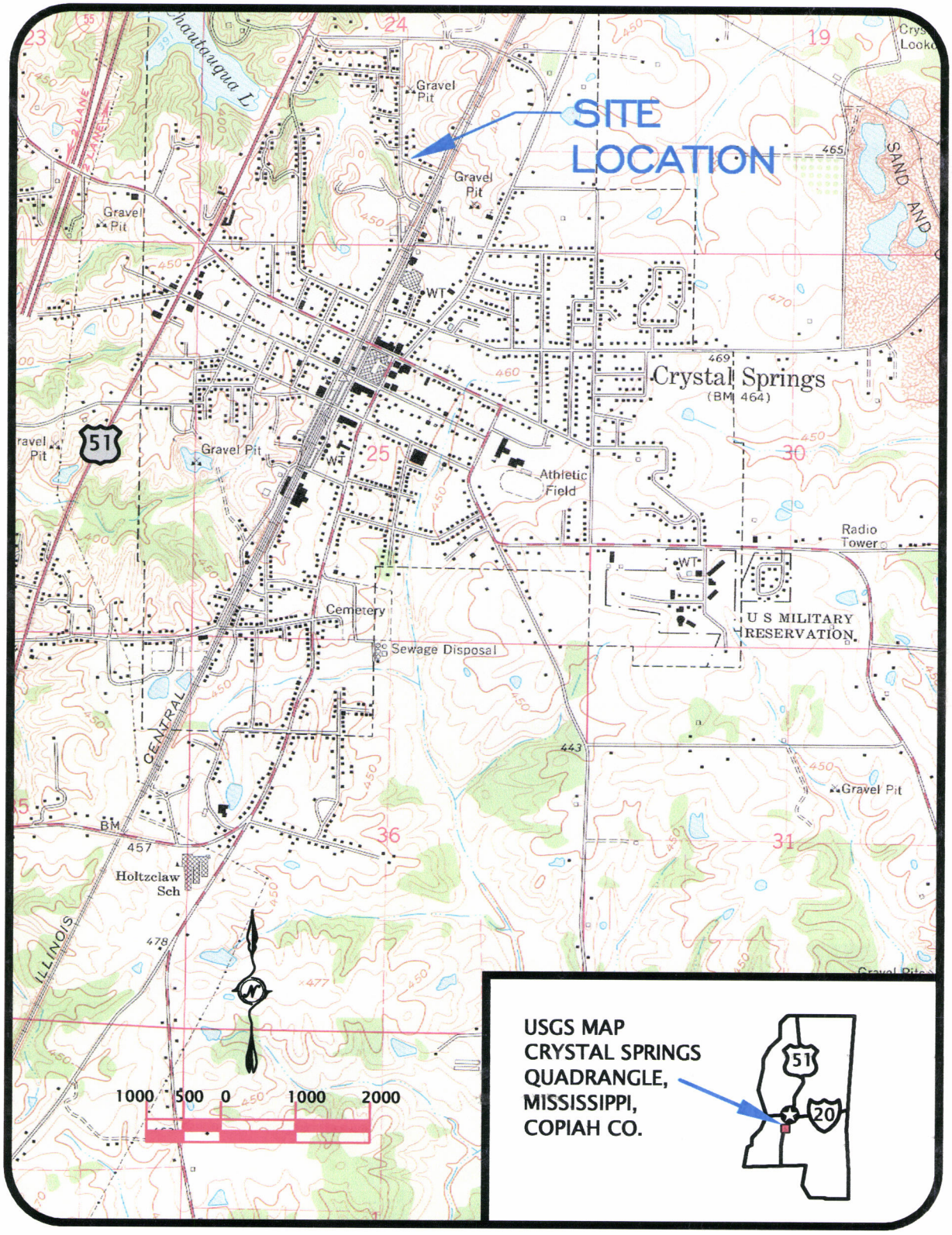
2. PCB concentrations greater than 1 mg/Kg were detected in the adjacent property to the north of the 106 and 110 Puckett Street sites. Three locations in the southeastern section of the site had PCB concentrations greater than 1 mg/Kg to a maximum observed depth of 0 to 12" bgs.

3. No PCB concentrations greater than 1 mg/Kg were detected in any of the samples collected in the adjacent property to the west of the 110 Puckett Street sites.

4. PCB concentrations greater than 1 mg/Kg were detected in the Crystal Springs right-of-way roadside ditch adjacent to the south and southwest north of the 106

and 110 Puckett Street sites. Four locations in the drainage ditch had PCB concentrations greater than 1 mg/Kg to a maximum observed depth of 0 to 12" bgs.

5. The vertical and horizontal extent of PCB impacted soil has been delineated on the properties described in this report.



MARTIN&SLAGLE
GeoEnvironmental Associates, LLC
PO Box 1023
Black Mountain NC 28711
828.669.3929 828.669.5289

SCALE = 1":2000'	
REV: 0	
DATE: 10/21/05	
DR: DGR	
CHK: RLM	

PUCKETT STREET LOCATION MAP

KUHLMAN ELECTRIC CORPORATION
101 KUHLMAN DRIVE
CRYSTAL SPRINGS, MS

PREPARED FOR:
BorgWarner Inc.

FIGURE 1

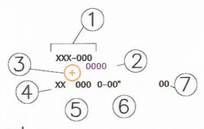
Table 1
Summary of Analytical Results
106 Puckett Street
Crystal Springs, Mississippi

Sample ID				Depth	Split	Date Collected	Time Collected	On-site Laboratory		Off-site Laboratory		
								Date Analyzed	Concentration PCB mg/Kg	Date Extracted	Date Analyzed	Concentration PCB mg/Kg
MWP	HA	027	003	24-36	**Yes**	9/6/2005	14:22	09/07/2005	0.50	09/12/2005	09/15/2005	0.60
MWP	HA	027	004	36-48		9/6/2005	14:30	09/07/2005	0.30			
MWP	HA	027	005	48-60		9/6/2005	14:38	09/07/2005	0.62			

LEGEND

ESP ETHEL SHORT PROPERTY
JMP JOE MANGUM PROPERTY
CSP CRYSTAL SPRINGS PROPERTY
GTP GREGORY TURNER PROPERTY
MWP MAGGIE WILLIAMS PROPERTY
ZWP ZEDIE WILLIAMS PROPERTY
HA HAND AUGER SAMPLE
DP DIRECT PUSH SAMPLE

SAMPLE POINT



1. SAMPLE LOCATION NUMBER
2. SURVEY NUMBER
3. SAMPLE POINT
4. SAMPLE TYPE
5. SAMPLE NUMBER by DEPTH
6. SAMPLE DEPTH RANGE
7. RESULTS IN mg/kg

OVERHEAD POWER — P —
UNDERGROUND GAS LINE — GAS —
PROPERTY LINE
LOT LINE
ROAD
FENCE — X —
VEGETATION

TELEPHONE PEDESTAL TEL PED
WATER SERVICE W
GAS SERVICE G
WATER METER M
ELECTRIC METER E
UTILITY POLE

GeoEnvironmental Associates LLC | MARTIN&SLAGLE
PO Box 1023
Black Mountain NC 28711
828.669.3929 828.669.5289

SCALE 1":10'	#	REVISION NOTES
DR: DGR	1	
CHK: KST	2	
REV: 0	3	
DATE: 10/20/05	4	
	5	

DRAWING NAME: MSL\20051020.DWG

PREPARED FOR:

BorgWarner Inc.

PUCKETT STREET SAMPLE LOCATIONS

KUHLMAN ELECTRIC CORPORATION
101 KUHLMAN DRIVE
CRYSTAL SPRINGS, MS

2 FIGURE

Table 2
Summary of Analytical Results
110 Puckett Street
Crystal Springs, Mississippi

Sample ID				Depth	Split	Date Collected	Time Collected	On-site Laboratory		Off-site Laboratory		
								Date Analyzed	Concentration PCB mg/Kg	Date Extracted	Date Analyzed	Concentration PCB mg/Kg
GTP	DP	023	001	0-12"	Yes	7/14/2005	10:38	07/14/2005	**1.0**	7/25/2005	7/26/2005	**1.1**
GTP	DP	023	002	12-24"		7/14/2005	10:41	07/14/2005	<0.1			
GTP	DP	024	001	0-12"		7/14/2005	10:35	07/14/2005	**8.0**			
GTP	DP	024	002	12-24"		7/14/2005	10:38	07/14/2005	0.33			
GTP	DP	025	001	0-12"		7/14/2005	10:43	07/14/2005	0.51			
GTP	DP	025	002	12-24"		7/14/2005	10:46	07/14/2005	0.13			
GTP	DP	026	001	0-12"		7/14/2005	10:51	07/14/2005	**9.9**			
GTP	DP	026	002	12-24"		7/14/2005	10:53	07/14/2005	0.23			
GTP	DP	027	001	0-12"	Yes	7/22/2005	11:14	07/22/2005	0.43	8/2/2005	8/9/2005	0.30
GTP	DP	027	002	12-24"		7/22/2005	11:16	07/22/2005	<0.1			
GTP	DP	028	001	0-12"		7/22/2005	11:19	07/22/2005	<0.1			
GTP	DP	028	002	12-24"		7/22/2005	11:21	07/22/2005	<0.1			
GTP	DP	029	001	0-12"		7/22/2005	11:23	07/22/2005	0.25			
GTP	DP	029	002	12-24"		7/22/2005	11:26	07/22/2005	<0.1			
GTP	DP	030	001	0-12"		7/22/2005	11:30	07/22/2005	0.26			
GTP	DP	030	002	12-24"		7/22/2005	11:32	07/22/2005	<0.1			
GTP	DP	031	001	0-12"		7/22/2005	11:36	07/22/2005	0.22			
GTP	DP	031	002	12-24"		7/22/2005	11:39	07/22/2005	<0.1			

Table 3
Summary of Analytical Results
Parcel #17
Crystal Springs, Mississippi

Sample ID				Depth	Split	Date Collected	Time Collected	On-site Laboratory		Off-site Laboratory		
								Date Analyzed	Concentration PCB mg/Kg	Date Extracted	Date Analyzed	Concentration PCB mg/Kg
ESP	DP	001	001	0-12"	Yes	7/20/2005	12:32	07/20/2005	0.53	7/25/2005	7/26/2005	0.57
ESP	DP	001	002	12-24"		7/20/2005	12:37	07/20/2005	<0.1			
ESP	DP	002	001	0-12"		7/20/2005	12:45	07/20/2005	**1.6**			
ESP	DP	002	002	12-24"		7/20/2005	12:47	07/20/2005	<0.1			
ESP	DP	003	001	0-12"		7/20/2005	12:50	07/20/2005	**3.6**			
ESP	DP	003	002	12-24"		7/20/2005	12:52	07/20/2005	0.15			
ESP	DP	004	001	0-12"		7/20/2005	13:00	07/20/2005	**1.7**			
ESP	DP	004	002	12-24"		7/20/2005	13:03	07/20/2005	0.36			
ESP	DP	005	001	0-12"		7/20/2005	13:10	07/20/2005	0.95			
ESP	DP	005	002	12-24"		7/20/2005	13:13	07/20/2005	<0.1			
ESP	DP	006	001	0-12"	Yes	7/20/2005	13:19	07/20/2005	0.33	7/25/2005	7/26/2005	0.77
ESP	DP	006	002	12-24"		7/20/2005	13:22	07/20/2005	0.39			
ESP	DP	007	001	0-12"		7/20/2005	13:29	07/20/2005	0.28			
ESP	DP	007	002	12-24"		7/20/2005	13:31	07/20/2005	<0.1			
ESP	DP	008	001	0-12"		7/20/2005	15:00	07/20/2005	<0.1			
ESP	DP	008	002	12-24"		7/20/2005	15:03	07/20/2005	<0.1			
ESP	DP	009	001	0-12"		7/20/2005	15:10	07/20/2005	<0.1			
ESP	DP	009	002	12-24"		7/20/2005	15:14	07/20/2005	<0.1			
ESP	DP	010	001	0-12"	Yes	7/21/2005	15:00	07/21/2005	<0.1	8/2/2005	8/9/2005	<0.1
ESP	DP	010	002	12-24"		7/21/2005	15:03	07/21/2005	<0.1			
ESP	DP	011	001	0-12"		7/21/2005	15:09	07/21/2005	<0.1			
ESP	DP	011	002	12-24"		7/21/2005	15:13	07/21/2005	<0.1			
ESP	DP	012	001	0-12"		7/21/2005	15:18	07/21/2005	<0.1			
ESP	DP	012	002	12-24"		7/21/2005	15:20	07/21/2005	<0.1			
ESP	DP	013	001	0-12"		7/21/2005	15:25	07/21/2005	0.31			
ESP	DP	013	002	12-24"		7/21/2005	15:28	07/21/2005	<0.1			
ESP	DP	014	001	0-12"	Yes	7/21/2005	15:34	07/21/2005	0.50	8/2/2005	8/9/2005	0.59
ESP	DP	014	002	12-24"		7/21/2005	15:37	07/21/2005	<0.1			
ESP	DP	015	001	0-12"		7/21/2005	15:40	07/21/2005	0.12			
ESP	DP	015	002	12-24"		7/21/2005	15:43	07/21/2005	<0.1			

Table 4
Summary of Analytical Results
Parcel #21
Crystal Springs, Mississippi

Sample ID				Depth	Split	Date Collected	Time Collected	On-site Laboratory		Off-site Laboratory		
								Date Analyzed	Concentration PCB mg/Kg	Date Extracted	Date Analyzed	Concentration PCB mg/Kg
JMP	DP	001	001	0-12"	Yes	7/14/2005	12:35	07/14/2005	<0.1	7/25/2005	7/26/2005	<0.1
JMP	DP	001	002	12-24"		7/14/2005	12:38	07/14/2005	<0.1			
JMP	DP	002	001	0-12"		7/14/2005	12:50	07/14/2005	<0.1			
JMP	DP	002	002	12-24"		7/14/2005	12:54	07/14/2005	<0.1			
JMP	DP	003	001	0-12"		7/14/2005	13:02	07/14/2005	<0.1			
JMP	DP	003	002	12-24"		7/14/2005	13:06	07/14/2005	<0.1			
JMP	DP	004	001	0-12"		7/14/2005	13:10	07/14/2005	<0.1			
JMP	DP	004	002	12-24"		7/14/2005	13:13	07/14/2005	<0.1			
JMP	DP	005	001	0-12"		7/14/2005	13:20	07/14/2005	<0.1			
JMP	DP	005	002	12-24"		7/14/2005	13:24	07/14/2005	<0.1			
JMP	DP	006	001	0-12"	Yes	7/14/2005	14:50	07/14/2005	0.10	7/25/2005	7/26/2005	<0.1
JMP	DP	006	002	12-24"		7/14/2005	14:54	07/14/2005	<0.1			
JMP	DP	007	001	0-12"		7/14/2005	15:09	07/14/2005	0.14			
JMP	DP	007	002	12-24"		7/14/2005	15:12	07/14/2005	<0.1			
JMP	DP	008	001	0-12"		7/14/2005	15:18	07/14/2005	<0.1			
JMP	DP	008	002	12-24"		7/14/2005	15:23	07/14/2005	<0.1			
JMP	DP	009	001	0-12"		7/14/2005	15:30	07/14/2005	<0.1			
JMP	DP	009	002	12-24"		7/14/2005	15:34	07/14/2005	<0.1			
JMP	DP	010	001	0-12"		7/14/2005	15:46	07/14/2005	<0.1			
JMP	DP	010	002	12-24"	Yes	7/14/2005	15:49	07/14/2005	<0.1	7/25/2005	7/26/2005	<0.1

Table 5
Summary of Analytical Results
Crystal Springs Property
Puckett Street
Crystal Springs, Mississippi

Sample ID				Depth	Split	Date Collected	Time Collected	On-site Laboratory		Off-site Laboratory		
								Date Analyzed	Concentration PCB mg/Kg	Date Extracted	Date Analyzed	Concentration PCB mg/Kg
CSP	DP	171	001	0-12"	Yes	7/15/2005	10:08	7/15/2005	**1.2**	7/25/2005	7/26/2005	0.99
CSP	DP	171	002	12-24"		7/15/2005	10:10	7/15/2005	<0.1			
CSP	DP	172	001	0-12"		7/15/2005	12:40	7/15/2005	**1.0**			
CSP	DP	172	002	12-24"		7/15/2005	12:43	7/15/2005	<0.1			
CSP	DP	173	001	0-12"		7/15/2005	12:51	7/15/2005	**1.5**			
CSP	DP	173	002	12-24"		7/15/2005	12:54	7/15/2005	<0.1			
CSP	DP	174	001	0-12"		7/15/2005	12:59	7/15/2005	<0.1			
CSP	DP	174	002	12-24"		7/15/2005	13:02	7/15/2005	<0.1			
CSP	DP	175	001	0-12"		7/15/2005	13:05	7/15/2005	0.49			
CSP	DP	175	002	12-24"		7/15/2005	13:08	7/15/2005	<0.1			
CSP	DP	176	001	0-12"		7/15/2005	13:11	7/15/2005	0.15			
CSP	DP	176	002	12-24"		7/15/2005	13:13	7/15/2005	<0.1			
CSP	DP	177	001	0-12"		7/15/2005	13:20	7/15/2005	0.87			
CSP	DP	177	002	12-24"		7/15/2005	13:24	7/15/2005	0.45			
CSP	DP	178	001	0-12"	Yes	7/15/2005	13:28	7/15/2005	**1.8**	7/25/2005	7/26/2005	**1.3**
CSP	DP	178	002	12-24"		7/15/2005	13:32	7/15/2005	<0.1			
CSP	DP	179	001	0-12"		7/15/2005	14:30	7/15/2005	0.23			
CSP	DP	179	002	12-24"		7/15/2005	14:33	7/15/2005	<0.1			
CSP	DP	180	001	0-12"		7/15/2005	14:40	7/15/2005	<0.1			
CSP	DP	180	002	12-24"		7/15/2005	14:43	7/15/2005	<0.1			
CSP	DP	181	001	0-12"		7/15/2005	14:50	7/15/2005	<0.1			
CSP	DP	181	002	12-24"		7/15/2005	14:53	7/15/2005	<0.1			
CSP	DP	182	001	0-12"	Yes	7/15/2005	14:58	7/15/2005	0.67	7/25/2005	7/26/2005	0.79
CSP	DP	182	002	12-24"		7/15/2005	15:02	7/15/2005	<0.1			
CSP	DP	183	001	0-12"		7/15/2005	15:08	7/15/2005	0.21			
CSP	DP	183	002	12-24"		7/15/2005	15:11	7/16/2005	<0.1			
CSP	DP	184	001	0-12"		7/15/2005	15:20	7/16/2005	0.14			
CSP	DP	184	002	12-24"		7/15/2005	15:23	7/16/2005	<0.1			
CSP	DP	185	001	0-12"		7/15/2005	15:28	7/16/2005	0.12			
CSP	DP	185	002	12-24"		7/15/2005	15:30	7/16/2005	<0.1			
CSP	DP	186	001	0-12"	Yes	7/15/2005	15:38	7/16/2005	0.14	7/25/2005	7/26/2005	<0.1

Table 5
Summary of Analytical Results
Crystal Springs Property
Puckett Street
Crystal Springs, Mississippi

Sample ID				Depth	Split	Date Collected	Time Collected	On-site Laboratory		Off-site Laboratory		
								Date Analyzed	Concentration PCB mg/Kg	Date Extracted	Date Analyzed	Concentration PCB mg/Kg
CSP	DP	186	002	12-24"		7/15/2005	15:41	7/16/2005	<0.1			
CSP	DP	187	001	0-12"		7/15/2005	15:50	7/16/2005	<0.1			
CSP	DP	187	002	12-24"		7/15/2005	15:53	7/16/2005	<0.1			
CSP	DP	188	001	0-12"	Yes	7/18/2005	16:05	7/19/2005	<0.1	7/25/2005	7/26/2005	<0.1
CSP	DP	189	001	0-12"		7/18/2005	16:15	7/19/2005	<0.1			
CSP	DP	190	001	0-12"		7/18/2005	16:21	7/19/2005	<0.1			
CSP	DP	191	001	0-12"		7/18/2005	16:28	7/19/2005	0.38			
CSP	DP	192	001	0-12"		7/18/2005	16:36	7/19/2005	<0.1			
CSP	DP	193	001	0-12"		7/18/2005	16:44	7/19/2005	<0.1			
CSP	DP	194	001	0-12"		7/18/2005	16:50	7/19/2005	<0.1			
CSP	DP	195	001	0-12"		7/18/2005	16:59	7/19/2005	<0.1			
CSP	DP	196	001	0-12"	Yes	7/19/2005	10:10	7/20/2005	<0.1	7/25/2005	7/26/2005	<0.1
CSP	DP	197	001	0-12"		7/19/2005	10:18	7/20/2005	<0.1			
CSP	DP	198	001	0-12"		7/19/2005	10:22	7/20/2005	<0.1			
CSP	DP	199	001	0-12"		7/19/2005	10:28	7/20/2005	<0.1			
CSP	DP	200	001	0-12"		7/19/2005	10:34	7/20/2005	<0.1			
CSP	DP	201	001	0-12"		7/19/2005	10:39	7/20/2005	<0.1			
CSP	DP	202	001	0-12"		7/19/2005	10:44	7/20/2005	<0.1			
CSP	DP	203	001	0-12"		7/19/2005	10:49	7/20/2005	<0.1			
CSP	DP	204	001	0-12"		7/19/2005	13:32	7/20/2005	<0.1			
CSP	DP	205	001	0-12"		7/19/2005	13:42	7/20/2005	<0.1			

August 8, 2005

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

Dear Mr. Martin,

Enclosed is the Technical Memorandum for work completed at the former Borg Warner and current Kuhlman Electric facility in Crystal Springs, Mississippi during the month of July. If you have any questions concerning this information, please give me a call.

Sincerely,

Kari-Ann Killian

for Richard Johnson

Enclosure

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road • Madison, WI 53718 • Phone (608) 221-8700 • FAX (608) 221-4889

Technical Memorandum

Borg Warner / Kuhlman Electric

Crystal Springs, Mississippi

TECHNICAL MEMORANDUM

August 8, 2005

To: Robert Martin
Martin Slagle Inc.

From: Richard Johnson
ECCS, Inc.

Re: Field Analytical Methods – QC Summary
Borg Warner – Kuhlman Electric Facility
Crystal Springs, Mississippi

INTRODUCTION

This Technical Memorandum provides documentation of the field analytical test methods used to analyze soil and water samples collected from JMP Property area during July 2005 during an accelerated site investigation episode around the former Borg Warner and current Kuhlman Electric facility in Crystal Springs, Mississippi. Soil and water samples were analyzed for polychlorinated biphenyls (PCBs) and chlorinated benzenes by gas chromatography (GC) in accordance with ECCS's Polychlorinated Biphenyl (PCB) Mini Extraction Screening Procedure. A summary of test results is provided in Table 1 for soils and Table 2 for waters. A summary of method blanks, laboratory control samples and matrix spike/matrix spike duplicate data is provided in Table 3 for the soils and Table 4 for the waters.

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 mobile lab PCB analysis for Excavation samples
B) FEDEX shipping label for Paradigm Labs
C) Chain of custody sheets for samples sent to Paradigm Labs

The PCB mini-extraction procedure is based on the existing EPA SW846 methods 8082/8141. The procedure incorporates all the quality control rigors of the full 8082/8141 methods including quantification based on 6-point calibration with continuing calibration verification, surrogate method performance monitoring, method blanks, laboratory control samples (LCS), and matrix spike/matrix spike (MS/MSD) duplicate samples. As such, you should consider these test results as comparable to what you would get from a fixed-based laboratory using the more-widely accepted extraction procedure.

The primary project objective of the sampling and testing episode was to delineate the PCB contamination at and around the site using the accelerated site characterization approach. The mobile laboratory was required to provide data as quickly as possible to keep the accelerated site investigation process on track while trying to maintain a goal of level three data quality.

CASE NARRATIVE

During the episode, all samples collected were analyzed. To maintain rapid turnaround and to meet the project objective, three GCs were operated on a nearly continuous basis.

Quality control including proper calibration, continuing calibration verification, surrogates, method blanks, laboratory control samples and matrix spike/matrix spike duplicate samples was performed at the method-specified intervals. Overall quality of the data is very good. The following quality related issues should be noted:

1. All surrogate recoveries were within acceptable ranges.

2. All LCS recoveries were within acceptable ranges. See Table 3 and 4.

3. All MS/MSD recoveries were within acceptable ranges. Percent repeatability was also within acceptable ranges. See Table 3 and 4.

4. Since electron capture of detectors tend to have a very narrow linear range, many sample extracts required dilution. Dilutions were accurately done.

METHOD SUMMARY

This method employs a mini-extraction procedure and gas chromatography analysis for the detection of PCBs and chlorinated benzenes. Reporting limits are provided in the results Tables. Four grams of sample are dried with anhydrous sodium sulfate and extracted with eight mLs of 80/20 iso-octane/acetone. The extract is then analyzed by Gas Chromatography-Electron Capture Detector (GC-ECD).

Procedure

1. Standards Preparation - Primary standards are prepared from a solution purchased from various vendors at Certified concentrations. Stock standards are prepared in suitable solvents and stored in a freezer when not in use. Secondary standards are prepared in 80/20 iso-octane/acetone and stored in a freezer when not in use. Standard curve mixes for this project was prepared at six concentrations: PCBs – 0.05, 0.10, 0.20, 0.50, 1.0 and 2.0 ug/m; chlorinated benzenes – 0.005, 0.01, 0.02, 0.05, 0.10 and 0.20 ug/ml.

2. Sample Preparation - SOILS: Each sample or quality control sample is prepared in identical fashion. Approximately four grams of silica sand (blanks and control spikes) or sample is transferred into a clean scintillation vial. Ten grams of anhydrous sodium sulfate are added to the vial and mixed well. Extra sodium sulfate is added when necessary to assure the sample is dried. A surrogate, spike compound mix (if necessary) and eight mLs of 80/20 iso-octane/acetone are added to the vial. The vial is shaken for 30 seconds, allowed to settle for 2 minutes, shaken again for 30 seconds, and allowed to settle for 10 minutes. An aliquot of the extract is transferred to an autosampler vial for injection into the GC-ECD.

3. WATER Samples: 200 grams of water was weighed into a clean jar containing 50 grams of sodium chloride. The samples were spiked with a surrogate in addition the LCS/MS/MSD were spiked with PCB's and chlorinated benzenes. Added 10 ml of isooctane to each and shake 3 times for 2 minutes each time. Samples were allowed to settle for approximately 5 minutes between each shake. Isooctane was decanted into a scintillation vial and then an aliquot was transferred to an autosampler vial. Then extracts were injected into a GC-ECD.

4. GC-ECD Analysis - A sample aliquot is injected into an HP5890 GC with an ECD equipped with an HP ChemStation for data processing. PCBs were identified by matching retention times of standards to the same retention time in the sample. Regression analysis was performed on each of the selected peak's height verses concentration of the standard using a LN/LN transformed linear regression. For PCBs nine peaks were selected for quantification. The ug/mL value for each peak was added together and divided by the number of peaks selected to obtain the total PCB ug/mL result. If interference occurred at any of the peaks, these peaks were not included in the total, and the divisor was reduced accordingly.

5. Quality Control - Quality control consisted of the following items:
   - Continuing calibration standards analyzed every ten samples or less and at the end of a run.
   - Blank and LCS samples analyzed every twenty sample or less with a minimum of one per day.
   - MS/MSD samples analyzed every twenty samples or less with a minimum of one per day.
   - Information is documented in logbook 45 and July run sheets.

6. Instrument Conditions - Two HP5890 gas chromatographs were equipped with RTX-35 capillary columns. Each system had a Leap Technologies A200S auto-sampler and an HP ChemStation for data handling.

Table 1

Soil Sample Results – July

Table 1
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory				
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (mg/kg)	Surrogate TCMX(%)	Surrogate DCBP(%)	Rinse
HH001	JMP-DP-001-001	0-1'	14-Jul-05	12:35	14-Jul-05	< 0.10	96.3	96.2	
HH002	JMP-DP-001-002	1-2'	14-Jul-05	12:38	14-Jul-05	< 0.10	92.6	83.9	
HH003	JMP-DP-002-001	0-1'	14-Jul-05	12:50	14-Jul-05	< 0.10	92.4	90.5	
HH004	JMP-DP-002-002	1-2'	14-Jul-05	12:54	14-Jul-05	< 0.10	92.4	84.2	
HH005	JMP-DP-003-001	0-1'	14-Jul-05	13:02	14-Jul-05	< 0.10	95.5	87.8	
HH006	JMP-DP-003-002	1-2'	14-Jul-05	13:06	14-Jul-05	< 0.10	94.9	86.6	
HH007	JMP-DP-004-001	0-1'	14-Jul-05	13:10	14-Jul-05	< 0.10	97.6	89.4	
HH008	JMP-DP-004-002	1-2'	14-Jul-05	13:13	14-Jul-05	< 0.10	93.4	96.5	
HH009	JMP-DP-005-001	0-1'	14-Jul-05	13:20	14-Jul-05	< 0.10	92.8	85.3	
HH010	JMP-DP-005-002	1-2'	14-Jul-05	13:24	14-Jul-05	< 0.10	100	105	
HH011	JMP-Duplicate	-	14-Jul-05	-	14-Jul-05	< 0.10	92.3	88.4	
HH012	JMP-DP-006-001	0-1'	14-Jul-05	14:50	14-Jul-05	**0.10**	91.7	90.9	
HH013	JMP-DP-006-002	1-2'	14-Jul-05	14:54	14-Jul-05	< 0.10	94.9	90.6	
HH014	JMP-DP-007-001	0-1'	14-Jul-05	15:09	14-Jul-05	**0.14**	94.4	89.8	
HH015	JMP-DP-007-002	1-2'	14-Jul-05	15:12	14-Jul-05	< 0.10	99.7	90.4	
HH016	JMP-DP-008-001	0-1'	14-Jul-05	15:18	14-Jul-05	< 0.10	90.6	85.4	
HH017	JMP-DP-008-002	1-2'	14-Jul-05	15:23	14-Jul-05	< 0.10	91.6	96.4	
HH018	JMP-DP-009-001	0-1'	14-Jul-05	15:30	14-Jul-05	< 0.10	92.4	85.2	
HH019	JMP-DP-009-002	1-2'	14-Jul-05	15:34	14-Jul-05	< 0.10	92.1	92.3	
HH020	JMP-DP-010-001	0-1'	14-Jul-05	15:46	14-Jul-05	< 0.10	88.0	90.7	
HH021	JMP-DP-010-002	1-2'	14-Jul-05	15:49	14-Jul-05	< 0.10	92.7	93.2	

NOTES:
A = Acid Treated.
Surrogate recovery criteria 60-140% unless sample is acid treated.
Surrogate recovery criteria 75-175% if sample is acid treated.

Table 2

Water Sample Results – July

Table 2
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory			
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (ug/L)	Surrogate TCMX(%)	Surrogate DCBP(%)
W1304	JMP-FB-001	-	14-Jul-05	12:24	15-Jul-05	< 0.25	110	96.6

Table 3

Soil QC Samples - July

Table 3
QC Results

Lab # associated with qc samples: HH001 through HH020

	Matrix Spike HH009	Matrix Spike Duplicate HH009		Blank 834	LCS 834
Date Analyzed:	7/14/05	7/14/05		7/14/05	7/14/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	93.1		93.1		0%	< 0.10	86.4

Table 3
QC Results

Lab # associated with qc samples: HH021

	Matrix Spike HH020	Matrix Spike Duplicate HH020	Blank	LCS
Date Analyzed:	7/14/05	7/14/05		

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	91.2		92.0		-1%		

Table 4

Water QC Samples - July

Table 4
QC Results

Lab # associated with qc samples: W1304

	Matrix Spike W1305	Matrix Spike Duplicate W1305	Blank	LCS
Date Analyzed:	7/15/05	7/15/05	7/15/05	7/15/05

Compound	% Rec		% Rec		% RPD	ug/L	% Rec
PCB as 1260	98.6		101		-2%	< 0.25	98.7

Appendix A

Chain of Custody Sheets for mobile lab PCB analysis Samples

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY No. 013209 *

Page 1 of 2

Buckett ST JMP

Project Number:		Mail Report To:	
Project Name:	KUHLMAN ELECTRIC	Company:	MARTIN & SLABLO
Project Location:	CRYSTAL SPRINGS	Address:	
Sampled By (Print):	CHRIS PEEL		

Turn Around (circle one) Normal Rush									
Report Due:									
Invoice To:									
Company:									
Address:									
P.O. No.: Quote No.:									

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
JMP-DP-001-001	7/1/01	1235	S	1	N/A	PCB's	0-1'	HH001
-001-002		1237					1-2'	HH002
-002-001		1250					0-1'	HH003
-002-002		1254					1-2'	HH004
-003-001		1302					0-1'	HH005
-003-002		1306					1-2'	HH006
-004-001		1310					0-1'	HH007
-004-002		1313					1-2'	HH008
-005-001		1320					0-1'	HH009
-005-002		1324					1-2'	HH010
JMP DUP		—						HH011

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

Relinquished By:	Chris E.O.A Peel	Date/Time:	7/1/01 1350	Received By:
Relinquished By:		Date/Time:		Received By:

Date/Time: 1350 7/1/01

Date/Time:

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

Shipped Via:

Receipt Temp:
Temp Blank Y N

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

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY No. 013210

JMP
Puckett PT

Page 2 of 2

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

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
JMP-DP-006-001	7/14/08	1450	S	1	N/A	PCB'S	0-1'	HH012
↓ -002	↓	1454	↓	↓	↓	↓	1-2'	HH013
007-001		BOT 1505					0-1'	HH014
↓ -002		BOT 1512					1-2'	HH015
008-001		BOT 1518					0-1'	HH016
↓ -002		BOT 1523					1-2'	HH017
009-001		1530					0-1'	HH018
↓ -002		1534					1-2'	HH019
010-001		1546					0-1'	HH020
↓ -002	↓	1549	↓	↓	↓	↓	1-2'	HH021

*Preservation Code A=None B=HCL C=H2SO4 D=HNO3 E=EnCore F=Methanol G=NaOH O=Other(Indicate)	Relinquished By: Chuck Pool	Date/Time: 7/14/08 1600	Received By:	Date/Time: 1600 7/14/08
	Relinquished By:	Date/Time:	Received By:	Date/Time:
Custody Seal: Present/Absent	Intact/Not Intact	Seal #'s	Receipt Temp:	
Shipped Via: FEDEX			Temp Blank Y N	

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

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY No. 013208 *

Page 1 of 1

7115 C Pueblo ST

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

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
JMP-FB-001	7/11/01	1224	W	1	NA	PCB's		W1304

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

Relinquished By:	Date/Time: 7/14/01 1350	Received By:	Date/Time: 1350 7/14/01
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

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

Appendix B

FEDEX shipping label for Paradigm Labs

FedEx Express **US Airbill**

FedEx Tracking Number: 8494 4407 3329

Form ID No. 0215 — Sender's Copy

From *Please print and press hard.*

Date: 7/20/05 — Sender's FedEx Account Number:

Sender's Name: Chuck Peel — Phone: (601) 898-2792

Company: PEEL CONSULTING

Address: 140 CHAPEL LANE — Dept./Floor/Suite/Room:

City: MADISON — State: MS — ZIP: 39110

Your Internal Billing Reference — First 24 characters will appear on invoice. MARTIN + SLACK OPTIONAL

To

Recipient's Name: SAMPLE CUSTODIAN — Phone: ( )

Company: PARADIGM ANALYTICAL LABS

Recipient's Address: 5500 BUSINESS DR — We cannot deliver to P.O. boxes or P.O. ZIP codes. — Dept./Floor/Suite/Room:

Address: — To request a package be held at a specific FedEx location, print FedEx address here.

City: WILMINGTON — State: NC — ZIP: 28405-8446

4a Express Package Service — *Packages up to 150 lbs.* * To most locations

- [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.* ** To most locations

- [ ] 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
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight 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.

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

FedEx Acct. No. / Credit Card No.: 1811-4189-1 — 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 Sign to Authorize Delivery Without a 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.

466

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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.GoFedEx 1.800.463.3339.

0295350499

Appendix C

Chain of Custody Sheets for samples sent to Paradigm Labs

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46363

Page 1 of 1

Client: MARTIN B SLAGLE
Address:
Address: BLACK MOUNTAIN, NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/20/05
Turnaround: NORMAL
Job Number:
P.O. Number:

Report To: SAM G
Invoice To: SAM G

Sample ID	Date	Time	Matrix	Preservatives				Analyses									Comments: Please specify any special reporting requirements
				N/A				8021									MOBILE LAB # Depth
JMP-DP-001-001	7/14/05	1235	S	X				X									HH001 0-1'
JMP-DUP		—		X				X									HH011 —
JMP-DP-002-001		1450		X				X									HH012 0-1'
JMP-DP-010-002		1549		X				X									HH021 1-2'

Relinquished By	Date	Time	Received By	Date	Time	Temperature
Charles O. M. Peel	7/20/05	1400				

State Certification Requested

NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

August 8, 2005

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

Dear Mr. Martin,

Enclosed is the Technical Memorandum for work completed at the former Borg Warner and current Kuhlman Electric facility in Crystal Springs, Mississippi during the month of July. If you have any questions concerning this information, please give me a call.

Sincerely,

Kari-Ann Killian

for Richard Johnson

Enclosure

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road • Madison, WI 53718 • Phone (608) 221-8700 • FAX (608) 221-4889

Technical Memorandum

Borg Warner / Kuhlman Electric

Crystal Springs, Mississippi

TECHNICAL MEMORANDUM

August 8, 2005

To: Robert Martin
Martin Slagle Inc.

From: Richard Johnson RJ for
ECCS, Inc.

Re: Field Analytical Methods – QC Summary
Borg Warner – Kuhlman Electric Facility
Crystal Springs, Mississippi

INTRODUCTION

This Technical Memorandum provides documentation of the field analytical test methods used to analyze soil and water samples collected from GTP Property area during July 2005 during an accelerated site investigation episode around the former Borg Warner and current Kuhlman Electric facility in Crystal Springs, Mississippi. Soil and water samples were analyzed for polychlorinated biphenyls (PCBs) and chlorinated benzenes by gas chromatography (GC) in accordance with ECCS's Polychlorinated Biphenyl (PCB) Mini Extraction Screening Procedure. A summary of test results is provided in Table 1 for soils and Table 2 for waters. A summary of method blanks, laboratory control samples and matrix spike/matrix spike duplicate data is provided in Table 3 for the soils and Table 4 for the waters.

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 mobile lab PCB analysis for Excavation samples
B) FEDEX shipping label for Paradigm Labs
C) Chain of custody sheets for samples sent to Paradigm Labs

The PCB mini-extraction procedure is based on the existing EPA SW846 methods 8082/8141. The procedure incorporates all the quality control rigors of the full 8082/8141 methods including quantification based on 6-point calibration with continuing calibration verification, surrogate method performance monitoring, method blanks, laboratory control samples (LCS), and matrix spike/matrix spike (MS/MSD) duplicate samples. As such, you should consider these test results as comparable to what you would get from a fixed-based laboratory using the more-widely accepted extraction procedure.

The primary project objective of the sampling and testing episode was to delineate the PCB contamination at and around the site using the accelerated site characterization approach. The mobile laboratory was required to provide data as quickly as possible to keep the accelerated site investigation process on track while trying to maintain a goal of level three data quality.

CASE NARRATIVE

During the episode, all samples collected were analyzed. To maintain rapid turnaround and to meet the project objective, three GCs were operated on a nearly continuous basis.

Quality control including proper calibration, continuing calibration verification, surrogates, method blanks, laboratory control samples and matrix spike/matrix spike duplicate samples was performed at the method-specified intervals. Overall quality of the data is very good. The following quality related issues should be noted:

1. All surrogate recoveries were within acceptable ranges.

2. All LCS recoveries were within acceptable ranges. See Table 3 and 4.

3. All MS/MSD recoveries were within acceptable ranges. Percent repeatability was also within acceptable ranges. See Table 3 and 4.

4. Since electron capture of detectors tend to have a very narrow linear range, many sample extracts required dilution. Dilutions were accurately done.

METHOD SUMMARY

This method employs a mini-extraction procedure and gas chromatography analysis for the detection of PCBs and chlorinated benzenes. Reporting limits are provided in the results Tables. Four grams of sample are dried with anhydrous sodium sulfate and extracted with eight mLs of 80/20 iso-octane/acetone. The extract is then analyzed by Gas Chromatography-Electron Capture Detector (GC-ECD).

Procedure

1. Standards Preparation - Primary standards are prepared from a solution purchased from various vendors at Certified concentrations. Stock standards are prepared in suitable solvents and stored in a freezer when not in use. Secondary standards are prepared in 80/20 iso-octane/acetone and stored in a freezer when not in use. Standard curve mixes for this project was prepared at six concentrations: PCBs – 0.05, 0.10, 0.20, 0.50, 1.0 and 2.0 ug/m; chlorinated benzenes – 0.005, 0.01, 0.02, 0.05, 0.10 and 0.20 ug/ml.

2. Sample Preparation - SOILS: Each sample or quality control sample is prepared in identical fashion. Approximately four grams of silica sand (blanks and control spikes) or sample is transferred into a clean scintillation vial. Ten grams of anhydrous sodium sulfate are added to the vial and mixed well. Extra sodium sulfate is added when necessary to assure the sample is dried. A surrogate, spike compound mix (if necessary) and eight mLs of 80/20 iso-octane/acetone are added to the vial. The vial is shaken for 30 seconds, allowed to settle for 2 minutes, shaken again for 30 seconds, and allowed to settle for 10 minutes. An aliquot of the extract is transferred to an autosampler vial for injection into the GC-ECD.

3. WATER Samples: 200 grams of water was weighed into a clean jar containing 50 grams of sodium chloride. The samples were spiked with a surrogate in addition the LCS/MS/MSD were spiked with PCB's and chlorinated benzenes. Added 10 ml of isooctane to each and shake 3 times for 2 minutes each time. Samples were allowed to settle for approximately 5 minutes between each shake. Isooctane was decanted into a scintillation vial and then an aliquot was transferred to an autosampler vial. Then extracts were injected into a GC-ECD.

4. GC-ECD Analysis - A sample aliquot is injected into an HP5890 GC with an ECD equipped with an HP ChemStation for data processing. PCBs were identified by matching retention times of standards to the same retention time in the sample. Regression analysis was performed on each of the selected peak's height verses concentration of the standard using a LN/LN transformed linear regression. For PCBs nine peaks were selected for quantification. The ug/mL value for each peak was added together and divided by the number of peaks selected to obtain the total PCB ug/mL result. If interference occurred at any of the peaks, these peaks were not included in the total, and the divisor was reduced accordingly.

5. Quality Control - Quality control consisted of the following items:
   - Continuing calibration standards analyzed every ten samples or less and at the end of a run.
   - Blank and LCS samples analyzed every twenty sample or less with a minimum of one per day.
   - MS/MSD samples analyzed every twenty samples or less with a minimum of one per day.
   - Information is documented in logbook 45 and July run sheets.

6. Instrument Conditions - Two HP5890 gas chromatographs were equipped with RTX-35 capillary columns. Each system had a Leap Technologies A200S auto-sampler and an HP ChemStation for data handling.

Table 1

Soil Sample Results – July

Table 1
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory				
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (mg/kg)	Surrogate TCMX(%)	Surrogate DCBP(%)	Rinse
GG047	GTP-DP-023-001	0-1'	14-Jul-05	10:38	14-Jul-05	**1.0**	90.1	96.1	
GG048	GTP-DP-023-002	1-2'	14-Jul-05	10:41	14-Jul-05	< 0.10	93.1	89.8	
GG049	GTP-DP-024-001	0-1'	14-Jul-05	10:35	14-Jul-05	**8.0**	89.8	89.9	
GG050	GTP-DP-024-002	1-2'	14-Jul-05	10:38	14-Jul-05	**0.33**	99.9	90.2	
GG051	GTP-DP-025-001	0-1'	14-Jul-05	10:43	14-Jul-05	**0.51**	84.1	75.3	
GG052	GTP-DP-025-002	1-2'	14-Jul-05	10:46	14-Jul-05	**0.13**	93.6	85.5	
GG053	GTP-DP-026-001	0-1'	14-Jul-05	10:51	14-Jul-05	**9.9**	94.4	95.7	
GG054	GTP-DP-026-002	1-2'	14-Jul-05	10:53	14-Jul-05	**0.23**	92.2	89.6	
GG055	GTP-Duplicate	-	14-Jul-05	-	14-Jul-05	**0.91**	90.8	90.9	
GG056	GTP-DP-027-001	0-1'	22-Jul-05	11:14	22-Jul-05	**0.43**	99.6	83.9	
GG057	GTP-DP-027-002	1-2'	22-Jul-05	11:16	22-Jul-05	< 0.10	99.6	96.6	
GG058	GTP-DP-028-001	0-1'	22-Jul-05	11:19	22-Jul-05	< 0.10	102	94.7	
GG059	GTP-DP-028-002	1-2'	22-Jul-05	11:21	22-Jul-05	< 0.10	102	97.4	
GG060	GTP-Duplicate	-	22-Jul-05	-	22-Jul-05	**0.39**	103	87.3	
GG061	GTP-DP-029-001	0-1'	22-Jul-05	11:23	22-Jul-05	**0.25**	102	95.0	
GG062	GTP-DP-029-002	1-2'	22-Jul-05	11:26	22-Jul-05	< 0.10	101	97.8	
GG063	GTP-DP-030-001	0-1'	22-Jul-05	11:30	22-Jul-05	**0.26**	99.7	90.4	
GG064	GTP-DP-030-002	1-2'	22-Jul-05	11:32	22-Jul-05	< 0.10	104	109	
GG065	GTP-DP-031-001	0-1'	22-Jul-05	11:36	22-Jul-05	**0.22**	100	85.0	
GG066	GTP-DP-031-002	1-2'	22-Jul-05	11:39	22-Jul-05	< 0.10	101	96.3	

NOTES:
A = Acid Treated.
Surrogate recovery criteria 60-140% unless sample is acid treated.
Surrogate recovery criteria 75-175% if sample is acid treated.

Table 2

Water Sample Results – July

Table 2
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory			
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (ug/L)	Surrogate TCMX(%)	Surrogate DCBP(%)
W1303	GTP-FB-002	-	14-Jul-05	10:23	15-Jul-05	< 0.25	106	93.2
W1312	GTP-FB-003	-	22-Jul-05	11:13	26-Jul-05	< 0.25	113	108

Table 3

Soil QC Samples - July

Table 3
QC Results

Lab # associated with qc samples: GG047 through GG055

	Matrix Spike HH009		Matrix Spike Duplicate HH009			Blank 833	LCS 833
Date Analyzed:	7/14/05		7/14/05			7/14/05	7/14/05
Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	93.1		93.1		0%	< 0.10	90.3

Table 3
QC Results

Lab # associated with qc samples: GG056 through GG066

	Matrix Spike GG059	Matrix Spike Duplicate GG059	Blank 841	LCS 841
Date Analyzed:	7/22/05	7/22/05	7/22/05	7/22/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	98.6		98.1		1%	< 0.10	97.6

Table 4

Water QC Samples - July

Table 4
QC Results

Lab # associated with qc samples: W1303

	Matrix Spike W1305		Matrix Spike Duplicate W1305			Blank	LCS
Date Analyzed:	7/15/05		7/15/05			7/15/05	7/15/05
Compound	% Rec		% Rec		% RPD	ug/L	% Rec
PCB as 1260	98.6		101		-2%	< 0.25	98.7

Table 4
QC Results

Lab # associated with qc samples: W1312

	Matrix Spike W1312		Matrix Spike Duplicate W1312			Blank	LCS
Date Analyzed:	7/27/05		7/27/05			7/26/05	7/26/05
Compound	% Rec		% Rec		% RPD	ug/L	% Rec
PCB as 1260	92.7		90.9		2%	< 0.25	104

Appendix A

Chain of Custody Sheets for mobile lab PCB analysis Samples

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY No. 013206

GTP
Puckett ST

Page 1 of 1

Project Number:	Mail Report To:
Project Name: KUHLMAN ELECTRIC	Company: MARTIN B SLAGLE
Project Location: CRYSTAL SPRINGS	Address:
Sampled By (Print): CHUCK POOL	

Turn Around (circle one) Normal Rush
Report Due:
Invoice To:
Company:
Address:
P.O. No.: Quote No.:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
GTP-DP-023-001	7/14/05	1038	S	1	NA	PCB's	0-1'	GG047
-023-002		1041	S				1-2'	GG048
-024-001		1035					0-1'	GG049
-024-002		1038					1-2'	GG050
-025-001		1043					0-1'	GG051
-025-002		1046					1-2'	GG052
-026-001		1051					0-1'	GG053
-026-002		1053					1-2'	GG054
GTP-DUP		—						GG055

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

Relinquished By: [signature] Date/Time: 7/14/05 1106
Received By: [signature] Date/Time: 1100 7/14/05
Relinquished By: Date/Time:
Received By: Date/Time:

Custody Seal: Present/Absent Intact/Not Intact Seal #'s
Receipt Temp:
Temp Blank Y N
Shipped Via:

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

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY

GTP
Puckett ST

No. 013231 *

Page 1 of 1

Turn Around (circle one) Normal Rush

Report Due:

Invoice To:

Company:

Address:

P.O. No.: Quote No.:

Project Number:

Project Name: KUHLMAN ELECTRIC

Project Location: CRYSTAL SPRINGS

Sampled By (Print): Chuck Pal

Mail Report To:

Company: MARTIN & SLAGLE

Address:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
GTP-DP-027-001	7/22/05	1114	S	1	NA	PCBs	0-1	GC056
GTP-DP 027-002		1116					1-2	GC057
GTP-DP 028-001		1119					0-1	GC058
GTP-DP 028-002		1121					1-2	GC059
GTP-DUPLICATE		—					—	GC060
GTP-DP-029-001		1123					0-1	GC061
GTP-DP-029-002		1126					1-2	GC062
GTP-DP-030-001		1130					0-1	GC063
GTP-DP-030-002		1132					1-2	GC064
GTP-DP-031-001		1136					0-1	GC065
GTP-DP-031-002		1139					1-2	GC066

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

Relinquished By: Chuck O. A. Pal — Date/Time: 7/22/05 1210

Received By: [signature] — Date/Time: 7/22/05 1210

Relinquished By: — Date/Time:

Received By: — Date/Time:

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

Receipt Temp:

Temp Blank Y N

Shipped Via:

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

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY

No. 013207

Page 1 of 1

MSL Puckett ST

Project Number:	Mail Report To:
Project Name: KUHLMAN ELECTRIC	Company: MARTIN & SLAGLE
Project Location: CRYSTAL SPRINGS	Address:
Sampled By (Print): CHUCK POOL	

Turn Around (circle one) Normal Rush	
Report Due:	
Invoice To:	
Company:	
Address:	
P.O. No.:	Quote No.:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
GTP-AB-002	7/14/05	1023	W	1	NA	PCB's		W1303

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

Relinquished By: [signature] O.M. P.C.I. Date/Time: 7/14/05 1100

Received By: [signature] Date/Time: 7/14/05 1100

Relinquished By: Date/Time:

Received By: 1235 1234 13.6 Date/Time: 1320

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

Receipt Temp:

Temp Blank Y N

Shipped Via:

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

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY

MISC

No. 013227 *

Page 1 of 1

Turn Around (circle one) Normal Rush
Report Due:
Invoice To:
Company:
Address:
P.O. No.: Quote No.:

Project Number:
Project Name: KUHLMAN ELECTRIC
Project Location: CRYSTAL SPRINGS
Sampled By (Print): Chuck Peel

Mail Report To:
Company: MARTIN + SLAGLE
Address:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
GTP-FB-003	7/22/05	1113	W	1	NA	PCBs		W1312

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

Relinquished By: Chuck Peel
Date/Time: 7/22/05 1200
Received By:
Date/Time: 7/22/05 1200

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

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

Appendix B

FEDEX shipping label for Paradigm Labs

FedEx Express **US Airbill** FedEx Tracking Number **8494 4407 3329**

Sender's Copy

From *Please print and press hard.*

Date 7/20/05 Sender's FedEx Account Number

Sender's Name Chuck Peel Phone (601) 898-2792

Company PEEL CONSULTING

Address 140 CHAPEL LANE Dept./Floor/Suite/Room

City MADISON State MS ZIP 39110

Your Internal Billing Reference First 24 characters will appear on invoice. MARTIN + SLACK OPTIONAL

To

Recipient's Name SAMPLE CUSTODIAN Phone ( )

Company PARADIGM ANALYTICAL LABS

Recipient's Address 5500 BUSINESS DR Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City WILMINGTON State NC ZIP 28405-8446

4a Express Package Service — *Packages up to 150 lbs.* * To most locations

- [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.* ** To most locations

- [ ] 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
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight 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
- [ ] Cargo Aircraft Only

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

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

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

FedEx Acct. No. or Credit Card No. 1811-4189-1 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 Sign to Authorize Delivery Without a 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.

466

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.GoFedEx 1.800.463.3339.

0295350499

SRF • Rev. Date 11/03 • Part #158279 • ©1994–2003 FedEx • PRINTED IN U.S.A.

FedEx Express **US Airbill** FedEx Tracking Number **8494 4407 3330**

Sender's Copy

From *Please print and press hard.*

Date 7/28/05 Sender's FedEx Account Number

Sender's Name CHUCK PEEL Phone 601 898-2792

Company PEEL CONSULTING

Address 140 CHAPEL LANE Dept./Floor/Suite/Room

City MADISON State MS ZIP 39110

Your Internal Billing Reference First 24 characters will appear on invoice. MARTIN + SLACK

To

Recipient's Name SAMPLE CUSTODIAN Phone ( )

Company PARADIGM ANALYTICAL LABS

Recipient's Address 5500 BUSINESS DR Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

MINGTON State NC ZIP 28405-8446

4a Express Package Service — *Packages up to 150 lbs.* * To most locations

- [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.* ** To most locations

- [ ] 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
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight 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
- [ ] Cargo Aircraft Only

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

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

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

FedEx Acct. No. or Credit Card No. 1811-4189-1 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 Sign to Authorize Delivery Without a 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.

466

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.GoFedEx 1.800.463.3339.

0295350499

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Appendix C

Chain of Custody Sheets for samples sent to Paradigm Labs

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46362

Page 1 of 1

Client: MARTIN B SLAGLE
Address:
Address: BLACK MOUNTAIN, NC
Quote #:

Project ID: KIRKMAN COURTYARD
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/20/05
Turnaround: LOCAL
Job Number:
P.O. Number:

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives				Analyses							Comments: Please specify any special reporting requirements
				MI				PCB's							MOBILE LAB # Depth
GTP-DP-023-001	7/14/05	1038	S	X				X							GG047 0-1'
GTP-DUP	7/14/05	—	S	X				X							GG055 —

Relinquished By	Date	Time	Received By	Date	Time	Temperature
Charles O. M. Peel	7/20/05	1400				

State Certification Requested
NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44656

Page 1 of 1

Client: MARTIN & SLAGLE
Address:
Address: BLACK MOUNTAIN NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/27/05
Turnaround: STD
Job Number:
P.O. Number:

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives: NA	Analyses: PCBs	Comments: Please specify any special reporting requirements: MOBIL LAB # / Depth
GTP-DP-027-001	7/22/05	1114	S	X	X	66056 0-1'
GTP-DUPLICATE	7/22/05	—	S	X	X	66060 —

Relinquished By	Date	Time	Received By	Date	Time	Temperature
	7/28/05	1430				

State Certification Requested
NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

August 8, 2005

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

Dear Mr. Martin,

Enclosed is the Technical Memorandum for work completed at the former Borg Warner and current Kuhlman Electric facility in Crystal Springs, Mississippi during the month of July. If you have any questions concerning this information, please give me a call.

Sincerely,

Kari-Ann Killian
for Richard Johnson

Enclosure

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road • Madison, WI 53718 • Phone (608) 221-8700 • FAX (608) 221-4889

Technical Memorandum

Borg Warner / Kuhlman Electric

Crystal Springs, Mississippi

TECHNICAL MEMORANDUM

August 8, 2005

To: Robert Martin
Martin Slagle Inc.

From: Richard Johnson
ECCS, Inc.

Re: Field Analytical Methods – QC Summary
Borg Warner – Kuhlman Electric Facility
Crystal Springs, Mississippi

INTRODUCTION

This Technical Memorandum provides documentation of the field analytical test methods used to analyze soil and water samples collected from CSP Property area during July 2005 during an accelerated site investigation episode around the former Borg Warner and current Kuhlman Electric facility in Crystal Springs, Mississippi. Soil and water samples were analyzed for polychlorinated biphenyls (PCBs) and chlorinated benzenes by gas chromatography (GC) in accordance with ECCS's Polychlorinated Biphenyl (PCB) Mini Extraction Screening Procedure. A summary of test results is provided in Table 1 for soils and Table 2 for waters. A summary of method blanks, laboratory control samples and matrix spike/matrix spike duplicate data is provided in Table 3 for the soils and Table 4 for the waters.

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 mobile lab PCB analysis for Excavation samples
B) FEDEX shipping label for Paradigm Labs
C) Chain of custody sheets for samples sent to Paradigm Labs

The PCB mini-extraction procedure is based on the existing EPA SW846 methods 8082/8141. The procedure incorporates all the quality control rigors of the full 8082/8141 methods including quantification based on 6-point calibration with continuing calibration verification, surrogate method performance monitoring, method blanks, laboratory control samples (LCS), and matrix spike/matrix spike (MS/MSD) duplicate samples. As such, you should consider these test results as comparable to what you would get from a fixed-based laboratory using the more-widely accepted extraction procedure.

The primary project objective of the sampling and testing episode was to delineate the PCB contamination at and around the site using the accelerated site characterization approach. The mobile laboratory was required to provide data as quickly as possible to keep the accelerated site investigation process on track while trying to maintain a goal of level three data quality.

CASE NARRATIVE

During the episode, all samples collected were analyzed. To maintain rapid turnaround and to meet the project objective, three GCs were operated on a nearly continuous basis.

Quality control including proper calibration, continuing calibration verification, surrogates, method blanks, laboratory control samples and matrix spike/matrix spike duplicate samples was performed at the method-specified intervals. Overall quality of the data is very good. The following quality related issues should be noted:

1. All surrogate recoveries were within acceptable ranges with the exception of one sample (C252). Method states that 1 of the 2 required surrogates must be within range.

2. All LCS recoveries were within acceptable ranges. See Table 3 and 4.

3. All MS/MSD recoveries were within acceptable ranges. Percent repeatability was also within acceptable ranges. See Table 3 and 4.

4. Since electron capture of detectors tend to have a very narrow linear range, many sample extracts required dilution. Dilutions were accurately done.

METHOD SUMMARY

This method employs a mini-extraction procedure and gas chromatography analysis for the detection of PCBs and chlorinated benzenes. Reporting limits are provided in the results Tables. Four grams of sample are dried with anhydrous sodium sulfate and extracted with eight mLs of 80/20 iso-octane/acetone. The extract is then analyzed by Gas Chromatography-Electron Capture Detector (GC-ECD).

Procedure

1. Standards Preparation - Primary standards are prepared from a solution purchased from various vendors at Certified concentrations. Stock standards are prepared in suitable solvents and stored in a freezer when not in use. Secondary standards are prepared in 80/20 iso-octane/acetone and stored in a freezer when not in use. Standard curve mixes for this project was prepared at six concentrations: PCBs – 0.05, 0.10, 0.20, 0.50, 1.0 and 2.0 ug/m; chlorinated benzenes – 0.005, 0.01, 0.02, 0.05, 0.10 and 0.20 ug/ml.

2. Sample Preparation - SOILS: Each sample or quality control sample is prepared in identical fashion. Approximately four grams of silica sand (blanks and control spikes) or sample is transferred into a clean scintillation vial. Ten grams of anhydrous sodium sulfate are added to the vial and mixed well. Extra sodium sulfate is added when necessary to assure the sample is dried. A surrogate, spike compound mix (if necessary) and eight mLs of 80/20 iso-octane/acetone are added to the vial. The vial is shaken for 30 seconds, allowed to settle for 2 minutes, shaken again for 30 seconds, and allowed to settle for 10 minutes. An aliquot of the extract is transferred to an autosampler vial for injection into the GC-ECD.

3. WATER Samples: 200 grams of water was weighed into a clean jar containing 50 grams of sodium chloride. The samples were spiked with a surrogate in addition the LCS/MS/MSD were spiked with PCB's and chlorinated benzenes. Added 10 ml of isooctane to each and shake 3 times for 2 minutes each time. Samples were allowed to settle for approximately 5 minutes between each shake. Isooctane was decanted into a scintillation vial and then an aliquot was transferred to an autosampler vial. Then extracts were injected into a GC-ECD.

4. GC-ECD Analysis - A sample aliquot is injected into an HP5890 GC with an ECD equipped with an HP ChemStation for data processing. PCBs were identified by matching retention times of standards to the same retention time in the sample. Regression analysis was performed on each of the selected peak's height verses concentration of the standard using a LN/LN transformed linear regression. For PCBs nine peaks were selected for quantification. The ug/mL value for each peak was added together and divided by the number of peaks selected to obtain the total PCB ug/mL result. If interference occurred at any of the peaks, these peaks were not included in the total, and the divisor was reduced accordingly.

5. Quality Control - Quality control consisted of the following items:
   - Continuing calibration standards analyzed every ten samples or less and at the end of a run.
   - Blank and LCS samples analyzed every twenty sample or less with a minimum of one per day.
   - MS/MSD samples analyzed every twenty samples or less with a minimum of one per day.
   - Information is documented in logbook 45 and July run sheets.

6. Instrument Conditions - Two HP5890 gas chromatographs were equipped with RTX-35 capillary columns. Each system had a Leap Technologies A200S auto-sampler and an HP ChemStation for data handling.

Table 1

Soil Sample Results – July

Table 1
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory				
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (mg/kg)	Surrogate TCMX(%)	Surrogate DCBP(%)	Rinse
C217	CSP-DP-171-001	0-1'	15-Jul-05	10:08	15-Jul-05	**1.2**	90.3	86.4	
C218	CSP-DP-171-002	1-2'	15-Jul-05	10:10	15-Jul-05	< 0.10	95.1	91.0	
C219	CSP- Duplicate	-	15-Jul-05	-	15-Jul-05	**1.2**	90.2	91.7	
C220	CSP-DP-172-001	0-1'	15-Jul-05	12:40	15-Jul-05	**1.0**	91.5	88.0	
C221	CSP-DP-172-002	1-2'	15-Jul-05	12:43	15-Jul-05	< 0.10	93.2	90.4	
C222	CSP-DP-173-001	0-1'	15-Jul-05	12:51	15-Jul-05	**1.5**	95.5	80.3	
C223	CSP-DP-173-002	1-2'	15-Jul-05	12:54	15-Jul-05	< 0.10	93.4	85.4	
C224	CSP-DP-174-001	0-1'	15-Jul-05	12:59	15-Jul-05	< 0.10	89.7	86.3	
C225	CSP-DP-174-002	1-2'	15-Jul-05	13:02	15-Jul-05	< 0.10	91.9	89.9	
C226	CSP-DP-175-001	0-1'	15-Jul-05	13:05	15-Jul-05	**0.49**	90.5	87.0	
C227	CSP-DP-175-002	1-2'	15-Jul-05	13:08	15-Jul-05	< 0.10	93.2	89.0	
C228	CSP-DP-176-001	0-1'	15-Jul-05	13:11	15-Jul-05	**0.15**	91.3	84.9	
C229	CSP-DP-176-002	1-2'	15-Jul-05	13:13	15-Jul-05	< 0.10	94.3	87.7	
C230	CSP-DP-177-001	0-1'	15-Jul-05	13:20	15-Jul-05	**0.87**	89.2	76.8	
C231	CSP-DP-177-002	1-2'	15-Jul-05	13:24	15-Jul-05	**0.45**	90.0	80.0	
C232	CSP-DP-178-001	0-1'	15-Jul-05	13:28	15-Jul-05	**1.8**	90.7	81.6	
C233	CSP-DP-178-002	1-2'	15-Jul-05	13:32	15-Jul-05	< 0.10	92.8	84.5	
C234	CSP-DP-179-001	0-1'	15-Jul-05	14:30	15-Jul-05	**0.23**	89.4	84.1	
C235	CSP-DP-179-002	1-2'	15-Jul-05	14:33	15-Jul-05	< 0.10	91.1	85.6	
C236	CSP-DP-180-001	0-1'	15-Jul-05	14:40	15-Jul-05	< 0.10	90.8	84.3	
C237	CSP-DP-180-002	1-2'	15-Jul-05	14:43	15-Jul-05	< 0.10	87.9	85.6	
C238	CSP-DP-181-001	0-1'	15-Jul-05	14:50	15-Jul-05	< 0.10	90.1	85.4	
C239	CSP-DP-181-002	1-2'	15-Jul-05	14:53	15-Jul-05	< 0.10	90.8	85.1	
C240	CSP-DP-182-001	0-1'	15-Jul-05	14:58	15-Jul-05	**0.67**	91.8	83.4	
C241	CSP-DP-182-002	1-2'	15-Jul-05	15:02	15-Jul-05	< 0.10	90.9	82.3	
C242	CSP-DP-183-001	0-1'	15-Jul-05	15:08	15-Jul-05	**0.21**	87.8	84.0	
C243	CSP-DP-183-002	1-2'	15-Jul-05	15:11	16-Jul-05	< 0.10	89.2	82.2	
C244	CSP-DP-184-001	0-1'	15-Jul-05	15:20	16-Jul-05	**0.14**	87.3	80.8	
C245	CSP-DP-184-002	1-2'	15-Jul-05	15:23	16-Jul-05	< 0.10	90.1	81.8	
C246	CSP-DP-185-001	0-1'	15-Jul-05	15:28	16-Jul-05	**0.12**	90.0	82.2	
C247	CSP-DP-185-002	1-2'	15-Jul-05	15:30	16-Jul-05	< 0.10	91.5	82.9	
C248	CSP-DP-186-001	0-1'	15-Jul-05	15:38	16-Jul-05	**0.14**	88.2	80.3	
C249	CSP-DP-186-002	1-2'	15-Jul-05	15:41	16-Jul-05	< 0.10	91.5	78.1	
C250	CSP-DP-187-001	0-1'	15-Jul-05	15:50	16-Jul-05	< 0.10	86.2	79.2	
C251	CSP-DP-187-002	1-2'	15-Jul-05	15:53	16-Jul-05	< 0.10	88.1	77.1	
C252	CSP-DP-188-001	0-1'	18-Jul-05	16:05	19-Jul-05	< 0.10	136	61.8	A
C253	CSP-DP-189-001	0-1'	18-Jul-05	16:15	19-Jul-05	< 0.10	138	103	A
C254	CSP-DP-190-001	0-1'	18-Jul-05	16:21	19-Jul-05	< 0.10	132	109	A
C255	CSP-DP-191-001	0-1'	18-Jul-05	16:28	19-Jul-05	**0.38**	136	102	A

NOTES:
A = Acid Treated.
Surrogate recovery criteria 60-140% unless sample is acid treated.
Surrogate recovery criteria 75-175% if sample is acid treated.

Table 1
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory				
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (mg/kg)	Surrogate TCMX(%)	Surrogate DCBP(%)	Rinse
C256	CSP-DP-192-001	0-1'	18-Jul-05	16:36	19-Jul-05	< 0.10	119	111	A
C257	CSP- Duplicate	-	18-Jul-05	-	19-Jul-05	< 0.10	122	112	A
C258	CSP-DP-193-001	0-1'	18-Jul-05	16:44	19-Jul-05	< 0.10	120	100	A
C259	CSP-DP-194-001	0-1'	18-Jul-05	16:50	19-Jul-05	< 0.10	120	107	A
C260	CSP-DP-195-001	0-1'	18-Jul-05	16:59	19-Jul-05	< 0.10	135	106	A
C261	CSP-DP-196-001	0-1'	19-Jul-05	10:10	20-Jul-05	< 0.10	112	106	A
C262	CSP-DP-197-001	0-1'	19-Jul-05	10:18	20-Jul-05	< 0.10	122	96.1	A
C263	CSP-DP-198-001	0-1'	19-Jul-05	10:22	20-Jul-05	< 0.10	109	93.1	A
C264	CSP-DP-199-001	0-1'	19-Jul-05	10:28	20-Jul-05	< 0.10	110	101	A
C265	CSP-DP-200-001	0-1'	19-Jul-05	10:34	20-Jul-05	< 0.10	135	110	A
C266	CSP-DP-201-001	0-1'	19-Jul-05	10:39	20-Jul-05	< 0.10	120	93.3	A
C267	CSP-DP-202-001	0-1'	19-Jul-05	10:44	20-Jul-05	< 0.10	117	96.7	A
C268	CSP-DP-203-001	0-1'	19-Jul-05	10:49	20-Jul-05	< 0.10	118	94.8	A
C269	CSP- Duplicate	-	19-Jul-05	-	20-Jul-05	< 0.10	106	100	A
C270	CSP-DP-204-001	0-1'	19-Jul-05	13:32	20-Jul-05	< 0.10	133	87.8	A
C271	CSP-DP-205-001	0-1'	19-Jul-05	13:42	20-Jul-05	< 0.10	126	92.7	A

NOTES:
A = Acid Treated.
Surrogate recovery criteria 60-140% unless sample is acid treated.
Surrogate recovery criteria 75-175% if sample is acid treated.

Table 2

Water Sample Results – July

Table 2
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory			
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (ug/L)	Surrogate TCMX(%)	Surrogate DCBP(%)
W1305	CSP-FB-008	-	15-Jul-05	10:05	15-Jul-05	< 0.25	109	97.4
W1310	CSP-FB-009	-	18-Jul-05	16:17	20-Jul-05	< 0.25	110	112

Table 3

Soil QC Samples - July

Table 3
QC Results

Lab # associated with qc samples: C217 through C236

	Matrix Spike C218	Matrix Spike Duplicate C218		Blank 835	LCS 835
Date Analyzed:	7/15/05	7/15/05		7/15/05	7/15/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	92.9		91.5		2%	< 0.10	91.6

Table 3
QC Results

Lab # associated with qc samples: C237 through C251

	Matrix Spike C251	Matrix Spike Duplicate C251		Blank 836	LCS 836
Date Analyzed:	7/16/05	7/16/05		7/16/05	7/16/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	85.3		86.0		-1%	< 0.10	82.9

Table 3
QC Results

Lab # associated with qc samples: C252 through C260

	Matrix Spike C259	Matrix Spike Duplicate C259	Blank 837	LCS 837
Date Analyzed:	7/19/05	7/19/05	7/19/05	7/19/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	99.5		94.8		5%	< 0.10	106

Table 3
QC Results

Lab # associated with qc samples: C261 through C271

	Matrix Spike C265	Matrix Spike Duplicate C265		Blank 838	LCS 838
Date Analyzed:	7/20/05	7/20/05		7/19/05	7/20/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	112		107		5%	< 0.10	99.2

Table 4

Water QC Samples - July

Table 4
QC Results

Lab # associated with qc samples: W1305

	Matrix Spike W1305	Matrix Spike Duplicate W1305	Blank	LCS
Date Analyzed:	7/15/05	7/15/05	7/15/05	7/15/05

Compound	% Rec		% Rec		% RPD	ug/L	% Rec
PCB as 1260	98.6		101		-2%	< 0.25	98.7

Table 4
QC Results

Lab # associated with qc samples: W1310

	Matrix Spike W1309		Matrix Spike Duplicate W1309			Blank	LCS
Date Analyzed:	7/20/05		7/20/05			7/20/05	7/20/05
Compound	% Rec		% Rec		% RPD	ug/L	% Rec
PCB as 1260	116		111		4%	< 0.25	115

Appendix A

Chain of Custody Sheets for mobile lab PCB analysis Samples

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY No. 013212 *

CSP Packet #5

Page 1 of 3

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

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
CSP-DP-171-001	7/6/05	1004	S	1	HA	PCBS	0-1'	C217
↓ ↓ ↓ -002		1010					1-2'	C218
CSP-DUP		—					—	C219
CSP-DP-172-001		1240					0-1'	C220
↓ -002		1243					1-2'	C221
173-001		1251					0-1'	C222
↓ -002		1254					1-2'	C223
174-001		1259					0-1'	C224
↓ -002		1302					1-2'	C225
175-001		1305					0-1'	C226
↓ -002		1308					1-2'	C227
↓ ↓ 176-001	↓	1311	↓	↓	↓	↓	0-1'	C228

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

Relinquished By: Charles O. M. Page	Date/Time: 7/15/05 1345	Received By:	Date/Time: 7/15/05 1345
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

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Environmental Chemistry Consulting Services, Inc.

2525 Advance Road Madison, WI 53718
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CHAIN OF CUSTODY

CSP Puckett ST

No. 013213 *

Page 2 of 3

Project Number:	
Project Name: KUHLMAN ELECTRIC	
Project Location: CRYSTAL SPRINGS	
Sampled By (Print): CHUCK PEEL	

Mail Report To:	
Company: MARTIN B SLAGLE	
Address:	

Turn Around (circle one) Normal Rush	
Report Due:	
Invoice To:	
Company:	
Address:	
P.O. No.: Quote No.:	

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
CSP-DP-176-002	7/15/05	1313	S	1	HA	PCB's	1-2'	C229
177-001		1320					~~1-2~~ 10 0-1'	C230
↓ -002		1324					1-2'	C231
178-001		1328					0-1'	C232
↓ -002		1332					1-2'	C233
179-001		1430					0-1'	C234
↓ -002		1433					1-2'	C235
180-001		1440					0-1'	C236
↓ -002		1443					1-2'	C237
181-001		~~1350~~ 1450					0-1'	C238
↓ -002		~~1353~~ 1453					1-2'	C239
182-001		~~1355~~ 1455					0-1'	C240

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

Relinquished By: Chuck O. M. Peel	Date/Time: 7/15/05 1530	Received By:	Date/Time: 1530 7/15/05
Relinquished By:	Date/Time:	Received By:	Date/Time:

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

Shipped Via: ② EMI/ECCO

Receipt Temp:
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CHAIN OF CUSTODY

CSP Puckett ST

No. 013214 *

Page 3 of 3

Project Number:	Mail Report To:
Project Name: KUHLMAN ELECTRIC	Company: MARTIN & SCHMID
Project Location: CRYSTAL SPRINGS	Address:
Sampled By (Print): CHUCK PECK	

Turn Around (circle one) Normal Rush
Report Due:
Invoice To:
Company:
Address:
P.O. No.: Quote No.:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
CSP-DP-182-002	7/14/05	1402	S	1	NA	PCB's	1-2'	C241
183-001		1408					0-1'	C242
-002		1411					1-2'	C243
184-001		1500					0-1'	C244
-002		1523					1-2'	C245
185-001		1528					0-1'	C246
-002		1530					1-2'	C247
186-001		1538					0-1'	C248
-002		1541					1-2'	C249
187-001		1550					0-1'	C250
002		1553					1-2'	C251

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

Relinquished By: Chuck A. Peck	Date/Time: 7/15/05 1600	Received By:	Date/Time: 1600 7/15/05
Relinquished By:	Date/Time:	Received By:	Date/Time:

Custody Seal: Present/Absent Intact/Not Intact Seal #'s
Shipped Via: (2) ENTECH COURIER 7/15/05
Receipt Temp:
Temp Blank Y N

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CHAIN OF CUSTODY

CSP Pudcliff ST

No. 013217 *

Page 1 of 1

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

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
CSP-DP-188-001	7/18/05	1605	S	1	NA	PCBs	0-1	C252
CSP-DP-189-001		1615					0-1	C253
CSP-DP-190-001		1621					0-1	C254
CSP-DP-191-001		1628					0-1	C255
CSP-DP-192-001		1636					0-1	C256
CSP-Duplicate		—					—	C257
CSP-DP-193-001		1644					0-1	C258
CSP-DP-194-001		1650					0-1	C259
CSP-DP-195-001		1659					0-1	C260

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

Relinquished By: C. & D. Paul	Date/Time: 7/18/05 1720	Received By:	Date/Time: 7/18/05 1720
Relinquished By:	Date/Time:	Received By:	Date/Time:

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

Shipped Via:

Receipt Temp:

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CHAIN OF CUSTODY

CSP Puckett ST

No. 013219 *

Page 1 of 1

Project Number:	Mail Report To:
Project Name: KUHLMAN ELECTRIC	Company: MARTIN & SVAGLE
Project Location: CRYSTAL SPRINGS	Address:
Sampled By (Print): Chuck Peel	

Turn Around (circle one) Normal Rush
Report Due:
Invoice To:
Company:
Address:
P.O. No.: Quote No.:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
CSP-DP-196-001	07/19/05	1010	S	1	NA	PCBs	0-1'	C261
CSP-DP-197-001		1018					0-1'	C262
CSP-DP-198-001		1022					0-1'	C263
CSP-DP-199-001		1028					0-1'	C264
CSP-DP-200-001		1034					0-1'	C265
CSP-DP-201-001		1039					0-1'	C266
CSP-DP-202-001		1044					0-1'	C267
CSP-DP-203-001		1049					0-1'	C268
CSP-DUPLICATE		—					—	C269
CSP-DP-204-001		1332					0-1'	C270
CSP-DP-205-001	↓	1342	↓	↓	↓	↓	0-1'	C271

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

Relinquished By: Chuck O. M. Peel	Date/Time: 7/19/05 1700	Received By:	Date/Time: 7/19/05 1700
Relinquished By:	Date/Time:	Received By:	Date/Time:

Custody Seal: Present/Absent Intact/Not Intact Seal #'s
Shipped Via:
Receipt Temp:
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CHAIN OF CUSTODY No. 013211 *

MISC Puckett ST

Page 1 of 1

Turn Around (circle one)	Normal Rush
Report Due:	
Invoice To:	
Company:	
Address:	
P.O. No.:	Quote No.:

Project Number:	
Project Name:	KUNKWAD ELECTRIC
Project Location:	CRYSTAL SPRINGS
Sampled By (Print):	CHUCK POOL
Mail Report To:	
Company:	MARTIN & SLADEK
Address:	

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
CSP-FB-008	7/15/05	1005	W	1	N/A	PCB's		W1301

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

Relinquished By:	Chuck D. M. Pool	Date/Time:	7/15/05 1030
Relinquished By:		Date/Time:	
Received By:		Date/Time:	7/15/05 1030
Received By:		Date/Time:	

Custody Seal: Present/Absent Intact/Not Intact Seal #'s
Shipped Via:
Receipt Temp:
Temp Blank Y N

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CHAIN OF CUSTODY

MISC

No. 013215 *

Page 1 of 1

Project Number:	Mail Report To:
Project Name: KUHLMAN ELECTRIC	Company: MARTIN & SLAGLE
Project Location: CRYSTAL SPRINGS	Address:
Sampled By (Print): Chuck Paul	

Turn Around (circle one) Normal Rush
Report Due:
Invoice To:
Company:
Address:
P.O. No.: Quote No.:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
CSP-FB-009	7/18/05	1617	W	1	NP	PCBs		W1310

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

Relinquished By: Chuck O. A. Paul	Date/Time: 7/18/05 1700	Received By:	Date/Time: 7/18/05 1700
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

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Appendix B

FEDEX shipping label for Paradigm Labs

FedEx Express **US Airbill**

FedEx Tracking Number: 8494 4407 3329

Form No. 0215 — Sender's Copy

From *Please print and press hard.*

7/20/05 — Sender's FedEx Account Number

Sender's Name: Chuck Peel — Phone: (601) 898-2792

Company: PEEL CONSULTING

Address: 140 CHAPEL LANE — Dept./Floor/Suite/Room

City: MADISON — State: MS — ZIP: 39110

Your Internal Billing Reference — First 24 characters will appear on invoice. MARTIN + SLACK OPTIONAL

To

Recipient's Name: SAMPLE CUSTODIAN — Phone: ( )

Company: PARADIGM ANALYTICAL LABS

Recipient's Address: 5500 BUSINESS DR — Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address — To request a package be held at a specific FedEx location, print FedEx address here.

City: WILMINGTON — State: NC — ZIP: 28405-8446

4a Express Package Service — *Packages up to 150 lbs.* * To most locations

- [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.* ** To most locations

- [ ] 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
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] **SATURDAY Delivery** — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight 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
- [ ] Cargo Aircraft Only

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

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

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

FedEx Acct. No. or Credit Card No.: 1811-4189-1 — 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 Sign to Authorize Delivery Without a 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.

466

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.GoFedEx 1.800.463.3339.

0295350499

SRF • Rev. Date 11/03 • Part #156779 • ©1994–2003 FedEx • PRINTED IN U.S.A.

Appendix C

Chain of Custody Sheets for samples sent to Paradigm Labs

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46364

Page 1 of 1

Client: MARTIN & SLAGLE Project ID: KUHLMAN ELECTRIC Date: 7/20/05 Report To: SAME
Address: Contact: ROBERT MARTIN Turnaround: STD
Address: BLACK MOUNTAIN NC Phone: Job Number:
Quote #: Fax: P.O. Number: Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives: NA	Analyses: PCB	Comments: Please specify any special reporting requirements: Mobile Lab #	Depth
CSP-DP-171-001	7/15/05	1008	S	X	X	C217	0-1'
CSP-DUPLICATE	7/15/05	—	S	X	X	C219	—
CSP-DP-178-001	7/15/05	1328	S	X	X	C232	0-1'
CSP-DP-182-001	7/15/05	1458 1358	S	X	X	C240	0-1'
CSP-DP-186-001	7/15/05	1538	S	X	X	C248	0-1'
CSP-DP-188-001	7/18/05	1605	S	X	X	C252	0-1'
CSP-DUPLICATE	7/18/05	—	S	X	X	C257	—
CSP-DP-196-001	7/19/05	1010	S	X	X	C261	0-1'
CSP-DUPLICATE	7/19/05	—	S	X	X	C269	—

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Charles O. M. Riel	7/20/05	MCC					NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46365

Page 1 of 1

Client: MARTIN + SLAGLE
Address:
Address: BLACK MOUNTAIN NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/20/05
Turnaround: STD
Job Number:
P.O. Number:

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives				Analyses									Comments: Please specify any special reporting requirements
				NA				PCB									MOBIL LAB #
CSP-FB-009	7/19/05	1617	W	X				X									W1310

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Burke O. McPeak	7/20/05	PM					NC ____ SC ____ Other ____
							SEE REVERSE FOR TERMS AND CONDITIONS

August 8, 2005

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

Dear Mr. Martin,

Enclosed is the Technical Memorandum for work completed at the former Borg Warner and current Kuhlman Electric facility in Crystal Springs, Mississippi during the month of July. If you have any questions concerning this information, please give me a call.

Sincerely,

Kari-Ann Killian

for Richard Johnson

Enclosure

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road • Madison, WI 53718 • Phone (608) 221-8700 • FAX (608) 221-4889

Technical Memorandum

Borg Warner / Kuhlman Electric

Crystal Springs, Mississippi

Table 1
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory				
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (mg/kg)	Surrogate TCMX(%)	Surrogate DCBP(%)	Rinse
II001	ESP-DP-001-001	0-1'	20-Jul-05	12:32	20-Jul-05	**0.53**	99.2	97.7	
II002	ESP-DP-001-002	1-2'	20-Jul-05	12:37	20-Jul-05	< 0.10	103	110	
II003	ESP-DP-002-001	0-1'	20-Jul-05	12:45	20-Jul-05	**1.6**	101	102	
II004	ESP-DP-002-002	1-2'	20-Jul-05	12:47	20-Jul-05	< 0.10	104	114	
II005	ESP-DP-003-001	0-1'	20-Jul-05	12:50	20-Jul-05	**3.6**	102	101	
II006	ESP-DP-003-002	1-2'	20-Jul-05	12:52	20-Jul-05	**0.15**	103	112	
II007	ESP-DP-004-001	0-1'	20-Jul-05	13:00	20-Jul-05	**1.7**	101	107	
II008	ESP-DP-004-002	1-2'	20-Jul-05	13:03	20-Jul-05	**0.36**	101	110	
II009	ESP-Duplicate	-	20-Jul-05	-	20-Jul-05	**0.52**	100	106	
II010	ESP-DP-005-001	0-1'	20-Jul-05	13:10	20-Jul-05	**0.95**	100	105	
II011	ESP-DP-005-002	1-2'	20-Jul-05	13:13	20-Jul-05	< 0.10	99.7	109	
II012	ESP-DP-006-001	0-1'	20-Jul-05	13:19	20-Jul-05	**0.33**	101	111	
II013	ESP-DP-006-002	1-2'	20-Jul-05	13:22	20-Jul-05	**0.39**	103	113	
II014	ESP-DP-007-001	0-1'	20-Jul-05	13:29	20-Jul-05	**0.28**	102	112	
II015	ESP-DP-007-002	1-2'	20-Jul-05	13:31	20-Jul-05	< 0.10	100	109	
II016	ESP-DP-008-001	0-1'	20-Jul-05	15:00	20-Jul-05	< 0.10	104	117	
II017	ESP-DP-008-002	1-2'	20-Jul-05	15:03	20-Jul-05	< 0.10	101	108	
II018	ESP-DP-009-001	0-1'	20-Jul-05	15:10	20-Jul-05	< 0.10	100	102	
II019	ESP-DP-009-002	1-2'	20-Jul-05	15:14	20-Jul-05	< 0.10	98.8	107	
II020	ESP-DP-010-001	0-1'	21-Jul-05	15:00	21-Jul-05	< 0.10	98.5	93.9	
II021	ESP-DP-010-002	1-2'	21-Jul-05	15:03	21-Jul-05	< 0.10	99.2	98.7	
II022	ESP-DP-011-001	0-1'	21-Jul-05	15:09	21-Jul-05	< 0.10	98.2	104	
II023	ESP-DP-011-002	1-2'	21-Jul-05	15:13	21-Jul-05	< 0.10	98.9	96.3	
II024	ESP-Duplicate	-	21-Jul-05	-	21-Jul-05	< 0.10	100	95.4	
II025	ESP-DP-012-001	0-1'	21-Jul-05	15:18	21-Jul-05	< 0.10	98.1	92.7	
II026	ESP-DP-012-002	1-2'	21-Jul-05	15:20	21-Jul-05	< 0.10	96.1	96.3	
II027	ESP-DP-013-001	0-1'	21-Jul-05	15:25	21-Jul-05	**0.31**	99.2	94.1	
II028	ESP-DP-013-002	1-2'	21-Jul-05	15:28	21-Jul-05	< 0.10	96.5	97.8	
II029	ESP-DP-014-001	0-1'	21-Jul-05	15:34	21-Jul-05	**0.50**	98.1	93.6	
II030	ESP-DP-014-002	1-2'	21-Jul-05	15:37	21-Jul-05	< 0.10	97.8	97.4	
II031	ESP-DP-015-001	0-1'	21-Jul-05	15:40	21-Jul-05	**0.12**	100	97.1	
II032	ESP-DP-015-002	1-2'	21-Jul-05	15:43	21-Jul-05	< 0.10	99.2	99.2	

NOTES:
A = Acid Treated.
Surrogate recovery criteria 60-140% unless sample is acid treated.
Surrogate recovery criteria 75-175% if sample is acid treated.

Table 2

Water Sample Results – July

Table 2
Kuhlman Electric
Crystal Springs, Mississippi
PCB Concentrations as Aroclor 1260 Detected

					Field Laboratory			
Field Lab Sample ID	Sample ID	Sample Depth	Date Collected	Time Collected	Date Analyzed	Concentration (ug/L)	Surrogate TCMX(%)	Surrogate DCBP(%)
W1311	ESP-FB-001	-	20-Jul-05	12:30	20-Jul-05	< 0.25	113	115

Table 3

Soil QC Samples - July

Table 3
QC Results

Lab # associated with qc samples: II001 through II019

	Matrix Spike D065	Matrix Spike Duplicate D065	Blank 839	LCS 839
Date Analyzed:	7/20/05	7/20/05	7/20/05	7/20/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	104		106		-2%	< 0.10	105

Table 3
QC Results

Lab # associated with qc samples: II020 through II032

	Matrix Spike II023	Matrix Spike Duplicate II023		Blank 840	LCS 840
Date Analyzed:	7/21/05	7/21/05		7/21/05	7/21/05

Compound	% Rec		% Rec		% RPD	mg/kg	% Rec
PCB as 1260	103		99.4		4%	< 0.10	98.8

Table 4

Water QC Samples - July

Table 4
QC Results

Lab # associated with qc samples: W1311

	Matrix Spike W1309		Matrix Spike Duplicate W1309			Blank	LCS
Date Analyzed:	7/20/05		7/20/05			7/20/05	7/20/05
Compound	% Rec		% Rec		% RPD	ug/L	% Rec
PCB as 1260	116		111		4%	< 0.25	115

Appendix A

Chain of Custody Sheets for mobile lab PCB analysis Samples

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY

ESP
Puckett ST

No. 013225 *

Page 1 of 2

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

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
ESP-DP-001-001	7/20/05	1232	S	1	NA	PCBs	0-1'	II001
ESP-DP-001-002		1237					1-2'	II002
ESP-DP-002-001		1245					0-1'	II003
ESP-DP-002-002		1247					1-2'	II004
ESP-DP-003-001		1250					0-1'	II005
ESP-DP-003-002		1252					1-2'	II006
ESP-DP-004-001		1300					0-1'	II007
ESP-DP-004-002		1303					1-2'	II00P
ESP-DUPLICATE		—					—	II009
ESP-DP-005-001		1310					0-1'	II010
ESP-DP-005-002		1313					1-2'	II011
ESP-DP-006-001		1319					0-1'	II012

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

Relinquished By: Charles O. M. Lee	Date/Time: 7/20/05 1400	Received By:	Date/Time: 7/20/05 1400
Relinquished By:	Date/Time:	Received By:	Date/Time:

Custody Seal: Present/Absent Intact/Not Intact Seal #'s
Receipt Temp:
Shipped Via:
Temp Blank Y N

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

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road Madison, WI 53718
Phone 608-221-8700 FAX 608-221-4889

CHAIN OF CUSTODY

ESP

No. 013226 *

Page 2 of 2

Puckett ST

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 Peel		Company:
		Address:
		P.O. No.: Quote No.:

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
ESP-DP-006-002	7/20/05	1322	S	1	NA	PCBs	1-2	II 013
ESP-DP-007-001	↓	1329	↓	↓	↓	↓	0-1	II 014
ESP-DP-007-002		1331					1-2	II 015
ESP-DP-008-001		1500					0-1	II 016
ESP-DP-008-002		1503					1-2	II 017
ESP-DP-009-001		1510					0-1	II 018
ESP-DP-009-002	↓	1514	↓	↓	↓	↓	1-2	II 019

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

Relinquished By: Charles O.A. Peel	Date/Time: 7/20/05 1600	Received By:	Date/Time: 7/20/05 1600
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

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

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY

No. 013228 *

Page 1 of 2

ESP Puckett ST

Turn Around (circle one) Normal Rush	
Report Due:	
Invoice To:	
Company:	
Address:	
P.O. No.: Quote No.:	

Project Number:	Mail Report To:
Project Name: KUHLMAN ELECTRIC	Company: MARTIN & SLAGLE
Project Location: CAPITAL SYRINGS	Address:
Sampled By (Print): Chuck Peel	

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Depth Comments	Laboratory Number
ESP-DP-010-001	7/21/05	1500	S	1	NA	PCBs	0-1'	II020
ESP-DP-010-002		1503					1-2'	II021
ESP-DP-011-001		1509					0-1'	II022
ESP-DP-011-002		1513					1-2'	II023
ESP-DUPLICATE		—					—	II024
ESP-DP-012-001		1518					0-1'	II025
ESP-DP-012-002		1520					1-2'	II026
ESP-DP-013-001		1525					0-1'	II027
ESP-DP-013-002		1528					1-2'	II028
ESP-DP-014-001		1534					0-1'	II029
ESP-DP-014-002		1537					1-2'	II030
ESP-DP-015-001		1540					0-1'	II031

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

Relinquished By:	Date/Time: 7/21/05 1600	Received By:	Date/Time: 7/21/05 1600
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

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

Environmental Chemistry Consulting Services, Inc.
2525 Advance Road Madison, WI 53718
Phone 608-221-8700 FAX 608-221-4889

CHAIN OF CUSTODY

No. 013229

ESP Puckett ST

Page 2 of 2

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	Depth Comments	Laboratory Number
ESP-DP-015-002	7/21/05	1543	S	1	NA	PCB	1-2'	IE032

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

Relinquished By: Clark O. Paul	Date/Time: 7/21/05 1700	Received By:	Date/Time: 7/21/05 1700
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

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

Environmental Chemistry Consulting Services, Inc.

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

CHAIN OF CUSTODY

MISC

No. 013218 *

Page 1 of 1

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

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Comments	Laboratory Number
ESP-FB-001	7/20/05	1230	W	1	NA	PCBs		W1311

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

Relinquished By: Chuck A.K. Peel	Date/Time: 7/20/05 1400	Received By:	Date/Time: 7/20/05 1400
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

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

Appendix B

FEDEX shipping label for Paradigm Labs

FedEx Express **US Airbill**

FedEx Tracking Number **8494 4407 3329**

Form ID 0215

Sender's Copy

From Please print and press hard.

Date 7/20/05 Sender's FedEx Account Number

Sender's Name Chuck Peel Phone (601) 898-2792

Company PEEL CONSULTING

Address 140 CHAPEL LANE

Dept./Room/Suite/Room

City MADISON State MS ZIP 39110

Your Internal Billing Reference First 24 characters will appear on invoice. MARTIN + SCALLE OPTIONAL

To

Recipient's Name SAMPLE CUSTODIAN Phone ( )

Company PARADIGM ANALYTICAL LABS

Recipient's Address 5500 BUSINESS DR

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Room/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City WILMINGTON State NC ZIP 28405-8446

4a Express Package Service — Packages up to 150 lbs. * To most locations

- [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. ** To most locations

- [ ] 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
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight 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.

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

FedEx Acct. No. or Credit Card No. 1811-4189-1 Exp. Date

Total Packages	Total Weight	Total Declared Value†	FedEx Use Only
		$ .00	

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

8 Sign to Authorize Delivery Without a 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.

466

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.GoFedEx 1.800.463.3339.

0295350499

SRF•Rev. Date 11/03•Part #156279•©1994–2003 FedEx•PRINTED IN U.S.A.

FedEx Express **US Airbill**

FedEx Tracking Number **8494 4407 3330**

Form ID 0215

Sender's Copy

From Please print and press hard.

Date 7/18/05 Sender's FedEx Account Number

Sender's Name CHUCK PEEL Phone 601 898-2792

Company PEEL CONSULTING

Address 140 CHAPEL LANE

Dept./Room/Suite/Room

City MADISON State MS ZIP 39110

Your Internal Billing Reference First 24 characters will appear on invoice. MARTIN & SCALLE

To

Recipient's Name SAMPLE CUSTODIAN Phone ( )

Company PARADIGM ANALYTICAL LABS

Recipient's Address 5500 BUSINESS DR

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Room/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City .MINGTON State NC ZIP 28405-8446

4a Express Package Service — Packages up to 150 lbs. * To most locations

- [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. ** To most locations

- [ ] 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
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight 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.

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

FedEx Acct. No. or Credit Card No. 1811-4189-1 Exp. Date

Total Packages	Total Weight	Total Declared Value†	FedEx Use Only
		$ .00	

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

8 Sign to Authorize Delivery Without a 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.

466

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Questions? Visit our Web site at fedex.com or call 1.800.GoFedEx 1.800.463.3339.

0295350499

Appendix C

Chain of Custody Sheets for samples sent to Paradigm Labs

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44654

Page 1 of 1

Client: MARTIN & SLAGLE
Address:
Address: BLACK MOUNTAIN NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/20/05
Turnaround: STD
Job Number:
P.O. Number:

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives: NA	Analyses: PCBs	Comments: Please specify any special reporting requirements: MOBIL LAB # / Depth
ESP-DP-001-001	7/20/05	1232	S	X	X	II001 / 0-1'
ESP-DUPLICATE	7/20/05	—	S	X	X	II009 / —
ESP-DP-006-001	7/20/05	1319	S	X	X	II012 / 0-1'

Relinquished By	Date	Time	Received By	Date	Time	Temperature
Charles O. M. Peel	7/20/05	1440				

State Certification Requested

NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44655

Page 1 of ____

Client: MARTIN + SLACK CC | Project ID: KUHLMAN ELECTRIC | Date: 7/28/05 | Report To: SAME
Address: ____ | Contact: ROBERT MARTIN | Turnaround: STD
Address: BLACK MOUNTAIN NC | Phone: ____ | Job Number: ____
Quote #: ____ | Fax: ____ | P.O. Number: ____ | Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives				Analyses										Comments: Please specify any special reporting requirements
				NA				PCB's										MOBIL LAB # / Depth
ESP-DP-010-001	7/21/05	1500	S	X				X										II020 0-1'
ESP-DUPLICATE	7/21/05	—	S	X				X										II024 —
ESP-DP-014-001	7/21/05	1534	S	X				X										II029 0-1'

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Charles A. Martin	7/28/05	1430					NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44653

Page 1 of 1

Client: MARTIN-GLACC
Address: _____
Address: BLACK MOUNTAIN NC
Quote #: _____

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone: _____
Fax: _____

Date: 7/20/05
Turnaround: STD
Job Number: _____
P.O. Number: _____

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives (NA)	Analyses (PCB)	Comments: Please specify any special reporting requirements
						MOBIL LAB #
ESF-FB-001	7/20/05	1230	W	X	X	W1311

Relinquished By	Date	Time	Received By	Date	Time	Temperature
Chuck O. M. Peel	7/20/05	1400				

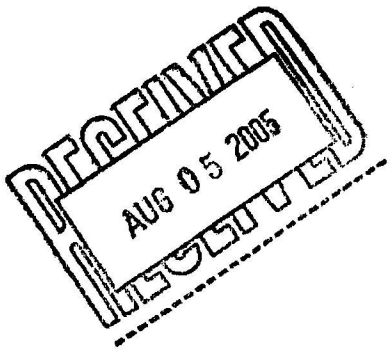
State Certification Requested

NC _____ SC _____ Other _____

SEE REVERSE FOR TERMS AND CONDITIONS

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711



Report Number: G442-327

Client Project: Kuhlman Electric

Dear Mr. Martin:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

7-29-05
Laboratory Director Date
J. Patrick Weaver

Results for PCBs
by EPA 8082

Client Sample ID: ESP-DP-001-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-327-1B
Lab Project ID: G442-327
Matrix: Soil %SOLIDS: 90.7
Sample Wt/Vol: 10.72 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/20/05 12:32
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	103	BQL
Aroclor-1221	103	BQL
Aroclor-1232	103	BQL
Aroclor-1242	103	BQL
Aroclor-1248	103	BQL
Aroclor-1254	103	BQL
Aroclor-1260	103	567
Aroclor-1262	103	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	80	80

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID:	ESP-Duplicate-II009	Analyzed By:	CLP
Client Project ID:	Kuhlman Electric	Date Collected:	7/20/05 0:00
Lab Sample ID:	G442-327-2B	Date Received:	7/21/05
Lab Project ID:	G442-327	Date Analyzed:	7/26/05
Matrix:	Soil %SOLIDS: 91.1	Date Extracted:	7/25/05
Sample Wt/Vol:	10.64 g ColumnID: STX-CLPest	Dilution:	1
Report Basis:	Dry Weight		

Compound	Quantitation Limit ug/KG	Result ug/KG	
Aroclor-1016	103	BQL	
Aroclor-1221	103	BQL	
Aroclor-1232	103	BQL	
Aroclor-1242	103	BQL	
Aroclor-1248	103	BQL	
Aroclor-1254	103	BQL	
Aroclor-1260	103		**534**
Aroclor-1262	103	BQL	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	83	83

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.4

Results for PCBs
by EPA 8082

Client Sample ID: ESP-DP-006-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-327-3B
Lab Project ID: G442-327
Matrix: Soil %SOLIDS: 87.7
Sample Wt/Vol: 10.21 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/20/05 13:19
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	112	BQL
Aroclor-1221	112	BQL
Aroclor-1232	112	BQL
Aroclor-1242	112	BQL
Aroclor-1248	112	BQL
Aroclor-1254	112	BQL
Aroclor-1260	112	766
Aroclor-1262	112	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	71	71

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: RNV

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB3294
Lab Project ID:
Matrix: SOIL %SOLIDS: 100.0
Sample Wt/Vol: 10.0 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	100	BQL
Aroclor-1221	100	BQL
Aroclor-1232	100	BQL
Aroclor-1242	100	BQL
Aroclor-1248	100	BQL
Aroclor-1254	100	BQL
Aroclor-1260	100	BQL
Aroclor-1262	100	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	61	61

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: RNP

8082_LIMS_v1 4

PARADIGM ANALYTICAL LABORATORIES, INC.

QC Results for PCBs
by EPA 8082

Client Sample ID: Batch QC
Lab Sample ID: G442-327-1B
Batch ID: 3294

Analyzed By: CLP
Matrix: Soil

MS/MSD

Analyte	Sample ug/KG	Spiked ug/KG	MS ug/KG	REC %	Spiked ug/KG	MSD ug/KG	REC %	RPD %
Aroclor-1260	567	1060	1660	103	1070	1770	112	8.37

LCS

Analyte		Spiked ug/KG	Result ug/KG	REC %	Limits Lower	Limits Upper
Aroclor-1260		1000	1140	114	70	130

Comments:

= Outside Control Limits

Reviewed by: BNP

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.011404.1

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44654

Page 1 of 1

Client: MARTIN & SLAGLE
Address:
Address: BLACK MOUNTAIN NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/20/05
Turnaround: STD
Job Number:
P.O. Number:

Report To: CAME

Invoice To: SAME

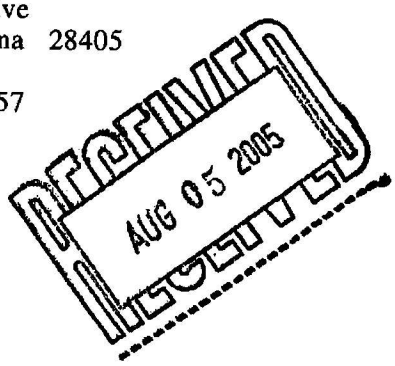
Sample ID	Date	Time	Matrix	Preservatives: NA	Analyses: RCRA	Comments: Please specify any special reporting requirements
						MOBILE LAB # / Depth
ESP-DP-001-001	7/20/05	1232	S	X	X	II001 0-1'
ESP-DUPLICATE	7/20/05	—	S	X	X	II009 —
ESP-DP-006-001	7/20/05	1319	S	X	X	II012 0-1'
						G442-327

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Charles O. M. Peel	7/20/05	1400		7/21/05	1110	4.8°C	NC ___ SC ___ Other ___
							SEE REVERSE FOR TERMS AND CONDITIONS

8 of 8

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557



Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711

Report Number: G442-329

Client Project: Kuhlman Electric

Dear Mr. Martin:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

7-29-05
Laboratory Director Date
J. Patrick Weaver

Results for PCBs
by EPA 8082

Client Sample ID: JMP-DP-001-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-329-1C
Lab Project ID: G442-329
Matrix: Soil %SOLIDS: 86.0
Sample Wt/Vol: 10.15 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/14/05 12:35
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	114	BQL
Aroclor-1221	114	BQL
Aroclor-1232	114	BQL
Aroclor-1242	114	BQL
Aroclor-1248	114	BQL
Aroclor-1254	114	BQL
Aroclor-1260	114	BQL
Aroclor-1262	114	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	91	91

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID:	JMP-DUP-HH011	Analyzed By:	CLP
Client Project ID:	Kuhlman Electric	Date Collected:	7/14/05 0:00
Lab Sample ID:	G442-329-2C	Date Received:	7/21/05
Lab Project ID:	G442-329	Date Analyzed:	7/26/05
Matrix:	Soil %SOLIDS: 85.9	Date Extracted:	7/25/05
Sample Wt/Vol:	10.48 g ColumnID: STX-CLPest	Dilution:	1
Report Basis:	Dry Weight		

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	111	BQL
Aroclor-1221	111	BQL
Aroclor-1232	111	BQL
Aroclor-1242	111	BQL
Aroclor-1248	111	BQL
Aroclor-1254	111	BQL
Aroclor-1260	111	BQL
Aroclor-1262	111	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	66	66

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID: JMP-DP-006-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-329-3C
Lab Project ID: G442-329
Matrix: Soil %SOLIDS: 89.5
Sample Wt/Vol: 10.75 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/14/05 14:50
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	104	BQL
Aroclor-1221	104	BQL
Aroclor-1232	104	BQL
Aroclor-1242	104	BQL
Aroclor-1248	104	BQL
Aroclor-1254	104	BQL
Aroclor-1260	104	BQL
Aroclor-1262	104	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	87	87

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.4

Results for PCBs
by EPA 8082

Client Sample ID: JMP-DP-010-002
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-329-4C
Lab Project ID: G442-329
Matrix: Soil %SOLIDS: 88.7
Sample Wt/Vol: 10.79 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/14/05 15:49
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	104	BQL
Aroclor-1221	104	BQL
Aroclor-1232	104	BQL
Aroclor-1242	104	BQL
Aroclor-1248	104	BQL
Aroclor-1254	104	BQL
Aroclor-1260	104	BQL
Aroclor-1262	104	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	89	89

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: PM

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB3294
Lab Project ID:
Matrix: SOIL %SOLIDS: 100.0
Sample Wt/Vol: 10.0 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	100	BQL
Aroclor-1221	100	BQL
Aroclor-1232	100	BQL
Aroclor-1242	100	BQL
Aroclor-1248	100	BQL
Aroclor-1254	100	BQL
Aroclor-1260	100	BQL
Aroclor-1262	100	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	61	61

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

PARADIGM ANALYTICAL LABORATORIES, INC.

QC Results for PCBs
by EPA 8082

Client Sample ID: Batch QC
Lab Sample ID: G442-327-1B
Batch ID: 3294

Analyzed By: CLP
Matrix: SOIL

MS/MSD

Analyte	Sample ug/KG	Spiked ug/KG	MS ug/KG	REC %	Spiked ug/KG	MSD ug/KG	REC %	RPD %
Aroclor-1260	567	1060	1660	103	1070	1770	112	8.37

LCS

Analyte		Spiked ug/KG	Result ug/KG	REC %	Limits	
					Lower	Upper
Aroclor-1260		1000	1140	114	70	130

Comments:

= Outside Control Limits

Reviewed by: RWP

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46363

Page 1 of 1

Client: MARTIN B SLABS
Address: _____
Address: BLACK MOUNTAIN, NC
Quote #: _____

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone: _____
Fax: _____

Date: 7/20/05
Turnaround: NORMAL
Job Number: _____
P.O. Number: _____

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives: MeOH	Analyses: PCB1	Comments: Please specify any special reporting requirements: MOBILE LAB # / Depth
JMP-DP-001-001	7/19/05	1235	S	X	X	HH001 0-1'
JMP-DUP	↓	—	↓	X	X	HH011 —
JMP-DP-002-001	↓	1450	↓	X	X	HH012 0-1'
JMP-DP-010-002	↓	1549	↓	X	X	HH021 1-2'
						G42-329

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Charles O. M. Peel	7/20/05	1400	[signature]	7/21/05	1110	4.8°C	NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711

Report Number: G442-330

Client Project: Kuhlman Electric

Dear Mr. Martin:

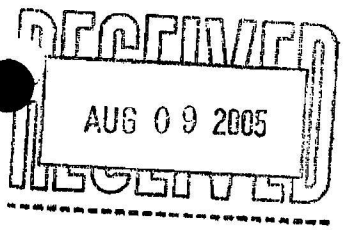
Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

7-29-05
Laboratory Director Date
J. Patrick Weaver



Results for PCBs
by EPA 8082

Client Sample ID: CSP-DP-171-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-1C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 85.0
Sample Wt/Vol: 10.07 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/15/05 10:08
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	117	BQL
Aroclor-1221	117	BQL
Aroclor-1232	117	BQL
Aroclor-1242	117	BQL
Aroclor-1248	117	BQL
Aroclor-1254	117	BQL
Aroclor-1260	117	988
Aroclor-1262	117	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	81	81

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: PNP

8082_LIMS_v1.4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-Duplicate-C219
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-2C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 85.4
Sample Wt/Vol: 10.35 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/15/05 0:00
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	113	BQL
Aroclor-1221	113	BQL
Aroclor-1232	113	BQL
Aroclor-1242	113	BQL
Aroclor-1248	113	BQL
Aroclor-1254	113	BQL
Aroclor-1260	113	2130
Aroclor-1262	113	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	95	95

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_vf 4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-DP-178-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-3C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 90.5
Sample Wt/Vol: 10.48 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/15/05 13:28
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	105	BQL
Aroclor-1221	105	BQL
Aroclor-1232	105	BQL
Aroclor-1242	105	BQL
Aroclor-1248	105	BQL
Aroclor-1254	105	BQL
Aroclor-1260	105	1310
Aroclor-1262	105	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	65	65

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-DP-182-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-4C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 93.6
Sample Wt/Vol: 10.23 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/15/05 14:58
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	104	BQL
Aroclor-1221	104	BQL
Aroclor-1232	104	BQL
Aroclor-1242	104	BQL
Aroclor-1248	104	BQL
Aroclor-1254	104	BQL
Aroclor-1260	104	793
Aroclor-1262	104	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	109	109

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-DP-186-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-5C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 94.6
Sample Wt/Vol: 10.31 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/15/05 15:38
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	102	BQL
Aroclor-1221	102	BQL
Aroclor-1232	102	BQL
Aroclor-1242	102	BQL
Aroclor-1248	102	BQL
Aroclor-1254	102	BQL
Aroclor-1260	102	BQL
Aroclor-1262	102	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	80	80

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-DP-188-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-6C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 89.9
Sample Wt/Vol: 10.71 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/18/05 16:05
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	104	BQL
Aroclor-1221	104	BQL
Aroclor-1232	104	BQL
Aroclor-1242	104	BQL
Aroclor-1248	104	BQL
Aroclor-1254	104	BQL
Aroclor-1260	104	BQL
Aroclor-1262	104	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	95	95

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: RJV

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-Duplicate-C257
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-7C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 88.2
Sample Wt/Vol: 10.22 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/18/05 0:00
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	111	BQL
Aroclor-1221	111	BQL
Aroclor-1232	111	BQL
Aroclor-1242	111	BQL
Aroclor-1248	111	BQL
Aroclor-1254	111	BQL
Aroclor-1260	111	BQL
Aroclor-1262	111	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	93	93

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-DP-196-001
Client Project ID: Kuhlman Electric
Lab Sample ID. G442-330-8C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 95.4
Sample Wt/Vol: 10.39 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/19/05 10:10
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	101	BQL
Aroclor-1221	101	BQL
Aroclor-1232	101	BQL
Aroclor-1242	101	BQL
Aroclor-1248	101	BQL
Aroclor-1254	101	BQL
Aroclor-1260	101	BQL
Aroclor-1262	101	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	104	104

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.4

Results for PCBs
by EPA 8082

Client Sample ID: CSP-Duplicate-C269
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-330-9C
Lab Project ID: G442-330
Matrix: Soil %SOLIDS: 95.4
Sample Wt/Vol: 10.63 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/19/05 0:00
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	98.6	BQL
Aroclor-1221	98.6	BQL
Aroclor-1232	98.6	BQL
Aroclor-1242	98.6	BQL
Aroclor-1248	98.6	BQL
Aroclor-1254	98.6	BQL
Aroclor-1260	98.6	BQL
Aroclor-1262	98.6	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	117	117

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB3294
Lab Project ID:
Matrix: SOIL %SOLIDS: 100.0
Sample Wt/Vol: 10.0 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	100	BQL
Aroclor-1221	100	BQL
Aroclor-1232	100	BQL
Aroclor-1242	100	BQL
Aroclor-1248	100	BQL
Aroclor-1254	100	BQL
Aroclor-1260	100	BQL
Aroclor-1262	100	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	61	61

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.4

PARADIGM ANALYTICAL LABORATORIES, INC.

QC Results for PCBs
by EPA 8082

Client Sample ID: Batch QC
Lab Sample ID: G442-327-1B
Batch ID: 3294

Analyzed By: CLP
Matrix: SOIL

MS/MSD

Analyte	Sample ug/KG	Spiked ug/KG	MS ug/KG	REC %	Spiked ug/KG	MSD ug/KG	REC %	RPD %
Aroclor-1260	567	1060	1660	103	1070	1770	112	8.37

LCS

Analyte		Spiked ug/KG	Result ug/KG	REC %	Limits	
					Lower	Upper
Aroclor-1260		1000	1140	114	70	130

Comments:

= Outside Control Limits

Reviewed by: _____

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

...ALYTICAL LABORATORIES, INC.
...Business Drive, Wilmington, NC 28405
hone: (910)-350-1903 FAX: (910)-350-1557

6442-330

Chain-of Custody Record & Analytical Request

COC# 46364

Page 1 of 1

lient: MARTIN-SLACLE Project ID: KUHLMAN ELECTRIC Date: 7/20/05 Report To: SAME

ddress: Contact: ROBERT MARTIN Turnaround: STD

ddress: BLACK MOUNTAIN NC Phone: Job Number:

uote #: Fax: P.O. Number: Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives: HA	Analyses: PCB	Comments: Please specify any special reporting requirements: Mobil Lab # / Depth
SP-DP-171-001	7/15/05	1008	S	X	X	C217 0-1'
SP-DUPLICATE	7/15/05	—	S	X	X	C219 —
SP-DP-178-001	7/15/05	1328	S	X	X	C232 0-1'
SP-DP-182-001	7/15/05	1358	S	X	X	C240 0-1'
SP-DP-186-001	7/15/05	1538	S	X	X	C248 0-1'
SP-DP-188-001	7/18/05	1605	S	X	X	C252 0-1'
SP-DUPLICATE	7/18/05	—	S	X	X	C257 —
SP-DP-196-001	7/19/05	1010	S	X	X	C261 0-1'
SP-DUPLICATE	7/19/05	—	S	X	X	C269 —

Relinquished By	Date	Time	Received By	Date	Time	Temperature
Lyle, B. M. Peel	7/20/05	MCC				

State Certification Requested

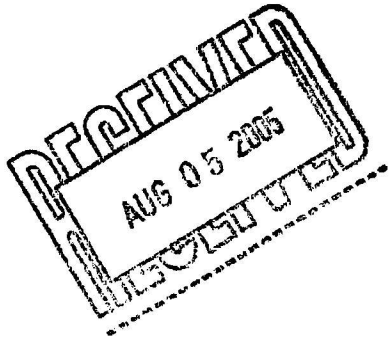
NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

CLIENT COPY

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711



Report Number: G442-331

Client Project: Kuhlman Electric

Dear Mr. Martin:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

7-29-05
Laboratory Director Date
J. Patrick Weaver

Results for PCBs
by EPA 8082

Client Sample ID: GTP-DP-023-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-331-1C
Lab Project ID: G442-331
Matrix: Soil %SOLIDS: 89.4
Sample Wt/Vol: 10.23 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/14/05 10:38
Date Received: 7/21/05
Date Analyzed: 7/26/05
Date Extracted: 7/25/05
Dilution: 1

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	109	BQL
Aroclor-1221	109	BQL
Aroclor-1232	109	BQL
Aroclor-1242	109	BQL
Aroclor-1248	109	BQL
Aroclor-1254	109	BQL
Aroclor-1260	109	**1050**
Aroclor-1262	109	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	90	90

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID:	GTP-Dup-GG055	Analyzed By:	CLP
Client Project ID:	Kuhlman Electric	Date Collected:	7/14/05 0:00
Lab Sample ID:	G442-331-2C	Date Received:	7/21/05
Lab Project ID:	G442-331	Date Analyzed:	7/26/05
Matrix:	Soil %SOLIDS: 90.0	Date Extracted:	7/25/05
Sample Wt/Vol:	10.16 g ColumnID: STX-CLPest	Dilution:	1
Report Basis:	Dry Weight		

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	109	BQL
Aroclor-1221	109	BQL
Aroclor-1232	109	BQL
Aroclor-1242	109	BQL
Aroclor-1248	109	BQL
Aroclor-1254	109	BQL
Aroclor-1260	109	**860**
Aroclor-1262	109	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	94	94

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1 4

Results for PCBs
by EPA 8082

Client Sample ID:	Method Blank		Analyzed By: CLP
Client Project ID:			Date Collected:
Lab Sample ID:	PB3294		Date Received:
Lab Project ID:			Date Analyzed: 7/26/05
Matrix:	SOIL	%SOLIDS: 100.0	Date Extracted: 7/25/05
Sample Wt/Vol:	10.0 g	ColumnID: STX-CLPest	Dilution: 1
Report Basis:	Dry Weight		

Compound	Quantitation Limit ug/KG	Result ug/KG
Aroclor-1016	100	BQL
Aroclor-1221	100	BQL
Aroclor-1232	100	BQL
Aroclor-1242	100	BQL
Aroclor-1248	100	BQL
Aroclor-1254	100	BQL
Aroclor-1260	100	BQL
Aroclor-1262	100	BQL

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	61	61

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.4

PARADIGM ANALYTICAL LABORATORIES, INC.

QC Results for PCBs
by EPA 8082

Client Sample ID: Batch QC
Lab Sample ID: G442-327-1B
Batch ID: 3294

Analyzed By: CLP
Matrix: SOIL

MS/MSD

Analyte	Sample ug/KG	Spiked ug/KG	MS ug/KG	REC %	Spiked ug/KG	MSD ug/KG	REC %	RPD %
Aroclor-1260	567	1060	1660	103	1070	1770	112	8.37

LCS

Analyte		Spiked ug/KG	Result ug/KG	REC %	Limits Lower	Limits Upper
Aroclor-1260		1000	1140	114	70	130

Comments:

= Outside Control Limits

Reviewed by: _____

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.011404.1

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46362

Page 1 of 1

Client: MARTIN B SLAGLE
Address: _____
Address: BLACK MOUNTAIN, NC
Quote #: _____

Project ID: KIRKMAN CLUSTER
Contact: ROBERT MARTIN
Phone: _____
Fax: _____

Date: 7/20/05
Turnaround: ROUTINE
Job Number: _____
P.O. Number: _____

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives: HNO3				Analyses: PCB's										Comments: Please specify any special reporting requirements: MOBILE LAB # / Depth
GTP-DP-023-001	7/14/05	1038	S	X				X										GG047 0-1'
GTP-DUP	7/14/05	—	S	X				X										GG055 —
																		G442-331

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Charles O. M. Peel	7/20/05	1400	[signature]	7/21/05	1110	4.8°C	NC ____ SC ____ Other ____
							SEE REVERSE FOR TERMS AND CONDITIONS

7 of 7

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711

Report Number: G442-328

Client Project: Kuhlman Electric

Dear Mr. Martin:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

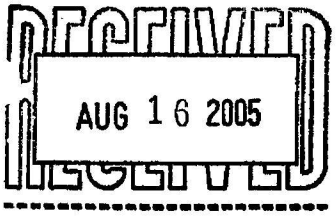
If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

Laboratory Director
J. Patrick Weaver

8/9/05
Date



Results for PCBs
by EPA 8082

Client Sample ID: CSP-FB-009
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-328-1C
Lab Project ID: G442-328
Sample Wt/Vol: 500 ML ColumnID: STX-CLPest

Analyzed By: CLP
Date Collected: 7/18/05 16:17
Date Received: 7/21/05
Date Extracted: 7/26/05
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	1.00	1	07/28/05
Aroclor-1221	BQL	1.00	1	07/28/05
Aroclor-1232	BQL	1.00	1	07/28/05
Aroclor-1242	BQL	1.00	1	07/28/05
Aroclor-1248	BQL	1.00	1	07/28/05
Aroclor-1254	BQL	1.00	1	07/28/05
Aroclor-1260	BQL	1.00	1	07/28/05
Aroclor-1262	BQL	1.00	1	07/28/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	49	49

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By:

8082_LIMS_v1 5

Results for PCBs
by EPA 8082

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB3299
Lab Project ID:
Sample Wt/Vol: 500 ML ColumnID: STX-CLPest

Analyzed By: CLP
Date Collected:
Date Received:
Date Extracted: 7/26/05
Matrix: WATER

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	1.00	1	07/28/05
Aroclor-1221	BQL	1.00	1	07/28/05
Aroclor-1232	BQL	1.00	1	07/28/05
Aroclor-1242	BQL	1.00	1	07/28/05
Aroclor-1248	BQL	1.00	1	07/28/05
Aroclor-1254	BQL	1.00	1	07/28/05
Aroclor-1260	BQL	1.00	1	07/28/05
Aroclor-1262	BQL	1.00	1	07/28/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	52	52

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: 
8082_LIMS_v1 5

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46365

Page 1 of 1

Client: MARTIN + SLAGLE
Address:
Address: BLACK MOUNTAIN NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/20/05
Turnaround: STD
Job Number:
P.O. Number:

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives: NA				Analyses: PCB										Comments: Please specify any special reporting requirements
																		MOBIL LAB #
SP-FB-009	7/19/05	1617	W	X				X										W1310
																		G442-328

Relinquished By	Date	Time	Received By	Date	Time	Temperature
[signature]	7/20/05	[illegible]	[signature]	7/21/05	1110	4.8°C

State Certification Requested
NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

N.C. Certification #481 S.C. Certification #99029

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711

Report Number: G442-332

Client Project: Kuhlman Electric

Dear Mr. Martin:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

8/9/05

Laboratory Director Date
J. Patrick Weaver

Results for PCBs
by EPA 8082

Client Sample ID: ESP-FB-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-332-1B
Lab Project ID: G442-332
Sample Wt/Vol: 500 ML ColumnID: STX-CLPest

Analyzed By: CLP
Date Collected: 7/20/05 12:30
Date Received: 7/21/05
Date Extracted: 7/26/05
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	1.00	1	07/28/05
Aroclor-1221	BQL	1.00	1	07/28/05
Aroclor-1232	BQL	1.00	1	07/28/05
Aroclor-1242	BQL	1.00	1	07/28/05
Aroclor-1248	BQL	1.00	1	07/28/05
Aroclor-1254	BQL	1.00	1	07/28/05
Aroclor-1260	BQL	1.00	1	07/28/05
Aroclor-1262	BQL	1.00	1	07/28/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
DBC	100	47	47

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By:

8082_LIMS_v1 6

Results for PCBs
by EPA 8082

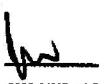
Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB3299
Lab Project ID:
Sample Wt/Vol: 500 ML ColumnID: STX-CLPest

Analyzed By: CLP
Date Collected:
Date Received:
Date Extracted: 7/26/05
Matrix: WATER

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	1.00	1	07/28/05
Aroclor-1221	BQL	1.00	1	07/28/05
Aroclor-1232	BQL	1.00	1	07/28/05
Aroclor-1242	BQL	1.00	1	07/28/05
Aroclor-1248	BQL	1.00	1	07/28/05
Aroclor-1254	BQL	1.00	1	07/28/05
Aroclor-1260	BQL	1.00	1	07/28/05
Aroclor-1262	BQL	1.00	1	07/28/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	52	52

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: 
8082_LIMS_v1 5

PARADIGM ANALYTICAL LABORATORIES, INC.

QC Results for PCBs
by EPA 8082

Client Sample ID: Batch QC
Lab Sample ID: G442-332-1B
Batch ID: 3299

Analyzed By: CLP
Matrix: Water

MS/MSD

Analyte	Sample ug/L	Spiked ug/L	MS ug/L	REC %	Spiked ug/L	MSD ug/L	REC %	RPD %
Aroclor-1260	BQL	37	32.4	87.6	37	36	97.3	10 5

LCS

Analyte		Spiked ug/L	Result ug/L	REC %	Limits Lower	Limits Upper
Aroclor-1260		10	9.02	90.2	70	130

Comments:

= Outside Control Limits

Reviewed by:

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44653

Page 1 of 1

Client: MARTIN-SLAGLE
Address:
Address: BLACK MOUNTAIN NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/20/05
Turnaround: STD
Job Number:
P.O. Number:

Report To: SAME

Invoice To: SAME

PARADIGM ANALYTICAL LABORATORIES, INC.

Sample ID	Date	Time	Matrix	Preservatives	Analyses	Comments: Please specify any special reporting requirements
				NA	Pb	MOBIL LAB #
ESP-FB-001	7/20/05	1230	W	X	X	W1311
						6442-332

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Clark O.M. Peel	7/20/05	1400		7/21/05	1110	4.8°C	NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

N.C. Certification #481 S.C. Certification #99029

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711

Report Number: G442-334

Client Project: Kuhlman Electric

Dear Mr. Martin:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

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Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

8/11/05
Laboratory Director Date
J. Patrick Weaver

Results for PCBs
by EPA 8082

Client Sample ID: ESP-DP-010-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-334-1B
Lab Project ID: G442-334
Sample Wt/Vol: 10.56 ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/21/05 15:00
Date Received: 7/29/05
Date Extracted: 8/2/05
Matrix: Soil
%SOLIDS: 69.6

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	136	1	08/09/05
Aroclor-1221	BQL	136	1	08/09/05
Aroclor-1232	BQL	136	1	08/09/05
Aroclor-1242	BQL	136	1	08/09/05
Aroclor-1248	BQL	136	1	08/09/05
Aroclor-1254	BQL	136	1	08/09/05
Aroclor-1260	BQL	136	1	08/09/05
Aroclor-1262	BQL	136	1	08/09/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	118	118

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____
8082_LIMS_v1 5

Results for PCBs
by EPA 8082

Client Sample ID: ESP-Duplicate-II024
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-334-2B
Lab Project ID: G442-334
Sample Wt/Vol: 10.15 ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/21/05 0:00
Date Received: 7/29/05
Date Extracted: 8/2/05
Matrix: Soil
%SOLIDS: 73.3

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	134	1	08/09/05
Aroclor-1221	BQL	134	1	08/09/05
Aroclor-1232	BQL	134	1	08/09/05
Aroclor-1242	BQL	134	1	08/09/05
Aroclor-1248	BQL	134	1	08/09/05
Aroclor-1254	BQL	134	1	08/09/05
Aroclor-1260	BQL	134	1	08/09/05
Aroclor-1262	BQL	134	1	08/09/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	113	113

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By:

8082_LIMS_v1 5

Results for PCBs
by EPA 8082

Client Sample ID:	ESP-DP-014-001	Analyzed By:	CLP
Client Project ID:	Kuhlman Electric	Date Collected:	7/21/05 15:34
Lab Sample ID:	G442-334-3B	Date Received:	7/29/05
Lab Project ID:	G442-334	Date Extracted:	8/2/05
Sample Wt/Vol:	10.48 ColumnID: STX-CLPest	Matrix:	Soil
Report Basis:	Dry Weight	%SOLIDS:	81.3

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	117	1	08/09/05
Aroclor-1221	BQL	117	1	08/09/05
Aroclor-1232	BQL	117	1	08/09/05
Aroclor-1242	BQL	117	1	08/09/05
Aroclor-1248	BQL	117	1	08/09/05
Aroclor-1254	BQL	117	1	08/09/05
Aroclor-1260	**594**	117	1	08/09/05
Aroclor-1262	BQL	117	1	08/09/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	112	112

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____

8082_LIMS_v1.5

Results for PCBs
by EPA 8082

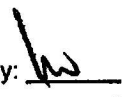
Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB3352
Lab Project ID:
Sample Wt/Vol: 10.0 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Date Extracted: 8/2/05
Matrix: SOIL
%SOLIDS: 100.0

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	100	1	08/09/05
Aroclor-1221	BQL	100	1	08/09/05
Aroclor-1232	BQL	100	1	08/09/05
Aroclor-1242	BQL	100	1	08/09/05
Aroclor-1248	BQL	100	1	08/09/05
Aroclor-1254	BQL	100	1	08/09/05
Aroclor-1260	BQL	100	1	08/09/05
Aroclor-1262	BQL	100	1	08/09/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	90	90

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: 

8082_LIMS_v1.5

PARADIGM ANALYTICAL LABORATORIES, INC.

QC Results for PCBs
by EPA 8082

Client Sample ID: Batch QC
Lab Sample ID: G442-333-3B
Batch ID: 3352

Analyzed By: CLP
Matrix. SOIL

MS/MSD

Analyte	Sample ug/L	Spiked ug/L	MS ug/L	REC %	Spiked ug/L	MSD ug/L	REC %	RPD %
Aroclor-1260	2870	1030	3930	103	1110	4280	127	20.9

LCS

Analyte		Spiked ug/L	Result ug/L	REC %	Limits Lower	Limits Upper
Aroclor-1260		1000	1080	108	70	130

Comments:

= Outside Control Limits

Reviewed by:

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44655

Page 1 of 1

8 of 8

Client: MARTIN + SLACK
Address: _____
Address: BLACK MOUNTAIN NC
Quote #: _____

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone: _____
Fax: _____

Date: 7/28/05
Turnaround: STD
Job Number: _____
P.O. Number: _____

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives (NA)	Analyses (PAHs)	Comments: Please specify any special reporting requirements
						MOBIL LAB # Depth
ESP-DP-010-001	7/21/05	1500	S	X	X	II020 0-1'
ESP-DUPLICATE	7/21/05	—	S	X	X	II024 —
ESP-DP-014-001	7/21/05	1534	S	X	X	II029 0-1'
						G442-334

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Charles A. McPeak	7/28/05	1430	[signature]	7/29/05	1015	5.8°C	NC ____ SC ____ Other ____
							SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. Certification #481 S.C. Certification #99029

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Robert Martin
Martin & Slagle
Box 1023
Black Mountain NC 28711

Report Number: G442-335

Client Project: Kuhlman Electric

Dear Mr. Martin:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

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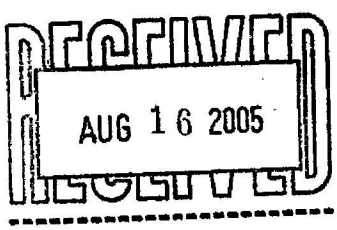
Sincerely,
Paradigm Analytical Laboratories, Inc.

8/11/05
Date

Laboratory Director
J. Patrick Weaver



Results for PCBs
by EPA 8082

Client Sample ID: GTP-DP-027-001
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-335-1B
Lab Project ID: G442-335
Sample Wt/Vol: 10.49 ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/22/05 11:14
Date Received: 7/29/05
Date Extracted: 8/2/05
Matrix: Soil
%SOLIDS: 83.6

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	114	1	08/09/05
Aroclor-1221	BQL	114	1	08/09/05
Aroclor-1232	BQL	114	1	08/09/05
Aroclor-1242	BQL	114	1	08/09/05
Aroclor-1248	BQL	114	1	08/09/05
Aroclor-1254	BQL	114	1	08/09/05
Aroclor-1260	296	114	1	08/09/05
Aroclor-1262	BQL	114	1	08/09/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	89	89

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By:

8082_LIMS_v1 5

Results for PCBs
by EPA 8082

Client Sample ID: GTP-Duplicate-G6060
Client Project ID: Kuhlman Electric
Lab Sample ID: G442-335-2B
Lab Project ID: G442-335
Sample Wt/Vol: 10.44 ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 7/22/05 0:00
Date Received: 7/29/05
Date Extracted: 8/2/05
Matrix: Soil
%SOLIDS: 82.9

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	116	1	08/09/05
Aroclor-1221	BQL	116	1	08/09/05
Aroclor-1232	BQL	116	1	08/09/05
Aroclor-1242	BQL	116	1	08/09/05
Aroclor-1248	BQL	116	1	08/09/05
Aroclor-1254	BQL	116	1	08/09/05
Aroclor-1260	221	116	1	08/09/05
Aroclor-1262	BQL	116	1	08/09/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	85	85

*Sample was quantitated as Aroclor 1260, but may contain a mixture of Aroclor 1260 and Aroclor 1262.

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By: _____
8082_LIMS_v1.5

Results for PCBs
by EPA 8082

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB3352
Lab Project ID:
Sample Wt/Vol: 10.0 g ColumnID: STX-CLPest
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Date Extracted: 8/2/05
Matrix: SOIL
%SOLIDS: 100.0

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	100	1	08/09/05
Aroclor-1221	BQL	100	1	08/09/05
Aroclor-1232	BQL	100	1	08/09/05
Aroclor-1242	BQL	100	1	08/09/05
Aroclor-1248	BQL	100	1	08/09/05
Aroclor-1254	BQL	100	1	08/09/05
Aroclor-1260	BQL	100	1	08/09/05
Aroclor-1262	BQL	100	1	08/09/05

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	90	90

Comments:
BQL = Below Quantitation Limit
NA = Not applicable, surrogate diluted out.

Reviewed By:

8082_LIMS_v1 5

PARADIGM ANALYTICAL LABORATORIES, INC.

QC Results for PCBs
by EPA 8082

Client Sample ID: Batch QC
Lab Sample ID: G442-333-3B
Batch ID: 3352

Analyzed By: CLP
Matrix: SOIL

MS/MSD

Analyte	Sample ug/L	Spiked ug/L	MS ug/L	REC %	Spiked ug/L	MSD ug/L	REC %	RPD %
Aroclor-1260	2870	1030	3930	103	1110	4280	127	20.9

LCS

Analyte		Spiked ug/L	Result ug/L	REC %	Limits Lower	Limits Upper
Aroclor-1260		1000	1080	108	70	130

Comments:

= Outside Control Limits

Reviewed by:

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

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% soilds = Percent Solids

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PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 44656

Page 1 of 1

7 of 7

Client: MARTIN & SLAGLE
Address:
Address: BLACK MOUNTAIN NC
Quote #:

Project ID: KUHLMAN ELECTRIC
Contact: ROBERT MARTIN
Phone:
Fax:

Date: 7/29/05
Turnaround: STD
Job Number:
P.O. Number:

Report To: SAME
Invoice To: SAME

Sample ID	Date	Time	Matrix	Preservatives (NA)	Analyses (PCBs)	Comments: Please specify any special reporting requirements
						MOBIL LAB # Depth
GTP-DP-027-001	7/22/05	1114	S	X	X	66056 0-1'
GTP-DUPLICATE	7/22/05	—	S	X	X	66060 —
						G442-335

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
	7/28/05	1430		7/29/05	1015	5.8°C	NC ___ SC ___ Other ___

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. Certification #481 S.C. Certification #99029

APPENDIX 2

EVALUATION OF ON-SITE ANALYTICAL PCB DETERMINATIONS SUPPORTING PUCKETT STREET PROPERTIES

Puckett Street Properties
Crystal Springs, Mississippi

Prepared for

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1.0 EXECUTIVE SUMMARY

The on-site laboratory, Environmental Chemistry Consulting Services, Inc. (ECCS), successfully analyzed soil samples for polychlorinated biphenyls (PCBs) in support of sampling activities performed at Puckett Street in Crystal Springs Mississippi. Approximately 10 percent of the soil samples collected during the program were split in the field and sent to an off-site laboratory, Paradigm Analytical Laboratories, Inc. (Paradigm), for confirmatory analysis. The on-site laboratory successfully implemented an extensive Quality Assurance/Quality Control (QA/QC) program, a program essentially as comprehensive and strict as those of off-site laboratories (see Appendix 1 for on-site laboratory reports). A careful examination of the on-site laboratory QA/QC results and the results of the split soil samples analyzed by both the on-site (ECCS) and the off-site confirmatory (Paradigm) laboratories demonstrated the consistent accuracy of the on-site laboratory. Comparison of results of the split samples analyzed by both laboratories showed excellent agreement across the full range of encountered Aroclor 1260 concentrations, including those near the PCB action level of 1.0 mg/Kg, confirming the suitability of the on-site measurements for site characterization and future decision-making.

- Both laboratories consistently met internal QA/QC criteria. Analytical systems were under control with regard to calibration, surrogate recoveries, matrix spikes, matrix spike duplicates, laboratory control samples, and blanks.
- 100% of split samples (*i.e.*, on-site *vs.* off-site laboratory) fell within the range of acceptable Relative Percent Differences (RPDs) for split soil samples.
- 100% of the duplicate sample pairs analyzed by the on-site laboratory fell within the acceptable range for RPDs for duplicate soil samples.
- 89% of the duplicate sample pairs analyzed by the off-site laboratory fell within the acceptable range for RPDs for duplicate soil samples.
- 100% of on-site laboratory results of <1.0 mg/Kg were confirmed by the off-site laboratory.
- The precision, accuracy, selectivity, and sensitivity of the on-site laboratory were excellent throughout the program.

During the initial phase of the 2002 Drainage Channel Remediation program, comparability issues were revealed for some of the split samples. However, the comparability issues were resolved by modifying the off-site laboratory's sample preparation procedures, and the comparability demonstrated subsequently confirmed the strong performance of the on-site laboratory throughout the entire program.

2.0 ON-SITE LABORATORY METHOD PROCEDURES

MDEQ and USEPA Region IV approved the use of the on-site laboratory for assessment and confirmation of remediation on this project as discussed in Section 7.0 of this report. Both laboratories have consistently performed well during previous phases of assessment and remediation associated with the Kuhlman Electric project. In accordance with the approved QA/QC plan, ten percent of samples collected were split and sent to the off-site laboratory, Paradigm, to confirm the on-site laboratory results and applicability of these results to the assessment and remediation programs.

The on-site method used for the determination of PCBs during this program was an abbreviated, modified version of approved methods (a mini-extraction modifying EPA Method 3500B for sample extraction, EPA Method 3665A for extract cleanup, and EPA Method 8082 for determination of PCBs). Surrogates were added to each sample to monitor extraction performance; analysis was carried out on a gas chromatograph using capillary columns and an electron capture detector (ECD); and quantification was based on comparison to standards using daily 6-point calibration curves. Through the use of the gas chromatograph and ECD, the selectivity and sensitivity of the on-site method was equivalent to that of the off-site laboratory. The method was also similar to one previously demonstrated to be successful for PCBs by the EPA (USEPA, 1995).

2.1 On-Site Laboratory Sample Preparation and Extraction

For each sample, the on-site laboratory received a 9 oz. sample jar filled with soil that had been homogenized by the sample collectors. After processing the sample, as described below, on-site laboratory staff transferred soil from the original 9 oz. jar into a 4 oz. jar which was shipped to the off-site laboratory for confirmatory analysis. The on-site laboratory retained the balance of sample in the 9 oz. jar.

In the on-site laboratory, approximately 4 grams of each sample were weighed into a 20 mL scintillation vial. Approximately 10 grams of sodium sulfate were added to the vial and mixed with the soil until the mixture was free flowing. Surrogate solution containing decachlorobiphenyl [DCBP] and tetrachlorometaxylene [TCMX] was added, followed by addition of 8 mLs of solvent (80:20, isooctane:acetone). The container was then sealed and shaken for 3 thirty-second intervals. If the extract exhibited color following the shaking step, it was treated with sulfuric acid to remove interferants. Otherwise, the extract was decanted into injection vials and subsequently injected onto a gas chromatograph equipped with an electron capture detector.

2.2 On-Site Laboratory Analysis

Sample analysis was performed on an RTX-35, 30 m X 0.53mm ID X 0.5-micron film capillary column. Based on site history and prior analyses (and confirmed by this program), the PCBs were quantified as Aroclor 1260. Up to 9 Aroclor 1260 peaks were used to quantify the concentration of PCBs present, based on a 6-point calibration curve, which was generated each day. Continuing Calibration Verification (CCV) samples were also run regularly. Allowable surrogate recoveries were 60-140 % for both DCPB and TCMX (75-175% for acid treated samples). The nominal reporting limit was approximately 0.100 mg/Kg, well below the target action level of 1.0 mg/Kg.

2.3 On-Site Laboratory QA/QC

The QA/QC parameters of the on-site methodology are described in the on-site laboratory reports (Appendix 1). The on-site laboratory consistently met its QA/QC criteria, ensuring that the analytical system was under control with regard to calibrations, matrix spikes, matrix spike duplicates, laboratory control samples, and blanks. Sample surrogate recoveries were calculated on a real-time basis and re-extractions and re-analyses were performed on the infrequent occasions that allowable recoveries were not achieved.

3.0 OFF-SITE LABORATORY METHOD PROCEDURES

The confirmatory off-site laboratory, Paradigm, used approved EPA standard analytical methods, including EPA Method 3545 for extraction, EPA Method 3665A for cleanup of the extract, and EPA Method 8082 for analysis of the extract for PCBs.

3.1 Off-Site Laboratory Sample Preparation and Extraction

EPA Method 3545, Accelerated Solvent Extraction (or Pressurized Solvent Extraction), was used to extract PCBs from the split samples sent to the off-site laboratory. Approximately 10 grams of soil were mixed and dried with approximately 20 grams of drying agent (sodium sulfate), then extracted in a pressurized, heated extraction device. Two extraction cycles were used.

3.2 Off-Site Laboratory Analysis

The off-site laboratory used EPA Method 8082 for the analysis of samples (USEPA, 1997). The method was virtually the same as that of the on-site laboratory with regard to equipment and methodology.

3.3 Off-Site Laboratory QA/QC

The off-site laboratory consistently met its QA/QC criteria, ensuring that the analytical system was under control with regard to calibrations, surrogate recoveries, matrix spikes, matrix spike duplicates, laboratory control samples, and blanks (See Appendix 1).

4.0 COMPARISON OF ON-SITE LABORATORY AND OFF-SITE LABORATORY RESULTS

4.1 Split Samples

The PCB (Aroclor 1260) data for all split samples are presented in Table 1. Other information regarding these samples is, such as collection dates, depth of sample, *etc.*, is included in the Assessment Report and in Appendix 1.

Throughout this document we use the on-site laboratory results directly (expressed on an as received, or wet weight basis) to compare with the off-site laboratory results. This comparison is most appropriate for evaluating the performance of the on-site laboratory because it coincides exactly with how the on-site laboratory results were used on a real-time basis for decision making in the field and in generating a conceptual site model. For all calculations and plotting, "non-detects" were set to values equal to the reporting limit.

A comparison of all on-site and off-site laboratory results for July 14 – September 6, 2005 is illustrated in Figure 1. The regression line, its equation, and the coefficient of determination (R^2, [Zar, 1984]) are also presented in the figure (and is presented in all similar figures in this report). The on-site laboratory results correlated strongly with the off-site laboratory results.

To evaluate precision and accuracy further, the Relative Percent Difference (RPD; RPD =([on-site-off-site]/{[on-site + off-site]/2} X 100%)) was calculated for each pair of split samples (see Table 1). For this data analysis, we evaluated the split sample data against an RPD criterion of 100%. This criterion was used by EPA Region IV at the Anniston, Alabama site (CHMM, 2000; USEPA Region IV, 2000).

Unfortunately, USEPA Region IV's data validation guidance does not specify a criterion for split sample precision, other than to note whether precision was acceptable, provisional, or unacceptable; based on our analysis the precision is acceptable (USEPA Region IV, 1999). For the purposes of our evaluation, "non-detects" were set to detected values equal to the reporting limit.

Figure 2 plots the RPD *versus* the off-site laboratory concentration (Paradigm). Typically, the magnitude of the RPDs is greater and more variable as concentrations approach the detection limit because a given absolute difference in concentration constitutes a larger percentage difference. In this data set, however, the RPDs indicate exceptionally good correlation between laboratories even at very low concentrations. Figure 3 presents the median RPD along with percentile information, for split samples within the concentration ranges ≤10 mg/Kg. No data evaluations were performed on concentrations between 10 and 100 mg/Kg or > 100 mg/Kg because there were no results detected in these concentration ranges.

Soil contamination is prone to heterogeneity for semivolatile organics like PCBs because PCBs adhere to soil particles and do not generally get mixed well in the environment. This trait of soil contamination is recognized by regulatory agencies and is reflected in the larger RPD tolerances for soil samples relative to aqueous samples (USEPA Region I, 1996). However, the precision and accuracy of the Puckett Street on-site data as reflected in the RPD determinations were excellent (see Table 1). There were no instances where the RPDs of split samples exceeded 100%.

4.2 Duplicate Samples

Table 2 presents the data for each duplicate sample pair analyzed by both the on-site laboratory and the off-site laboratory. On-site and off-site duplicate pair results were evaluated for precision using criteria presented for non-aqueous matrices in USEPA's Region I data validation guidelines (USEPA Region I, 1996).

Region I's precision criterion is RPD $\leq$ 50% for non-aqueous duplicate results that are greater than 2 times the quantitation limit. For results less than 2 times the quantitation limit, if the difference between the results was less than the quantitation limit, the results were deemed to have demonstrated acceptable precision. This allows for evaluation of the results, taking into consideration the increased variability of data near the sample quantitation limit

(USEPA Region I, 1996). For the on-site laboratory 9 out of 9 duplicate pair analyses (100%) met RPD criteria. For the off-site laboratory, 8 out of 9 pairs (89%) met RPD criteria.

A comparison of each sample and its duplicate (July 14 – September 6, 2005) is presented in Figure 4 (on-site laboratory) and Figure 5 (off-site laboratory). Note that generally, the precision achieved by the on-site laboratory was marginally better to that of the off-site laboratory (as seen by a slightly higher R^2 and smaller y-intercept), although both laboratories performed well in this regard.

Figure 6 presents the RPD of the field duplicate analyses *versus* the average concentration for the pair (July 14 – September 6, 2005).

Again, the magnitude of the RPD typically increases at low concentrations, but in this data set, the on-site laboratory exhibits exceptional reproducibility of results indicating consistent

adherence to analytical methods and quality control procedures. Figure 7 presents the equivalent information for the off-site laboratory.

In the majority of the figures described above, RPDs were allowed to be either positive or negative in order to evaluate data trends (*e.g.,* if either the bonafide sample or its duplicate were consistently higher or lower). The RPDs were positive when the field sample result was greater than the duplicate result and negative when the field sample result was less than the duplicate result. For Figure 8, however, we present the mean of the absolute value of the RPDs (*e.g.*, an RPD of –18% becomes 18%) for the duplicate analyses for both the on-site laboratory and the off-site laboratory. Figure 8 demonstrates that the precision of the on-site laboratory compares favorably with that of the off-site laboratory (RPDs were 2.3% *versus* 16.8%, respectively).

4.3 Action Level Decisions

An important aspect of on-site chemistry programs relates to the reliability of real-time decisions based on on-site laboratory results. The performance of the on-site chemistry program with respect to the action level of 1.0 mg/Kg was excellent in this regard. Tables 3 and 4 summarize our findings. The off-site laboratory confirmed the on-site finding of < 1.0 mg/Kg 13 times out of 13,

and confirmed findings of ≥ 1 mg/Kg 2 out of 3 times. Sample CSP-DP-171-001 had an on-site laboratory result of 1.2 mg/Kg, while the off-site laboratory result was 0.988 mg/Kg (Table 1). The relative percent difference between the results is 19.4%, well within the accepted criterion for split sample precision.

4.4 Summary

Overall, the agreement between the results of the on-site laboratory and the off-site laboratory was excellent. This conclusion is based on the high correlations achieved in the regressions of on-site results *versus* off-site laboratory results; the accuracy in determining PCBs near the action level of 1.0 mg/Kg; the high precision attained by the on-site laboratory; and the virtual absence of significant QA/QC issues in the on-site laboratory throughout the program.

5.0 REFERENCES

CHMM. 2000. "Split Sampling Guideline for the Anniston PCB Site. Anniston, Calhoun County, Alabama." Prepared for USEPA Region IV. April 21.

U.S. Environmental Protection Agency (USEPA). 1995. "Field Analytical Screening Program: PCB Method." EPA/540/R-95/521. National Risk Management Research Laboratory (Cincinnati) and National Exposure Research Laboratory (Las Vegas), Office of Research and Development, USEPA. 37 p.

U.S. Environmental Protection Agency (USEPA). 1997. "SW 846."

U.S. Environmental Protection Agency Region I (USEPA Region I). 1996. "Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses." July, Revised December.

U.S. Environmental Protection Agency Region IV (USEPA Region IV). 1999. "Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services. Revision 2.1." July.

U.S. Environmental Protection Agency Region IV (USEPA Region IV). 2000. "Quality Assurance Project Plan for the Anniston PCB Site, Calhoun County, Aniston, Alabama. Region IV." January.

Zar, J.H. 1984. *Biostatistical Analysis*. Prentice-Hall, Inc., Englewood Cliffs, NJ. 718pp.