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From: Air Monitoring Results
To: FALL 2003

**MORE RECENT MATERIAL
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October 22, 2003

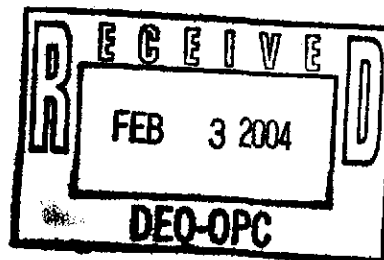
Mr. Richard Ellis
Singley Construction Company, Inc.
P.O. Box 389
Columbia, Mississippi 39429



EarthCon

Earth Consulting Group, Inc.

Re: EarthCon Project No. S149.001
Ambient Air Monitoring and Sampling
September 10-22, 2003
Kerr McGee Creosote Site
Hattiesburg, Mississippi



Dear Mr. Ellis:

This report summarizes ambient air monitoring and sampling activities conducted by Earth Consulting Group, Inc. (EarthCon) at the above-referenced location from September 10 through September 22, 2003. The ambient air monitoring and sampling activities were conducted by Matthew Courtney and Michael Scarbrough, EarthCon Air Monitoring Technicians, with oversight provided by W. Hal Moore, EarthCon Senior Project Manager. Air monitoring and sampling was conducted to quantify and document ambient air concentrations of Coal Tar Pitch Volatiles (CTPV) in and near the work area during excavation of creosote-contaminated soil from an intermittent stream (storm water drainage ditch).

The main chemicals of concern in CTPVs are polycyclic aromatic hydrocarbons (PAHs), which are also known as polynuclear aromatic hydrocarbons (PNAs). Possible health hazards associated with PAH exposure include cancer, skin problems, immunodeficiency, and reproductive difficulties for both the exposed and their offspring. More than 100 different chemicals are compiled into the general category of polycyclic aromatic hydrocarbons, including benzo[a]pyrene and dibenz[a]anthracene, which are known to cause cancer, and pyrene, acridine, chrysene, phenanthrene, and anthracene. The U.S. Department of Labor Occupational Safety & Health Administration (OSHA) has not established a substance-specific standard for occupational exposure to CTPVs. Exposures are regulated under OSHA's Air Contaminants Standard.

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The following table presents exposure limits established for CTPVs and related substances:

Substance	OSHA PEL	NIOSH REL	ACGIH TLV
CTPVs	0.2 mg/m ³ (benzene-soluble fraction)	0.1 mg/m ³ (cyclohexane-extractable fraction)	0.2 mg/m ³ (benzene-soluble fraction)
PAHs	0.2 mg/m ³	0.1 mg/m ³ (10 hour exposure)	<i>not established</i>

Note: Values are for an 8 hour time-weighted-average (TWA) exposure, except for the NIOSH REL for PAHs, which is based on a 10 hour TWA exposure.

Summary of Field Activity

EarthCon provided ambient air monitoring during mobilization, start-up, and excavation activities using a Thermo Environmental Instruments, Inc. Model 680 Portable Hydrocarbon Vapor Meter, which utilizes a flame ionization detector (FID), and a Thermo Environmental Instruments, Inc. Model 580B Organic Vapor Meter (OVM). A summary of the direct readings and locations is included in Appendix A.

EarthCon also collected two (2) air samples per day at selected locations near the active excavation areas utilizing Gilian BDX II air sampling pumps. The pumps were initially calibrated to 2 Liters/minute (LPM) using a mini-Buck Primary Flow Calibrator and then calibrated prior to each use using a low-flow rotameter that was also calibrated to the mini-Buck Primary Flow Calibrator. The air samples were collected by drawing known amounts of air through cassettes containing glass fiber filters (GFF). The filters were shipped to Entek Environmental Laboratories, Inc., Baton Rouge, Louisiana, to be analyzed for CTPVs by OSHA Method 58. According to OSHA Method 58, the filters are analyzed by extracting with benzene and gravimetrically determining the benzene-soluble fraction (BSF). If the BSF exceeds the appropriate PEL (0.2 mg/m³), then the sample is analyzed by high performance liquid chromatography (HPLC) with a fluorescence (μL) or ultraviolet (UV) detector to determine the presence of selected polynuclear aromatic hydrocarbons PAHs.

The following Table summarizes the analytical results of the air samples collected and analyzed during excavation activities occurring September 10 through September 22, 2003. Please refer to the attached Site Location Map and Site Plan for sampling locations, and Appendix B for laboratory reports.

**TABLE
SUMMARY OF ANALYTICAL RESULTS
KERR MCGEE CREOSOTE SITE
HATTIESBURG, MISSISSIPPI**

Sample No.	Date	Benzene-soluble Fraction (mg/m³)	OSHA PEL (mg/m³)
91501	09/15/03	0.02	0.2
91502	09/15/03	0.02	0.2
91601	09/16/03	0.01	0.2
91602	09/16/03	0.01	0.2
91701	09/17/03	0.02	0.2
91702	09/17/03	0.03	0.2
91801	09/18/03	0.02	0.2
91802	09/18/03	0.04	0.2
91901	09/19/03	0.02	0.2
91902	09/19/03	0.01	0.2

Discussion of Results

All of the air sample results were well below the OSHA PEL for BSF of 0.2 mg/m³. Based on a review of the air sample analytical results and direct readings collected in and around the excavated areas, workers in areas were not exposed to CTPVs in excess of regulatory limits.

Page 4 of 4
Mr. Ellis
October 22, 2003

Should you have any questions concerning the contents of this report, please contact us at your convenience at (601) 853-2134. EarthCon appreciates the opportunity to provide you with environmental consulting services.

Sincerely,
Earth Consulting Group, Inc.

A handwritten signature in black ink, appearing to read "K. L. Giessinger".

Kirk L. Giessinger
Certified Indoor Air Quality Consultant

Attachments