

Quarterly Monitoring Report

**Hercules Incorporated
Hattiesburg, Mississippi**

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**Prepared for:
Hercules Incorporated**

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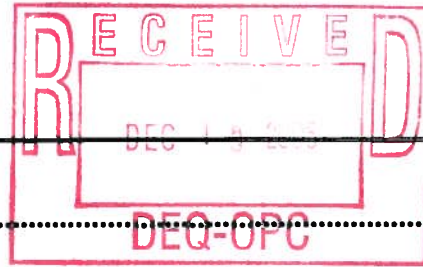


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1.0 INTRODUCTION

Hercules Incorporated (Hercules) commissioned Eco-Systems, Inc. (Eco-Systems) to conduct monitoring well installation and quarterly groundwater and surface water monitoring at the Hattiesburg, Mississippi facility. The site location is shown in Figure 1. The work is being conducted in accordance with the Corrective Action Plan Revision 01 (CAP) prepared by Groundwater & Environmental Services, Inc. (GES) dated January 20, 2005, which was approved by the Mississippi Department of Environmental Quality (MDEQ) in a letter dated January 25, 2005.

In April 2005, groundwater monitoring wells MW-12 through MW-19, which were specified in the CAP, were installed at the site. As discussed in the CAP, these new groundwater monitoring wells, the previously installed monitoring wells, and the sampling locations established in Green's Creek are being monitored quarterly to provide groundwater and surface water information

This report describes sampling activities and analytical results for the 2nd quarterly monitoring event. During this event, water levels were measured 18 wells and 16 piezometers, surface water samples were collected from six locations, and groundwater samples were collected from 18 monitoring wells.

2.0 FIELD ACTIVITIES

Field activities conducted during this quarterly sampling event include sample collection from 18 monitoring wells and 6 surface water monitoring locations. Per the CAP, groundwater and surface water samples were analyzed for Appendix IX VOC's and for Dioxathion.

2.1 GROUNDWATER SAMPLE COLLECTION

On November 2, Eco-Systems personnel collected groundwater levels from the 18 monitoring wells to be sampled during the quarterly monitoring event and from the 16 piezometers at the site. A summary of the water level measurements obtained on November 2, 2005 is included as Table 1.

Groundwater sample collection was conducted on November 2 & 3, 2005. Prior to collecting a groundwater sample, the monitoring wells were purged using either *low-flow/low-stress* technique. The *low flow/low stress* technique consisted of slowly lowering dedicated tubing connected to a peristaltic pump into a region of adequate permeability within the water-bearing zone. If possible, the suction end of the tubing was placed at the midpoint of the well screen for sampling. Purging was established with withdrawal of water at a rate that created an equilibrium with recharge (e.g., stabilized water table). Equilibrium is dependent upon the stabilization of at least temperature, pH, specific conductance, and turbidity. The water quality field parameters were measured with calibrated instruments and recorded in the field book along with the cumulative amount of water evacuated and time of batch parameter testing. Groundwater collection logs are attached as Appendix A.

Once field parameters stabilized, groundwater collected for analysis was sampled simply by collecting water directly into new sample containers supplied by the analytical laboratories. During the collection of field replicates that were collected for QA/QC concerns, alternating aliquots were placed in each replicate bottle until each bottle is filled.

In general, the order of sampling was from least impacted to most impacted based on historical data. Tubing used during purging and sampling was either dedicated to each well or disposed of after use. Subsequent to sampling, sample containers were labeled, placed and sealed on ice and shipped to the designated offsite laboratory for analysis. Chain-of-custody documentation accompanied the sample cooler. Personnel involved in sampling used clean, disposable gloves, which were changed between each sample collection. All non-disposable sampling equipment was decontaminated as outlined in Section 2.4

During this investigation, groundwater samples were collected from permanent monitoring wells MW-2 through MW-19. Filled sample vials were immediately placed in a cooler containing sufficient ice to lower the temperature of the filled sample vials below 4°C. Groundwater samples for VOC analysis were shipped via overnight courier to Severn Trent Laboratories in Savannah, Georgia for analysis. Groundwater samples for Dioxathion were delivered to Bonner Analytical and Testing Company (BATCO) for analysis.

2.2 SURFACE WATER SAMPLE COLLECTION

On November 2, 2005, six surface water samples were collected from the previously established sampling points along Green's Creek, CM-0 to CM-5. Samples were collected beginning with the most downstream location and proceeding upstream to each successive sampling location. Surface water samples were collected directly into new glass sample containers that were supplied by the analytical laboratory. The filled sample containers were labeled, packed and shipped/delivered in the same manner as groundwater samples discussed in Section 2.2.

2.3 QUALITY ASSURANCE/QUALITY CONTROL

For quality assurance/quality control (QA/QC) purposes, two duplicate groundwater samples, three rinsate samples, two trip blank samples, and three matrix spike and matrix spike duplicate (MS/MSD) were collected during field sampling activities. The duplicate groundwater samples were collected in alternating aliquots that were placed in each replicate bottle until each bottle was filled. The rinsate samples were prepared by pouring deionized water over groundwater sampling tubing and collecting the rinsate into new disposable sample containers supplied by the analytical laboratory. QA/QC samples were labeled, stored and shipped in the same manner as groundwater and surface water samples. QA/QC samples were analyzed for the same constituents as groundwater and surface water samples.

2.4 DECONTAMINATION

In general, groundwater sampling equipment that would contact the groundwater sample was single-use, disposable equipment. For any re-usable groundwater sampling equipment decontamination was accomplished by the following procedure:

- 1) Phosphate-free detergent wash.
- 2) Potable water rinse.
- 3) Deionized water rinse.

- 4) Isopropanol rinse.
- 5) Organic-free water rinse or air dry.

If it was necessary to store or transport decontaminated equipment, the decontaminated equipment was placed in either a new, disposable plastic bag or wrapped in aluminum foil.

2.5 OTHER PROCEDURES

Procedures for sample collection, sample containerization and packing, sample shipment, cross-contamination control, drummed material disposal, field documentation, chain-of-custody, data review, and other work items not specifically covered in this document were conducted in accordance with the Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EPA Region IV, May, 2001), (EISOPQAM)

3.0 LABORATORY ANALYTICAL RESULTS

Groundwater and surface water samples collected from the Hercules site were analyzed for Appendix IX VOC's according to U.S. EPA Method 8260B and for Dioxathion according to the Sampling and Analysis Protocol for the Determination of Dioxathion in Water (Hercules, 2002). Laboratory analytical reports for the samples collected during this investigation are included in Appendix B and summarized in Table 2, Table 3 and Table 4.

3.1 GROUNDWATER

Discussion presented in this section summarizes the analytical results for groundwater samples collected from monitoring wells MW-2 through MW-19 on November 2 & 3, 2005.

3.1.1 Volatile Organic Compounds

VOC's were not detected in groundwater samples collected from wells MW-03, MW-04, MW-05, MW-06, MW-07, MW-10, MW-11, MW-12, and MW-15.

Acetone was detected in the groundwater sample collected from monitoring wells MW-2 at a concentration of 32 µg/L, which is less than the Target Remedial Goal (TRG) for acetone of 608 µg/L. The TRG's are found in the Tier 1 Target Remedial Goal Table of the Final Regulations Governing Brownfields Voluntary Cleanup And Redevelopment In Mississippi, published by the Mississippi Commission on Environmental Quality and adopted May 1999 and revised March 2002. Acetone has not been previously detected in groundwater samples collected from MW-2, and the detection of acetone in the sample may be an artifact of sampling or analysis.

Analysis of the groundwater sample collected from monitoring well MW-08 detected benzene, chlorobenzene, carbon tetrachloride, chloroform, and toluene at concentrations above their respective TRG's. Concentrations of ethylbenzene and xylene, were detected in the sample collected from MW-8 at concentrations less than their respective TRG's.

Analysis of the groundwater sample collected from monitoring well MW-09 detected benzene at a concentration above its TRG of 5 µg/L. Concentrations of 1,1-dichloroethene and ethylbenzene were detected in the sample collected from MW-09 at concentrations less than their respective TRG's.

Analysis of the groundwater sample collected from monitoring well MW-13 detected benzene, carbon tetrachloride and chloroform at concentrations greater than their respective TRG's. Concentrations of acetone, chlorobenzene and vinyl chloride were detected in the sample collected from MW-13 at concentrations less than their respective TRG's.

Acetone was detected in the groundwater sample collected from MW-14. The concentration of acetone detected in the sample collected from MW-14 was less than the TRG for acetone.

Analysis of the groundwater sample collected from monitoring well MW-16 detected benzene and toluene at concentrations less than their respective TRG's.

Analysis of the groundwater sample collected from monitoring well MW-17 detected benzene, carbon tetrachloride, and chloroform at concentrations above their respective TRG's.

Analysis of the groundwater sample collected from monitoring well MW-18 detected benzene, chlorobenzene, and 1,1-dichloroethene at concentrations less than their respective TRG's.

Analysis of the groundwater sample collected from monitoring well MW-19 detected benzene at a concentration above the TRG. Chlorobenzene and ethylbenzene were detected in the sample collected from MW-19 at concentrations less than their respective TRG's.

3.1.2 Dioxathion

Analysis for dioxathion includes analysis for both the cis- and trans- isomers and for dioxenethion. Cis-dioxathion and trans-dioxathion were not detected in the groundwater samples collected during the November 2005 monitoring event.

Dioxenethion was not detected in the groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-18, and MW-19.

Dioxenethion was detected in the groundwater samples collected from monitoring wells, MW-8 and MW-17 at concentrations of 2,492 µg/L and 2,802 µg/L, respectively. A TRG has not been established for dioxenethion.

3.2 SURFACE WATER

Discussion presented in this section summarizes the analytical results for surface water samples collected from sampling locations CM-0 through CM-5 on November 2, 2005.

3.2.1 Volatile Organic Compounds

VOC's were not detected in surface water samples collected from locations CM-00, CM-01, CM-02, CM-04, and CM-05. The surface water sample collected from location CM-03 contained benzene at a concentration above the MDL but less than the TRG.

3.1.2 Dioxathion

Dioxenethion, cis-dioxathion and trans-dioxathion were not detected in the surface water samples collected during the November 2005 monitoring event.

3.3 QA/QC

Analytical reports for the QA/QC samples are included in Appendix B and summarized in Table 4.

Duplicate groundwater samples were collected from MW-9, MW-16, and MW-17. Analysis of the duplicate groundwater sample collected from MW-9 detected the same concentrations of 1,1-dichloroethene as was detected in the regular sample and similar concentrations of benzene, ethylbenzene, and toluene. Dioxathion constituents were not detected in the regular or duplicate samples collected from MW-9.

Analysis of the duplicate groundwater sample collected from monitoring well MW-16 detected similar concentrations of benzene and toluene. Dioxathion constituents were not detected in the regular or duplicate samples collected from MW-16.

Analysis of the duplicate groundwater sample collected from monitoring well MW-17 detected the same concentration of chloroform as the regular sample and similar concentrations of benzene and carbon tetrachloride. Concentrations of chlorobenzene and toluene were detected in the duplicate sample from MW-17 at concentrations less than the laboratory reporting limit for those constituents in the regular sample. Due to the difference in the reporting limits used by the laboratory for the regular and duplicate samples, comparison of detected concentrations of chlorobenzene and toluene is not practical. Dioxenethion was detected in the duplicate sample collected from MW-17 at a similar concentration as was detected in the regular sample. Cis-dioxathion and trans-

dioxathion were not detected in either the regular or duplicate samples collected from MW-17.

Analysis of the rinsate sample collected on November 2, 2005 (RS-01) detected concentrations of chloroform, methylene chloride, and toluene. Analysis of the rinsate sample collected on November 3, 2005 (RS-02) did not detect VOC's. Dioxathion constituents were not detected in either of the three rinsate samples.

VOC's were not detected in either of the trip blanks.

Review of the analytical reports for VOC's that were submitted by STL indicates that spike sample recoveries for the spiked volatile organic constituents in the MS and MSD samples were within the acceptable recovery ranges reported by the laboratory for each of the spiked constituents.

As reported by STL, all method blanks were non-detect for VOC's. The laboratory QC spike sample recoveries for VOC's detected in site samples were within the limits reported by the laboratory. Analyses were conducted within the 14 day holding time. Based on the information received and reviewed, the VOC analyses were conducted under controlled conditions and the data package is acceptable for use as reported, without qualification.

As reported by BATCO, all method blanks, were non-detect for dioxathion constituents. The laboratory QC spike sample recoveries were within acceptable limits for all samples except for the sample collected from MW-8. The narrative reported submitted by BATCO with the analytical reports indicated that the sample collected from MW-8 contained a matrix interference with the same retention time as naphthalene, which was used as a spike surrogate for dioxathion analyses. Due to the matrix interference, surrogate recoveries for the MW-8 and MW-17 samples were 1,806% and 1,388% of the spiked amount, respectively. Since the sample collected from MW-8 in February 2003 detected naphthalene, it is reasonable to assume that the matrix interference reported by the laboratory is caused by the presence of naphthalene in the groundwater samples, and the dioxathion analysis for these samples is, therefore, acceptable. Surrogate spike recoveries for other samples ranged from 51.2% to 96.4%. Based on the information received, the samples were extracted and analyzed within 7 days. The proscribed extraction time and holding time for organophosphorous compounds is 7 days and 40 days, respectively.



TABLES

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION DATA

November 2, 2005
Hercules, Incorporated
Hattiesburg, Mississippi

WELL NO.	TOC ELEVATION (ft.) ¹	WATER DEPTH (ft.) ²	GROUNDWATER ELEVATION (ft.)
PERMANENT MONITOR WELLS			
MW-1	174.12	na ³	na
MW-2	160.07	8.10	151.97
MW-3	160.03	9.04	150.99
MW-4	159.75	11.55	148.20
MW-5	160.99	11.03	149.96
MW-6	174.05	10.41	163.64
MW-7	na	14.77	na
MW-8	179.99	na	na
MW-9	na	13.08	na
MW-10	159.88	11.89	147.99
MW-11	157.18	8.71	148.47
MW-12	162.17	9.48	152.69
MW-13	175.23	10.30	164.93
MW-14	169.23	17.03	152.20
MW-15	172.21	20.89	151.32
MW-16	175.62	17.31	158.31
MW-17	186.13	18.25	167.88
MW-18	165.31	7.28	158.03
MW-19	172.25	11.81	160.44
STAFF GAUGES			
SG-1	NA	NA	NA
SG-2	NA	NA	NA
SG-3	NA	NA	NA
SG-4	NA	NA	NA
PIEZOMETERS			
TP-1	172.18	6.62	165.56
TP-2	171.72	12.74	158.98
TP-3	169.74	10.58	159.16
TP-4	163.64	8.44	155.20
TP-5	160.54	10.50	150.04
TP-6	158.63	9.55	149.08
TP-7	167.17	9.93	157.24
TP-8	183.79	14.86	168.93
TP-9	163.44	7.87	155.57
TP-10	179.69	15.34	164.35
TP-11	162.26	11.21	151.05
TP-12	159.95	12.14	147.81
TP-13	156.99	8.54	148.45
TP-14	162.59	6.80	155.79
TP-16	179.72	14.01	165.71
TP-17	182.71	17.20	165.51

NOTES:

- 1- Elevations are in feet relative to mean sea level.
- 2 - Depth to water is in feet below top of casing. Staff gauge readings are in feet above the base of the staff.
- 3 - Data not available.

Location	Date														
		Acetone	Benzene	Chlorobenzene	Carbon Tetrachloride	Chloroform	1,1,1-trichloroethene	Bromodichloromethane	Bromomethane	Chloroethane	Chloromethane	Dibromochloromethane	cis-1,2-dichloroethene	isopropylbenzene	methylene chloride
CM-00	Sep-03	NA ¹	< 1.0	<1.0	<1.0	<1.0	0	< 1.0	< 5.0	< 5.0	<1.0	< 1.0	<1.0	< 5.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 5.0	< 1.0	<1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	<1.0	<1.0	NA	NA	< 5.0	
CM-01	Feb-03	NA	2.8	<10.0	3.03	2.34	0.0	< 10.0	< 10.0	20.5	<10.0	<10.0	<10.0	<10.0	
	Sep-03	NA	< 1.0	6.6	<1.0	<1.0	0	< 1.0	< 5.0	< 5.0	<1.0	< 1.0	< 1.0	< 5.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
CM-02	Feb-03	NA	1.17	<10.0	1.5	<10.0	0.0	< 10.0	< 10.0	15.6	<10.0	<10.0	<10.0	<10.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
CM-03	Feb-03	NA	3.7	<10.0	<10.0	<10.0	0.0	< 10.0	< 10.0	8.42	<10.0	<10.0	<10.0	<10.0	
	Aug-05	< 25	1.1	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
	Nov-05	< 25	1.4	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
CM-04	Feb-03	NA	2.25	<10.0	<10.0	<10.0	0.0	< 10.0	< 10.0	3.43	<10.0	<10.0	<10.0	<10.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
CM-05	Feb-03	NA	4.04	<10.0	<10.0	<10.0	0.0	< 10.0	< 10.0	<12.0	<10.0	<10.0	<10.0	<10.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
MW-02	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
	Nov-05	32	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
MW-03	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
MW-04	Dec-02	ND ³	14.0	1.81	10.0	ND	D	ND	ND	63.0	1.72	ND	ND	1.26	
	Feb-03	NA	< 10.0	<10.0	<10.0	<10.0	0.0	< 10.0	< 10.0	<12.0	<10.0	<10.0	<10.0	<10.0	
	Aug-03	NA	< 1.0	<1.0	<1.0	<1.0	0	< 1.0	< 5.0	< 5.0	<1.0	< 1.0	< 1.0	< 5.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
MW-05	Aug-05	< 25	< 1.0	1.3	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
MW-06	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
MW-07	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	
MW-08	Dec-02	ND	6,900	290	16,000	1,800g	D	6.84	4.07	66.0	39.2	4.45	19	4.6	
	Feb-03	NA	< 500.0	230	12,000	1,300g	D	4.72	< 10.0	85.5	3.34	< 10.0	17.5	4.35	
	Aug-05	< 6300	18,000	< 250	3,500	510	50	NA	< 250	< 250	< 250	NA	NA	NA	
	Nov-05	< 2,500	17,000	160	1,000	260	00	NA	< 100	< 100	< 100	NA	NA	< 500	
MW-09	Dec-02	ND	9.15	ND	ND	ND	D	ND	ND	ND	ND	ND	ND	2.48	
	Feb-03	NA	64.3	J 5.85	20.7	J 9.83	0.0	< 10.0	< 10.0	19.7	< 10.0	< 10.0	< 10.0	J 1.92	
	Aug-05	< 25	12	1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	< 25	16.0	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
MW-10	Aug-03	NA	< 1.0	<1.0	<1.0	<1.0	0	< 1.0	< 5.0	< 5.0	<1.0	< 1.0	< 1.0	< 5.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
MW-11	Dec-02	ND	114	ND	ND	ND	D	ND	ND	ND	ND	ND	ND	ND	
	Feb-03	NA	J 6.39	<10.0	<10.0	<10.0	0.0	< 10.0	< 10.0	<12.0	<10.0	<10.0	<10.0	<10.0	
	Aug-03	NA	< 1.0	<1.0	<1.0	<1.0	0	< 1.0	< 5.0	< 5.0	<1.0	< 1.0	< 1.0	< 5.0	
	Aug-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	<1.0	<1.0	<1.0	0	NA	< 1.0	< 1.0	<1.0	NA	NA	< 5.0	

Location	Date														
		Acetone	Benzene	Chlorobenzene	Carbon Tetrachloride	Chloroform	1,1,1-trichloroethane	Bromodichloromethane	Bromomethane	Chloroethane	Chloromethane	Dibromochloromethane	cis-1,2-dichloroethane	isopropylbenzene	methylene chloride
MW-12	Aug-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
MW-13	Aug-05	< 25	120	10	260	96	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	29	78	9.3	53	56	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
MW-14	Aug-05	34	< 1.0	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	35	< 1.0	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
MW-15	Aug-05	84	1.7	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
MW-16	Aug-05	< 25	2.3	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	< 25	1.2	< 1.0	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
MW-17	Aug-05	< 6300	6,200	340	1,500	1,200	50	NA	< 250	< 250	< 250	NA	NA	< 1,300	
	Nov-05	< 13,000	1,500	< 500	17,000	1,600	000	NA	< 500	< 500	< 500	NA	NA	< 2,500	
MW-18	Aug-05	< 25	10	45	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	< 25	3.9	26	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
MW-19	Aug-05	< 25	20	7.5	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
	Nov-05	< 25	19	6.4	< 1.0	< 1.0	0	NA	< 1.0	< 1.0	< 1.0	NA	NA	< 5.0	
TRG ⁴		608	5.0	100	5.0	0.155	0.0	0.168	8.52	3.64	1.43	0.126	70	679	5

1 - NA indicates that the analyte was not analyzed.

2 - "<" indicates that the concentration of the analyte is less than the concentration

3 - ND = Non Detect / No detection limit available.

4 - Target Remediation Goals are taken from the Tier 1 Target Remedial Goal Ta

5 - TRG not yet established for this analyte.

TABLE 3
SUMMARY OF DIOXATHION ANALYTICAL RESULTS

Hercules Incorporated

Hattiesburg, MS

November 2005

Location	Date	Concentrations in µg/L			
		Dioxenethion	Dioxathion (cis)	Dioxathion (trans)	Total Dioxathion ¹
CM-00	Sep-03	< 0.400	< 0.400	< 0.400	< 0.800
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
CM-01	Feb-03	< 2.19	< 4.75	< 3.04	< 7.79
	Sep-03	< 0.400	< 0.400	< 0.400	< 0.800
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
CM-02	Feb-03	< 2.19	8.72	< 3.04	8.72
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
CM-03	Feb-03	3.16	< 4.75	< 3.04	< 7.79
	Aug-05	1.05	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
CM-04	Feb-03	< 2.19	< 4.75	< 3.04	< 7.79
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
CM-05	Feb-03	3.07	< 4.75	< 3.04	< 7.79
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-02	Dec-02	< 0.220	< 0.480	< 0.300	< 0.780
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-03	Dec-02	< 0.220	< 0.480	< 0.300	< 0.780
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-04	Dec-02	12.9	3.34	< 0.300	3.34
	Aug-03	6.34	1.82	< 0.400	1.82
	Aug-05	5.57	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-05	Dec-02	< 0.220	< 0.480	< 0.300	< 0.780
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-06	Dec-02	1.12	< 0.480	< 0.300	< 0.780
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-07	Dec-02	9.57	< 0.480	< 0.300	< 0.780
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-08	Dec-02	94.3	< 0.480	53.9	53.900
	Aug-05	539.00	< 0.400	< 0.400	< 0.800
	Nov-05	2,492.00	< 0.400	< 0.400	< 0.800
MW-09	Dec-02	5.9	12.8	< 0.300	12.800
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-10	Dec-02	< 0.220	< 0.480	< 0.300	< 0.780
	Aug-03	< 0.400	< 0.400	< 0.400	< 0.800
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-11	Dec-02	50.3	5.00	< 0.300	5.00
	Aug-03	6.24	< 0.400	< 0.400	< 0.800
	Aug-05	1.26	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-12	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-13	Aug-05	8.11	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-14	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-15	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-16	Aug-05	1.01	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
MW-17	Aug-05	2,210.00	< 0.400	< 0.400	< 0.800
	Nov-05	2,802.00	< 0.400	< 0.400	< 0.800

TABLE 3
SUMMARY OF DIOXATHION ANALYTICAL RESULTS

Hercules Incorporated

Hattiesburg, MS

November 2005

Location	Date	Concentrations in µg/L			
		Dioxenethion	Dioxathion (cis)	Dioxathion (trans)	Total Dioxathion ¹
MW-18	Aug-05	<0.400	<0.400	<0.400	<0.800
	Nov-05	<0.400	<0.400	<0.400	<0.800
MW-19	Aug-05	<0.400	<0.400	<0.400	<0.800
	Nov-05	<0.400	<0.400	<0.400	<0.800
TRG ³ -		N/E ⁴			54.8

1 - Total Dioxathion is the sum of the cis- and trans- isomers.

2 - "<" indicates that the concentration of the analyte is less than the concentrations shown.

3 - Target Remediation Goals are taken from the Tier 1 Target Remedial Goal Table of the Final Regulations Governing Brownfields Voluntary Cleanup and Redevelopment in Mississippi, MDEQ, March 2002.

Concentrations shown in bold are above TRGs

4 - No established Target Remediation Goal.

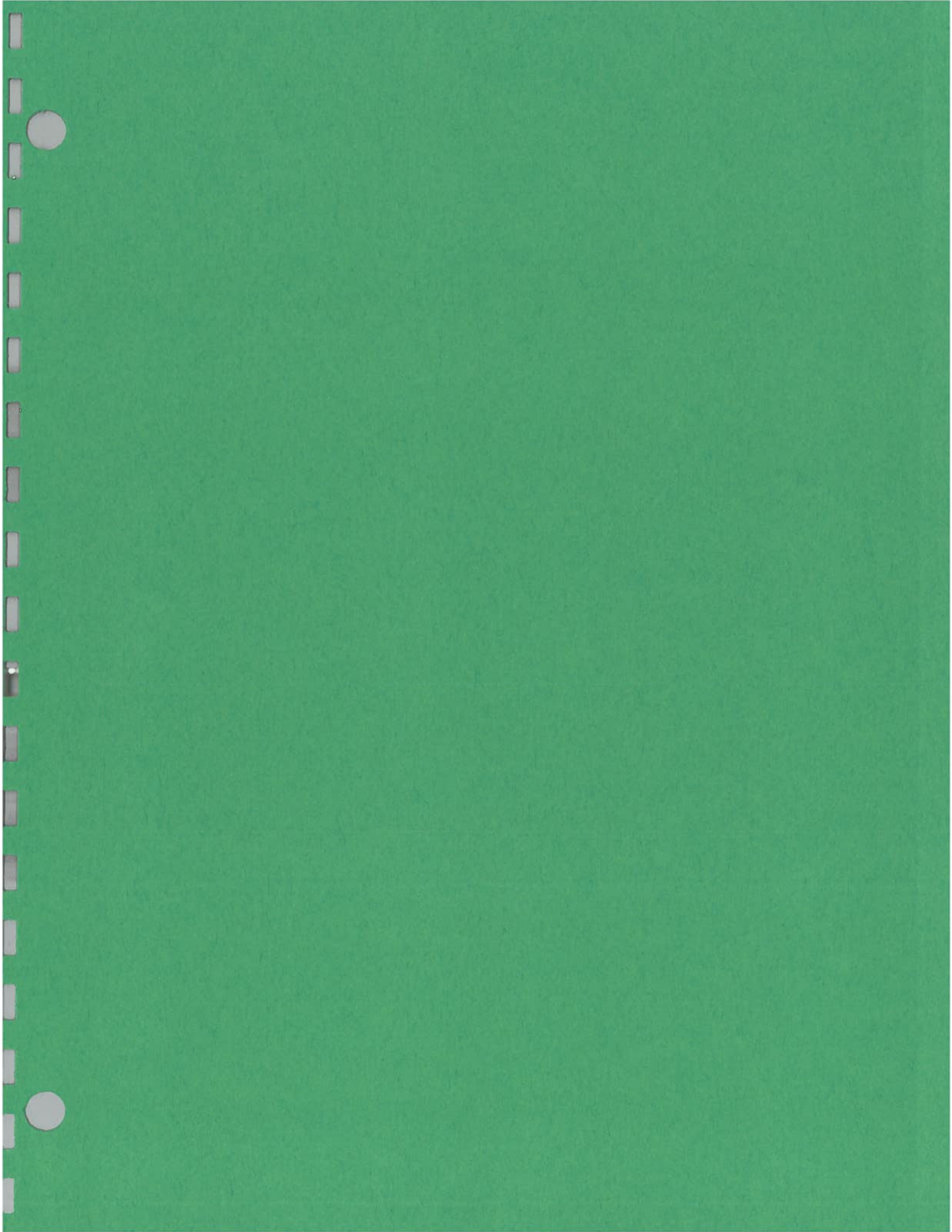
FIGURES

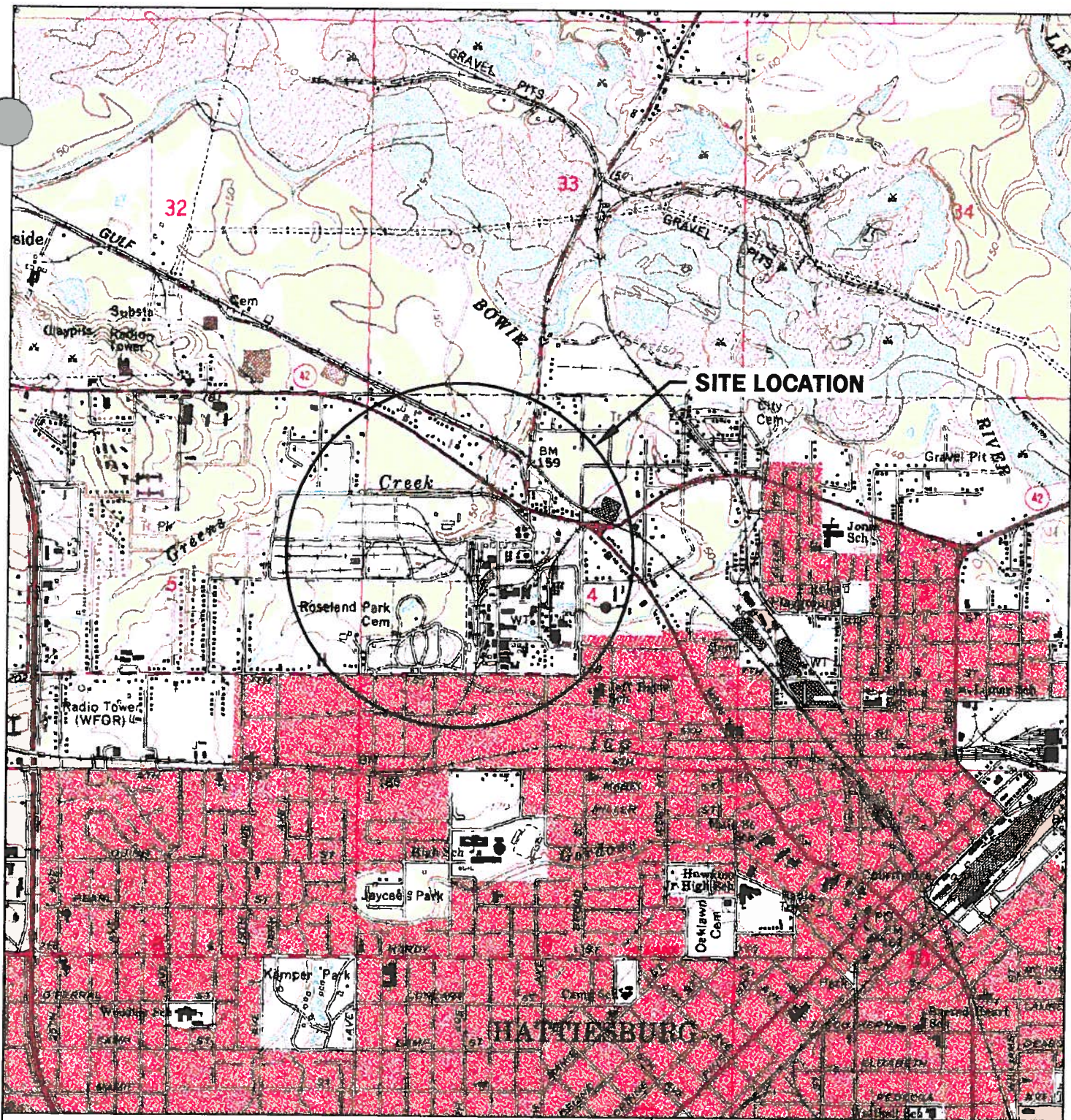
TABLE 4
SUMMARY OF QA/QC SAMPLE ANALYTICAL RESULTS
Hercules Incorporated
Hattiesburg, Mississippi
August 2005

Location	Concentrations in µg/L											
	Benzene	Carbon Tetrachloride	Chlorobenzene	Chloroform	1,1-Dichloroethene	Ethylbenzene	Methylene Chloride	Toluene	Dioxenehion	Dioxathion (cis)	Dioxathion (trans)	
MW-09	16	< 1.0	< 1.0	< 1.0	3.4	3.0	< 5.0	< 1.0	< 1.0	< 0.400	< 0.400	< 0.400
MW-09 DUP	18	< 1.0	< 1.0	< 1.0	3.4	3.4	< 5.0	< 1.0	< 1.0	< 0.400	< 0.400	< 0.400
% variation	13%	0%	0%	0%	0%	13%	0%	0%	0%	0%	0%	0%
MW-16	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	2.1	< 0.400	< 0.400	< 0.400	< 0.400
MW-16 DUP	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	2.0	< 0.400	< 0.400	< 0.400	< 0.400
% variation	8%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
MW-17	1500	17000	< 500	1600	< 500	< 500	< 2500	< 500	2802	< 0.400	< 0.400	< 0.400
MW-17 DUP	980	14000	300	1600	< 100	< 100	< 500	100	2377	< 0.400	< 0.400	< 0.400
% variation	35%	18%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%
RS-01	< 1.0	< 1.0	< 1.0	11	< 1.0	< 1.0	5.1	1.5	< 0.400	< 0.400	< 0.400	< 0.400
RS-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	1.6	< 0.400	< 0.400	< 0.400	< 0.400
TB-01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	N/A ²	N/A	N/A	N/A
TB-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	N/A	N/A	N/A	N/A

1 - "<" indicates that the concentration of the analyte is less than the concentrations shown.

2 - Trip blanks were not analyzed for dioxathion constituents.





SITE LOCATION

HATTIESBURG



QUADRANGLE LOCATION



**HERCULES INCORPORATED
HATTIESBURG, MISSISSIPPI**

Eco-Systems, Inc. 
Consultants, Engineers and Scientists

SCALE: 1"=2000'	DRAWN BY: N. SISSON	DATE:
	CHKD. BY:	DATE:
PROJECT NO. HER25080	CAD FILE HER25080-TOPO.dwg	

SITE LOCATION MAP

**FIGURE
1**

SOURCE: DeLORME 3D TopoQuads -- HATTIESBURG, MISSISSIPPI



**APPENDIX A
GROUNDWATER COLLECTION LOGS**

Groundwater Sample Collection Log

Project Name: Hercules
 Project Number: ELP25080-CC-MS

Boring ID: MW-08
 Site Location: Hattiesburg, Mississippi

Start Date: 11-02-2005 Finish Date: 11-02-2005
 Sample Technician: CT
 Purge/Sample Method: _____
 Well Diameter (d): 2"
 Total Depth (TD [ft-btoc]): 18.67
 Approximate Depth of Water Column (h)
 (h = TD - DTW [ft-btoc]): 3.75
 Calculated Well Volume (V = 6hd²)
 (V = vol in gal; d = well diam. in ft): 0.6375

Depth-to-Water (DTW) Measurements		
Date	Time	DTW (ft-btoc)
11-02-2005	1445	14.92'

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm) @ 25	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
11-02-2005 / 1505	1.921	5.92	697	27.9	5.44			

Sample Identification: HER-MNDB-1105
 Weather Conditions During Sampling: Sunny ; Approx 80°F
 Comments: _____
 Sample Technician: CT Date: 11-02-2005

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
11-02-2005	1512	1-1L GI	
11-02-2005	1512	3-40ml VOA	HCl

Notes:
 ft-btoc = feet below top of casing.
 gal = gallons.
 mS/cm = milliSiemens per centimeter.
 °C = degrees Celsius.
 NTU = Nephelometric Turbidity Units.
 mg/L = milligrams per liter.
 mV = millivolts.

Project Name: Hercules
Project Number: ELP25080-CC-MS

Boring ID: MN-16
Site Location: Hattiesburg, Mississippi

Start Date: 11-02-2005 Finish Date: 11-02-2005
Sample Technician: CT
Purge/Sample Method: Peristaltic / Low Flow
Well Diameter (d): 2"
Total Depth (TD [ft-btoc]): _____
Approximate Depth of Water Column (h) _____
(h = TD - DTW [ft-btoc]): _____
Calculated Well Volume ($V=6hd^2$) _____
(V = vol in gal; d = well diam. in ft): _____

Depth-to-Water (DTW) Measurements		
Date	Time	DTW (ft-btoc)
11-02-2005		
11-02-2005	1550	17.32
	1606	17.33

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
11-02-2005 / 1545	0.0	6.22	782	23.2	8.8			
1551	0.25	6.34	760	22.4	4.89			
1556	0.50	6.41	737	22.3	4.13			
1602	0.75	6.46	720	22.3	4.26			
1606	1.00	6.49	706	22.4	5.17			
1611	1.25	6.50	693	22.2	4.28			
1615	1.50	6.52	687	22.1	3.16			

Sample Identification: HER-MN16-1105 ; HER-FDI-1105

Weather Conditions During Sampling: Sunny ; Approx 75°F

Comments: _____

Sample Technician: CT Date: 11-02-2005

- Notes:**
ft-btoc = feet below top of casing.
gal = gallons.
mS/cm = milliSiemens per centimeter.
°C = degrees Celsius.
NTU = Nephelometric Turbidity Units.
mg/L = milligrams per liter.
mV = millivolts.

MN16
MN16
FDI
FDI

GROUNDWATER SAMPLE CONTAINERS

Date	Time	Sample Container	Preservative
11-02-2005	1616	1-1L G1	
11-02-2005	1616	3-40-1 VOA	HCl
11-02-2005	1616	1-1L G1	
11-02-2005	1616	3-40-1 VOA	



Groundwater Sample Collection Log

Project Name: Hercules
 Well Number: ELP25080-CC-MS

Boring ID: MW-11
 Site Location: Hattiesburg, Mississippi

Start Date: 11-03-2005 Finish Date: 11-03-2005
 Sample Technician: Chris Terrell
 Purge/Sample Method: Peristaltic Pump / Low Flow
 Well Diameter (d): 2"
 Total Depth (TD [ft-btoc]): _____
 Approximate Depth of Water Column (h) _____
 (h = TD - DTW [ft-btoc]): _____
 Calculated Well Volume (V = 6hd²) _____
 (V = vol in gal; d = well diam. in ft): _____

Date	Time	DTW (ft-btoc)
11-03-2005	0937	8.88
	0946	8.88
	0952	8.88

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
11-03-2005 / 0930	0.0	6.47	267	18.8	17.4			
0936	0.25	6.46	183.1	20.6	12.8			
0941	0.50	6.29	177.6	20.9	13.2			
0946	0.75	6.26	176.7	20.9	9.10			
0950	1.00	6.24	181.0	21.0	8.66			
0955	1.25	6.21	179.9	21.1	8.34			

Sample Identification: HER-MW11-1105

Weather Conditions During Sampling: Sunny ; Approx 60°F

Comments: _____

Sample Technician: CT Date: 11-03-2005

Date	Time	Sample Container	Preservative
11-03-2005	10:00	1-12 G1	—
11-03-2005	10:00	3-40ml VOA	HCL

- Notes:
- ft-btoc = feet below top of casing.
 - gal = gallons.
 - mS/cm = milliSiemens per centimeter.
 - °C = degrees Celsius.
 - NTU = Nephelometric Turbidity Units.
 - mg/L = milligrams per liter.
 - mV = millivolts.

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: ELP25080-CC-MS

Boring ID: MW-02
Site Location: Hattiesburg, Mississippi

Start Date: 11-03-2005 Finish Date: 11-03-2005
Sample Technician: Chris Terrent
Purge/Sample Method: Peristaltic Pump / Low Flow
Well Diameter (d): 2"
Total Depth (TD [ft-btoc]): _____
Approximate Depth of Water Column (h) _____
(h = TD - DTW [ft-btoc]): _____
Calculated Well Volume (V = 6hd²) _____
(V = vol in gal; d = well diam. in ft): _____

Depth-to-Water (DTW) Measurements		
Date	Time	DTW (ft-btoc)
11-02-2005		
11-03-2005	1032	8.26
	1048	8.26

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm) _{25°C}	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
11-03-2005 1030	0.0	6.46	172.4	21.4	534			
1035	0.25	6.52	143.2	21.7	37.9			
1040	0.50	6.32	124.8	21.7	21.2			
1045	0.75	6.11	114.1	21.9	25.8			
1049	1.00	6.00	105.5	22.2	23.3			
1054	1.25	5.92	103.3	22.2	15.7			
1059	1.50	5.86	104.3	22.3	10.06			
1104	1.75	5.83	104.7	22.3	4.97			

Sample Identification: HER-MW02-1105

Weather Conditions During Sampling: Sunny ; Approx 70°F

Comments: _____

Sample Technician: CT Date: 11-03-2005

Notes:

- ft-btoc = feet below top of casing.
- gal = gallons.
- mS/cm = milliSiemens per centimeter.
- °C = degrees Celsius.
- NTU = Nephelometric Turbidity Units.
- mg/L = milligrams per liter.
- mV = millivolts.

GROUNDWATER SAMPLE CONTAINERS

Date	Time	Sample Container	Preservative
11-03-2005	1108	1-1L 61	
11-03-2005	1108	3-40ml VOA	HCl



Groundwater Sample Collection Log

Project Name: Hercules
Project Number: ELP25080-CC-MS

Boring ID: MW-05
Site Location: Hattiesburg, Mississippi

Start Date: 11-03-2005 Finish Date: 11-03-2005
Sample Technician: Chris Tennell
Purge/Sample Method: Peristaltic Pump / Low Flow
Well Diameter (d): 2"
Total Depth (TD [ft-btoc]): _____
Approximate Depth of Water Column (h) _____
(h = TD - DTW [ft-btoc]): _____
Calculated Well Volume (V = 6hd²) _____
(V = vol in gal; d = well diam. in ft): _____

Depth-to-Water (DTW) Measurements		
Date	Time	DTW (ft-btoc)
11-02-2005		
11-03-2005	1128	10.89
	1135	11.14
	1140	11.20
	1150	11.14

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm) μ S	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
11-03-2005 / 1128	0.0	6.20	818	24.8	28.0			
1133	0.25	6.34	745	24.0	8.53			
1138	0.50	6.36	721	23.9	7.50			
1143	0.75	6.29	710	23.7	5.25			
1149	1.00	6.29	698	23.9	4.32			
1154	1.25	6.27	696	23.8	4.60			

Sample Identification: HER-MW05-1105

Weather Conditions During Sampling: Sunny, Approx 75°F

Comments: _____

Sample Technician: LT Date: 11-03-2005

- Notes:
- ft-btoc = feet below top of casing.
 - gal = gallons.
 - mS/cm = milliSiemens per centimeter.
 - °C = degrees Celsius.
 - NTU = Nephelometric Turbidity Units.
 - mg/L = milligrams per liter.
 - mV = millivolts.

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
11-03-2005	1200	1-L GI	
11-03-2005	1200	3-40-L VOA	HCl

Groundwater Sample Collection Log

Project Name: Hercules
 Project Number: ELP25080-CC-MS

Boring ID: MW-17
 Site Location: Hattiesburg, Mississippi

Start Date: 11-03-2005 Finish Date: 11-03-2005
 Sample Technician: Chris Terrell
 Purge/Sample Method: Peristaltic Pump / Low Flow
 Well Diameter (d): 2"
 Total Depth (TD [ft-btoc]): _____
 Approximate Depth of Water Column (h) _____
 (h= TD - DTW [ft-btoc]): _____
 Calculated Well Volume (V=6hd²) _____
 (V = vol in gal; d = well diam. in ft): _____

Date	Time	DTW (ft-btoc)
11-02-2005		
11-03-2005	1330	18.31
11-03-2005	1354	18.3

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm) μ S	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
11-03-2005/1329	0.0	6.05	579	26.0	>			odor.
1334	0.25	6.04	563	25.1	219			
1339	0.50	6.26	514	25.1	14.3			
1345	0.75	6.23	489	24.9	9.42			
1351	1.00	6.21	472	24.9	7.95			
1356	1.25	6.19	468	24.9	4.90			

Sample Identification: HER-MW17-1105; HER-FD3-1105

Weather Conditions During Sampling: Sunny; Approx 80°F

Comments: _____

Sample Technician: CT Date: 11-03-2005

Notes:
 ft-btoc = feet below top of casing.
 gal = gallons.
 mS/cm = milliSiemens per centimeter.
 °C = degrees Celsius.
 NTU = Nephelometric Turbidity Units.
 mg/L = milligrams per liter.
 mV = millivolts.

Date	Time	Sample Container	Preservative
11-03-2005	1400	1-1L G1	—
11-03-2005	1400	3-40ml VOA	HCl
11-03-2005	1400	1-1L G1	—
11-03-2005	1400	3-40ml VOA	HCl

MW17
 MW17
 FD3
 FD3

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: ELP25080-CC-MS

Boring ID: MW9
Site Location: Hattiesburg, Mississippi

Start Date: 11/3/05 Finish Date: 11/3/05
Sample Technician: David Head
Purge/Sample Method: Peristaltic pump
Well Diameter (d): 3"
Total Depth (TD [ft-btoc]): 20.22
Approximate Depth of Water Column (h) (h= TD - DTW [ft-btoc]): 7.14
Calculated Well Volume (V=6hd²) (V = vol in gal; d = well diam. in ft): 1.2

Date	Time	DTW (ft-btoc)
11/2/05	1306	13.08
11/3/05	1342	13.15
	1349	13.15

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
1333	0	6.10	0.694	25.2	1.97			
1340	0.5	6.14	0.766	25.0	1.29			
1346	0.75	6.07	0.709	24.8	1.50			
1352	1.02	6.08	0.672	24.8	1.33			
1357	1.25	6.05	0.667	24.9	1.30			
1403	1.50	6.05	0.665	24.8	1.23			

Sample Identification: HER-MW09-1105; HER-FD2-1105

Weather Conditions During Sampling: 75°F mostly sunny

Comments: _____

Sample Technician: DH Date: 11/3/05

Notes:
ft-btoc = feet below top of casing.
gal = gallons.
mS/cm = milliSiemens per centimeter.
°C = degrees Celsius.
NTU = Nephelometric Turbidity Units.
mg/L = milligrams per liter.
mV = millivolts.

Date	Time	Sample Container	Preservative
11/3/05	1403	3-40 mL VOA	HLR
		1-LAB	ACD ^{dit} none
11/3/05		3-40 mL VOA	HLR
		1-LAB	



Collection Log

Project Name: Hercules
 Project Number: ELP25080-CC-MS

Boring ID: MW17
 Site Location: Hattiesburg, Mississippi

Start Date: 11/3/05 Finish Date: 11/3/05
 Sample Technician: David Head
 Purge/Sample Method: Peristaltic Pump
 Well Diameter (d): 2"
 Total Depth (TD [ft-btoc]): 22.95
 Approximate Depth of Water Column (h)
 (h = TD - DTW [ft-btoc]): 8.18
 Calculated Well Volume (V = 6hd²)
 (V = vol in gal; d = well diam. in ft): 1.4

Date	Time	DTW (ft-btoc)
11/3/05	1303	14.77
11/3/05	1454	14.85
	1501	14.85
	1505	14.84

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
11/3/05 1443	0	5.56	0.157	26.2	6.15			
1450	0.5	4.97	0.099	25.4	3.06			
1455	0.75	4.81	0.089	25.3	3.50			
1500	1.00	4.81	0.091	25.1	3.16			
1505	1.25	4.81	0.090	25.1	2.89			

Sample Identification: HER-MW17-1105
 Weather Conditions During Sampling: 75°F mostly sunny
 Comments: _____
 Sample Technician: DH Date: 11/3/05

Date	Time	Sample Container	Preservative
11/3/05	1505	3-40ml VOA	HCL
		1-ILAB	-

Notes:
 ft-btoc = feet below top of casing.
 gal = gallons.
 mS/cm = milliSiemens per centimeter.
 °C = degrees Celsius.
 NTU = Nephelometric Turbidity Units.
 mg/L = milligrams per liter.
 mV = millivolts.



Environmental Engineers and Scientists

Project Name: Hercules
 Project Number: ELP25080-CC-MS

Boring ID: MW-1B
 Site Location: Hattiesburg, Mississippi

Start Date: 11-03-2005 Finish Date: 11-03-2005
 Sample Technician: Chris Terrell
 Purge/Sample Method: Peristaltic Pump / Low Flow
 Well Diameter (d): 2"
 Total Depth (TD [ft-btoc]): _____
 Approximate Depth of Water Column (h) _____
 (h = TD - DTW [ft-btoc]): _____
 Calculated Well Volume (V = 6hd²) _____
 (V = vol in gal; d = well diam. in ft): _____

Depth-to-Water (DTW) Measurements		
Date	Time	DTW (ft-btoc)
<u>11-02-2005</u>		
<u>11-03-2005</u>	<u>14:42</u>	<u>7.36</u>
<u>11-03-2005</u>	<u>14:58</u>	<u>7.39</u>

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm) _{MS}	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
<u>11-03-2005 / 14:40</u>	<u>0.0</u>	<u>6.14</u>	<u>670</u>	<u>26.8</u>	<u>89.5</u>			
<u>14:45</u>	<u>0.25</u>	<u>6.36</u>	<u>685</u>	<u>25.9</u>	<u>9.03</u>			
<u>14:49</u>	<u>0.50</u>	<u>6.34</u>	<u>665</u>	<u>24.3</u>	<u>7.94</u>			
<u>14:54</u>	<u>0.75</u>	<u>6.37</u>	<u>644</u>	<u>26.2</u>	<u>5.90</u>			
<u>14:59</u>	<u>1.00</u>	<u>6.38</u>	<u>645</u>	<u>25.9</u>	<u>4.95</u>			

Sample Identification: HER-MW1B-1105 (MS/MSD)
 Weather Conditions During Sampling: Sunny / Approx 95°F
 Comments: _____

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
<u>11-03-2005</u>	<u>1505</u>	<u>3-1L G1</u>	<u>---</u>
<u>11-03-2005</u>	<u>1505</u>	<u>9-40ml VOA</u>	<u>HCl</u>
<u>11-03-2005</u>	<u>---</u>		

Sample Technician: CT Date: 11-03-2005

Notes:
 ft-btoc = feet below top of casing.
 gal = gallons.
 mS/cm = milliSiemens per centimeter.
 °C = degrees Celsius.
 NTU = Nephelometric Turbidity Units.
 mg/L = milligrams per liter.
 mV = millivolts.



Collection Log

Project Name: Hercules
 Project Number: ELP25080-CC-MS

Boring ID: MW19
 Site Location: Hattiesburg, Mississippi

Start Date: 11/3/05 Finish Date: 11/3/05
 Sample Technician: David Head
 Purge/Sample Method: Peristaltic pump
 Well Diameter (d): 2"
 Total Depth (TD [ft-btoc]): 21.22
 Approximate Depth of Water Column (h)
 (h = TD - DTW [ft-btoc]): _____
 Calculated Well Volume (V = 6hd²)
 (V = vol in gal; d = well diam. in ft): _____

Depth-to-Water (DTW) Measurements		
Date	Time	DTW (ft-btoc)
11/3/05		
11/3/05	1535	11.95
	1543	11.95

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
1531	0	6.44	0.482	25.7	4.33			
1537	0.5	6.50	0.485	25.5	4.43			
1542	0.75	6.48	0.487	25.5	5.22			
1546	1.00	6.45	0.486	25.6	3.47			
1551	1.25	6.45	0.487	25.5	2.93			

Sample Identification: HER-MW19-1105
 Weather Conditions During Sampling: 75°F mostly sunny
 Comments: _____
 Sample Technician: DH Date: 11/3/05

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
11/3/05	1551	3-40 mL VOA 1-LAL	ACD

Notes:
 ft-btoc = feet below top of casing.
 gal = gallons.
 mS/cm = milliSiemens per centimeter.
 °C = degrees Celsius.
 NTU = Nephelometric Turbidity Units.
 mg/L = milligrams per liter.
 mV = millivolts.