

Hercules Incorporated Hattiesburg, Mississippi

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Prepared for: Hercules Incorporated

March 2006







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1.0 INTRODUCTION

Hercules Incorporated (Hercules) commissioned Eco-Systems, Inc. (Eco-Systems) to conduct 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 <u>Corrective Action Plan Revision 01</u> (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.

As discussed in the CAP, groundwater monitoring wells MW-2 through MW-19 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 3rd quarterly monitoring event. During this event, water levels were measured at 18 wells and 15 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 February 2, 2006, Eco-Systems personnel collected groundwater levels from the 18 monitoring wells to be sampled during the quarterly monitoring event and from the 15 piezometers at the site. Piezometer TP-1 was damaged by recent site activities and the groundwater level could not be measured at this location. A summary of the water level measurements obtained on February 2, 2006 is included as Table 1.

Groundwater sample collection was conducted on February 1-3, 2006. 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

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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 February 1, 2006, 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, three 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 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.

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- 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 <u>Environmental Investigations Standard Operating</u> <u>Procedures and Quality Assurance Manual</u> (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 <u>Sampling and Analysis Protocol for the Determination of Dioxathion in</u> <u>Water</u> (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 February 1-3, 2006.

3.1.1 Volatile Organic Compounds

VOC's were not detected in groundwater samples collected from wells MW-02, MW-03, MW-04, MW-05, MW-06, MW-07, MW-10, MW-11, MW-12, MW-15, and MW-16.

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 total xylenes 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 $5\mu g/L$. 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, chloroform, and vinyl chloride at concentrations greater than their respective TRG's. Concentrations of chlorobenzene and bromomethane 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-17 detected benzene, chlorobenzene, 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 February 2006 monitoring event.

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

Dioxenethion was detected in the groundwater samples collected from monitoring wells, MW-4, MW-6, MW-8, MW-13, MW-17, and MW-18 at concentrations of 19.7 μ g/L, 2.48 μ g/L, 1,669 μ g/L, 60.5 μ g/L, 1,436 μ g/L, and 7.25 μ g/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 February 1, 2006.

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.

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3.2.2 Dioxathion

Dioxenethion, cis-dioxathion and trans-dioxathion were not detected in the surface water samples collected during the February 2006 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 CM-03, MW-04, and MW-09. Analysis of the duplicate groundwater sample collected from CM-03 detected similar concentrations of benzene as was detected in the regular sample. All other constituents in the duplicate CM-03 sample and the regular CM-03 sample were both below the MDL. Dioxathion constituents were not detected in the regular or duplicate samples collected from CM-03.

Analysis of the duplicate groundwater sample collected from monitoring well MW-04 detected the same concentration of chlorobenzene. All other constituents in both the duplicate MW-04 sample and the regular MW-04 sample were less than the MDL. Analysis of the duplicate MW-04 sample detected a similar concentration of dioxenethion as was detected in the regular MW-04 sample. Dioxathion constituents were not detected in the regular or duplicate samples collected from MW-04.

Analysis of the duplicate groundwater sample collected from monitoring well MW-09 detected similar concentrations of benzene, bromomethane, carbon tetrachloride, 1,1-dichloroethene, and ethylbenzene as the regular sample. Dioxenethion and dioxathion constituents were not detected in the regular or duplicate samples collected from MW-09. Analysis of the rinsate samples collected on February 1, 2006 (RS-01) and February 2, 2006 (RS-02) detected the same concentrations of chloroform. Analysis of the rinsate sample collected on February 3, 2006 (RS-3) detected acetone and chloroform. Dioxathion constituents were not detected in any of the three rinsate samples. However, acetone and chloroform were not detected in the groundwater samples associated with the rinsed equipment except from locations where acetone and chloroform have been primarily detected in groundwater. Therefore, the acetone and chloroform detected in the rinsate samples may have been present in the deionized water used for decontamination procedures and 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 reported to be within acceptable limits for all samples except for the samples collected from MW-8 and MW-17. The narrative reported submitted by BATCO with the analytical reports indicated that the samples collected from MW-8 and MW-17 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 1,312% and 880% 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 50.2% to 101%. Based on the information received, the samples were extracted and analyzed within the proscribed time limits for organophosphorous compounds.



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TABLES

TABLE 1

SUMMARY OF GROUNDWATER ELEVATION DATA

February 2, 2006 Hercules, Incorporated Hattiesburg, Mississippi

WELL NO.	TOC ELEVATION	WATER DEPTH	GROUNDWATER
WELL NO.	(ft.) ¹	(ft) ²	ELEVATION (ft.)
	PERMANENT	MONITOR WELLS	
MW-1	174.12	NA ³	NA
MW-2	160.07	4.25	155.82
MW-3	160.03	7.42	152.61
MW-4	159.75	11.28	148.47
MW-5	160.99	8.75	152.24
MW-6	174.05	8.84	165.21
MW-7	NA	14.15	NA
MW-8	179.99	NA	NA
MW-9	NA	12.57	NA
MW-10	159.88	11.27	148.61
MW-11	157.18	8.23	148.95
MW-12	162.17	8.10	154.07
MW-13	175.23	9.53	165.70
MW-14	169.23	15.32	153.91
MW-15	172.21	20.62	151.59
MW-16	175.62	17.48	158.14
MW-17	186.13	18.60	167.53
MW-18	165.31	5.22	160.09
MW-19	172.25	10.90	161.35
	STAF	F GAUGES	
SG-1	NA	NA	NA
SG-2	NA	NA	NA
SG-3	NA	NA	NA
SG-4	NA	NA	NA
1	PIEZO	OMETERS	
TP-1	172.18	NA	NA
TP-2	171.72	10.91	160.81
TP-3	169.74	9.85	159.89
TP-4	163.64	3.99	159.65
TP-5	160.54	8.95	151.59
TP-6	158.63	8.45	150.18
TP - 7	167.17	8.21	158.96
TP-8	183.79	14.22	169.57
TP-9	163.44	4.49	158.95
TP-10	179.69	14.96	164.73
TP-11	162.26	10.43	151.83
TP-12	159.95	11.44	148.51
TP-13	156.99	7.99	149.00
TP-14	162.59	4.82	157.77
TP-16	179.72	13.33	166.39
TP-17	182.71	17.51	165.20

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.

TABLE 3

SUMMARY OF DIOXATHION ANALYTICAL RESULTS

Hercules Incorporated

Hattiesburg, MS

February 2006

	_		Concentrati		
Location	Date	Dioxenethion	Dioxathion (cis)	Dioxathion (trans)	Total Dioxathion
СМ-00	Sep-03	< 0.400	< 0.400	< 0.400	< 0.800
10 C	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
	Feb-06	< 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
01000	Feb-06	< 0.400	< 0.400 8.72	< 0.400	< 0.800 8.72
CM-02	Feb-03	< 2.19		< 3.04 < 0.400	< 0.800
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400		
<u></u>	Feb-06	< 0.400	< 0.400 < 4.75	< 0.400 < 3.04	< 0.800 < 7.79
CM-03	Feb-03	3.16		< 0.400	< 0.800
	Aug-05	1.05	< 0.400		
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
	Feb-06	< 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 < 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
014.04	Feb-06	< 0.400	< 0.400	< 0.400 < 3.04	< 7.79
CM-05	Feb-03	3.07	< 4.75		< 0.800
Í	Aug-05	< 0.400	< 0.400	< 0.400 < 0.400	< 0.800
	Nov-05	< 0.400	< 0.400		< 0.800 < 0.800
	Feb-06	< 0.400	< 0.400	< 0.400	
MW-02	Dec-02	< 0.220	< 0.480	< 0.300	< 0.780 < 0.800
	Aug-05	< 0.400	< 0.400	< 0.400	
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
	Feb-06	< 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
1	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
	Feb-06	< 0.400	< 0.400	< 0.400 < 0.300	< 0.800 3.34
MW-04	Dec-02	12.9	3.34	< 0.400	1.82
	Aug-03	6.34	< 0.400	< 0.400	< 0.800
	Aug-05	5.57	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400			< 0.800
	Feb-06	19.7	< 0.400 < 0.480	< 0.400	< 0.780
MW-05	Dec-02	< 0.220		< 0.300	< 0.800
	Aug-05	< 0.400	< 0.400	< 0.400 < 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
	Feb-06	< 0.400	< 0.400		< 0.780
MW-06	Dec-02	1.12	< 0.480	< 0.300 < 0.400	< 0.800
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400 < 0.400	< 0.400	< 0.800
MW 07	Feb-06	<u>2.48</u> 9.57	< 0.400	< 0.300	< 0.780
MW-07	Dec-02		< 0.480	< 0.300	< 0.800
	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
AW OP	Feb-06 Dec-02	<u>< 0.400</u> 94.3	< 0.480	53.9	53.900
MW-08			< 0.480	< 0.400	< 0.800
	Aug-05	539.00	< 0.400	< 0.400	< 0.800
	Nov-05 Feb-06	2,492.00	< 0.400	< 0.400	< 0.800
MW 00		1,669	12.8	< 0.300	12.800
MW-09	Dec-02	5.9 < 0.400	< 0.400	< 0.300	< 0.800
	Aug-05		< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400			< 0.800
AW 10	Feb-06	< 0.400	< 0.400	< 0.400	< 0.780
MW-10	Dec-02	< 0.220	< 0.480	< 0.300	
	Aug-03	< 0.400	< 0.400	< 0.400	< 0.800
	Aug-05 Nov-05	< 0.400 < 0.400	< 0.400 < 0.400	< 0.400 < 0.400	< 0.800 < 0.800

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Location	Date	Acetane	Benzene	Chlarobenzene	Carbon Tetrachloride	Chiaro form Trichloroethene	Bromodichloromethane	Bromomethane	Chioroethane	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	< 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	< 5.0
	Nov-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
<u></u>	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	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	< 13.
	Sep-03	NA	< 1.0	6.6	< 1.0	< 1.0 .0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
80	Aug-05 Nov-05	< 25 < 25	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	<1.0 <u>.0</u> <1.0 0	NA	< 1.0	<1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0	1	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
CM-02	Feb-03	NA	1.17	< 10.0	1.5	< 1.0 .0 < 10.0 0.0	NA < 10.0	<1.0 <10.0	<1.0 15.6	<1.0 <10.0	NA < 10.0	NA < 10.0	NA < 10.0	< 5.0
	Aug-05	< 25	< 1.0	<1.0	< 1.0	< 1.0 .0	< 10.0 NA	< 1.0	< 1.0	< 10.0	NA	NA	< 10.0 NA	< 5.0
	Nov-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	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	< 13.0
	Aug-05	< 25	1.1	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	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	NA	< 5.0
CM-04	Feb-06	< 25	1.1	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	<1.0	< 1.0	NA	NA	NA	< 5.0
J1V1~04	Feb-03 Aug-05	NA < 25	2.25	< 10.0 < 1.0	< 10.0 < 1.0	< 10.0 0.0	< 10.0	< 10.0	3.43	< 10.0	< 10.0	< 10.0	< 10.0	< 13.0
	Nov-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0 < 1.0 0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0		NA	< 1.0 < 1.0	< 1.0 < 1.0	< 1.0 < 1.0	NA NA	NA NA	NA NA	< 5.0 < 5.0
CM-05	Feb-03	NA	4.04	< 10.0	< 10.0	< 10.0 <u>0</u>	NA < 10.0	< 10.0	< 12.0	< 10.0	< 10.0	< 10.0	< 10.0	< 13.0
	Aug-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	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	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.0_0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
/W-02	Aug-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Nov-05 Feb-06	32	< 1.0	< 1.0	< 1.0	<1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
MW-03	Aug-05	< 25 < 25	< 1.0	< 1.0	< 1.0 < 1.0	< <u>1.0</u> .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
111-05	Nov-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0 < 1.0 0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0		NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
/W-04	Dec-02	ND ³	14.0	1.81	10.0	<1.0 .0 ND D	NA ND	<1.0 ND	< 1.0 63.0	< 1.0 1.72	NA ND	NA ND	NA 1.26	< 5.0 ND
	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	<13.
İ	Aug-03	NA	< 1.0	< 1.0	< 1.0	< 1.0 _0	< 1.0	< 5.0	< 5.0	< 1.0	< 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	< 5.0
	Nov-05		< 1.0	< 1.0	< 1.0	< 1.0 .0	NA		< 1.0	< 1.0	NA	NA	NA	< 5.0
AN OF	Feb-06		< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
1W-05	Aug-05 Nov-05		< 1.0 < 1.0	1.3	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
		< 25	< 1.0	<1.0 1.0	< 1.0 < 1.0	< 1.0 .0 < 1.0 0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
/W-06		< 25	< 1.0	< 1.0	< 1.0	< 1.0 <u>.0</u> < 1.0 <u>.0</u>	NA	< 1.0	< 1.0 < 1.0	< 1.0 < 1.0	NA	NA NA	NA NA	< 5.0 < 5.0
	Nov-05		< 1.0	< 1.0	< 1.0	< 1.0 0	NA NA	<1.0 <1.0	< 1.0	< 1.0 < 1.0	NA NA	NA	NA NA	< 5.0
		< 25	< 1.0	< 1.0	< 1.0	< 1.0 0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
1W-07		< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
		< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
<u>au co</u>		< 25	< 1.0	< 1.0	< 1.0	< 1.0 <u>.0</u>	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
fW-08	Dec-02	ND	6,900	290	16,000	1,800.8	6.84	4.07	66.0	39.2	4.45	19	4.6	26.
	Feb-03	NA < 6200	< 500.0	230	12,000	1,300.2	4.72	< 10.0	85.5	3.34	< 10.0	17.5	4.35	< 13.0
	- 1	< 6300 < 2,500	18,000 17,000	< 250	3,500	510 50	NA	< 250	< 250	< 250	NA	NA	NA	< 1,30
	Feb-06		17,000	160 160	1,000 480	260 00 130 00	NA NA	< 100 < 100	< 100 < 100	< 100	NA	NA	NA	< 500 < 500

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Location	Date	Acetone	Benzene	Chlorobenzene	Carbon Tetrachloride	Chloroform 1 richtoroetnene	Bromodichloromethane	Bromomethane	Chloroethane	Chloromethane	Dibromochloromethane	cis-1,2-dichloroethene	isopropylbenzene	methylene chloride
MW-09	Dec-02	ND	9.15	ND	ND	ND D	ND	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	< 13.0
	Aug-05	< 25	12	1.0	< 1.0	<1.00	NA	< 1.0	< 1.0	< 1.0	NA	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	NA	< 5.0
	Feb-06	< 25	18.0	< 1.0	< 1.0	<1.0_0	NA	< 1.0	< 1.0	< 1.0	NA	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	< 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	< 5.0
	Nov-05	< 25	< 1.0	< 1.0	< 1.0	<1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.0 _0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
MW-11	Dec-02	ND	114	ND	ND	NDD	ND	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	< 13.0
	Aug-03	NA	< 1.0	< 1.0	< 1.0	< 1.0 _0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 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	< 5.0
	Nov-05	< 25	< 1.0	<1.0	< 1.0	< 1.0 _0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
MW-12	Aug-05	< 25	< 1.0	<1.0	< 1.0	<1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	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	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.00	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
MW-13	Aug-05	< 25	120	10	260	96 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Nov-05	29	78	9.3	53	56 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	110	22	77	63 .0	NA	1.6	< 1.0	< 1.0	NA	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	NA	< 5.0
	Nov-05	35	< 1.0	< 1.0	< 1.0	< 1.0 _0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	180	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	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	NA	< 5.0
	Nov-05	< 25	< 1.0	< 1.0	< 1.0	< 1.0 _0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.0 0	NA	< 1.0	< 1.0	< 1.0	NA	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	NA NA	< 5.0 < 5.0
	Nov-05	< 25	1.2	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA NA	< 5.0
MW-17	Feb-06	< 25	< 1.0	< 1.0	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA NA	NA NA	NA NA	< 1,300
141 44 - 1 /	Aug-05	< 6300	6,200	340 < 500	1,500	1,20050	NA	< 250	< 250 < 500	< 500	NA	NA	NA	< 2,500
	Nov-05	< 13,000	1,500	< 500 600	17,000	1,600 00	NA	< 500	< 500	< 500	NA	NA	NA	< 2,500
MW-18	Feb-06	< 13,000 < 25	1,300 10	45	37,000	2,600 00	NA	< 500	< 1.0	< 1.0	NA NA	NA NA	NA	< 5.0
IAI AA - 19	Aug-05 Nov-05	< 25	3.9	45 26	< 1.0	1	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	4.2	31	< 1.0	<1.0 .0 <1.0 .0	NA NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
MW-19	Aug-05	< 25	20	7.5	< 1.0	····	NA NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
141 44 - 12	Nov-05	< 25	19	6.4	< 1.0	<1.0 .0 <1.0 .0	NA	< 1.0	< 1.0	<1.0	NA	NA	NA	< 5.0
	Feb-06	< 25	22	9.8	< 1.0	< 1.0 .0	NA	< 1.0	< 1.0	< 1.0	NA	NA	NA	< 5.0
TRG⁴	1.00-00	608	5.0	100	5.0	0.155.00	0.168	8.52	3.64	1.43	0.126		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 Tal

5 - TRG not yet established for this analyte.

TABLE 3

SUMMARY OF DIOXATHION ANALYTICAL RESULTS

Hercules Incorporated

Hattiesburg, MS

February 2006

			Concentrat	ions in µg/L	
Location	Date	Dioxenethion	Dioxathion (cis)	Dioxathion (trans)	Total Dioxathion
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
	Feb-06	< 0.400	< 0.400	< 0.400	< 0.800
MŴ-12	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
	Feb-06	<u>< 0.400</u>	< 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
	Feb-06	60.5	< 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
	Feb-06	< 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
	Feb-06	< 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
	Feb-06	< 0.400	< 0.400	< 0.400	< 0.800
MW-17	Aug-05	2,210	< 0.400	< 0.400	< 0.800
	Nov-05	2,802	< 0.400	< 0.400	< 0.800
	Feb-06	1,436	< 0.400	< 0.400	< 0.800
MW-18	Aug-05	< 0.400	< 0.400	< 0.400	< 0.800
	Nov-05	< 0.400	< 0.400	< 0.400	< 0.800
	Feb-06	7.25	< 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
	Feb-06	< 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 <u>Final Regulations Governing</u> <u>Brownfields Voluntary Cleanup and Redevelopment in Mississippi</u>, MDEQ, March 2002. Concentrations shown in **bold** are above TRGs

4 - No established Target Remediation Goal.

TABLE 4

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SUMMARY OF QA/QC SAMPLE ANALYTICAL RESULTS Hercules Incorporated Hatiiesburg, Mississippi February 2006

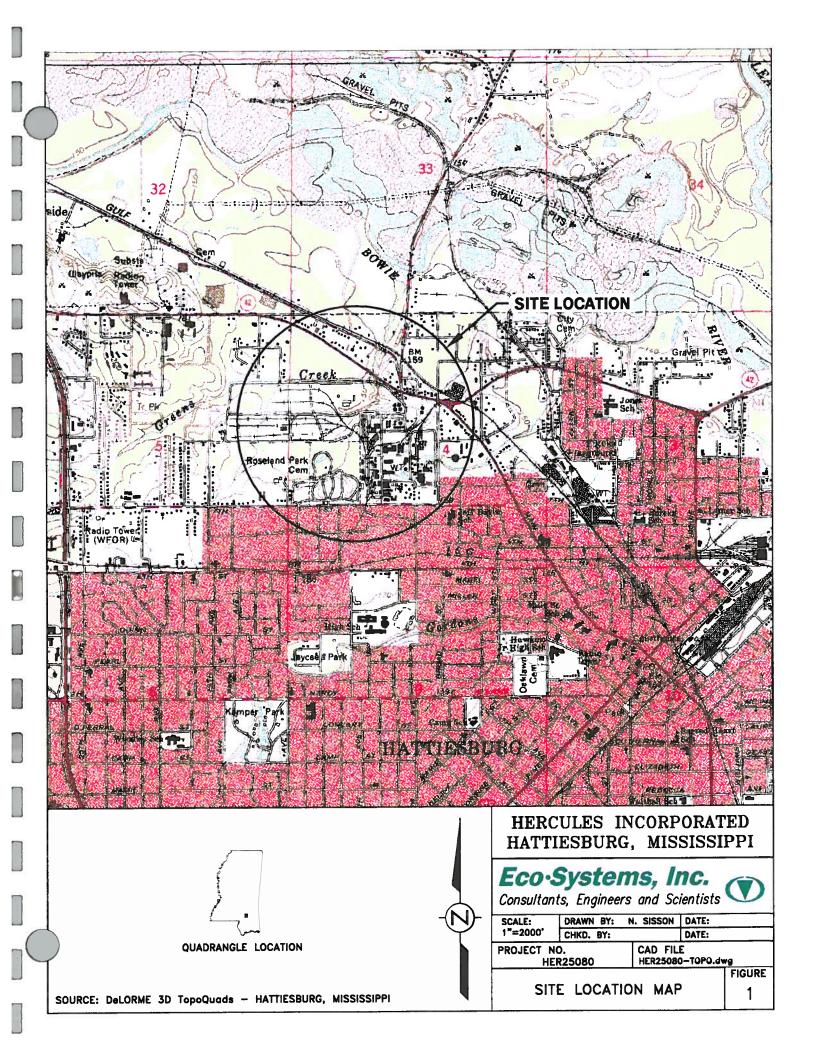
							:J	Concentrations in Ug/L	s in ue/L				
Location	9not92Å	Benzene	Bromomethane	Сягроп Теtгяchloride	Chlorobenzene	Chloroform	Dichloroethene	Ethylbenzene	Methylene Methylene	ənəuloT	noidtenethion	Dioxathion (cis)	Dioxathion (trans)
	< 25	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< ¹ 0.400	< 0.400	< 0.400
CM-03 DUP	< 25	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 0.400	< 0.400	< 0.400
% variation	%0	9‰6	%0	%0	%0	%0	%0	%0	%0	%0	%0	%0	%0
	< 25	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0 ×	< 5.0	< 1.0	19.7	< 0.400	< 0.400
MW-04 DUP	< 25	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	20.7	< 0.400	< 0.400
% variation	%0	%0	0%0	%0	%0	%0	%0	%0	%0	%0	5%	%0	%0
60-MM	< 25	18	< 1.0	< 1.0	< 1.0	< 1.0	4.1	3.8	< 5.0	< 1.0	< 0.400	< 0.400	< 0.400
MW-09 DUP	< 25	16	1.1	1.2	< 1.0	< 1.0	3.9	3.7	< 5.0	< 1.0	< 0.400	< 0.400	< 0.400
% variation		11%	10%	20%	%0	%0	5%	3%	%0	%0	%0	%0	%0
	< 25	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 5.0	< 1.0	< 0.400	< 0.400	< 0.400
	< 25	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 5.0	< 1.0	< 0.400	< 0.400	< 0.400
	47	< 1.0	< 1.0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	< 5.0	< 1.0	< 0.400	< 0.400	< 0.400
	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	N/A ²	N/A	N/A
	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	0 I >	< 5.0	-			

2 - Trip blanks were not analyzed for dioxathion constituents.



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FIGURES







APPENDIX A GROUNDWATER COLLECTION LOGS

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Eco-Systems, Inc.

Groundwater Sample Collection Log

					0	s		(1)	
Name:	Here		terly GW Monitor	ing	•	Boring ID:		MW.17	
Project Number:		HER2:	5080-CC-MS			Site Location:		Hattiesburg, Missi	ssippi
Start Date:	2-3-20	an lu	Einich Doto	2-3-	70010		Denth	-to-Water (DTW) N	Accuraments
Sample Technician:	2-3-20	1.5	Finish Date:	1 5	2000		Depti	Time	DTW (ft-btoc
Purge/Sample Method:			peristaltic pump	NAT E	dives		2-2-2006	1005	18.60
Well Diameter (d):			2"				2-3-206	1250	18.72
Fotal Depth (TD):			0.00				2 5 000	1-50	10.12
Approximate Depth of	Water Column	(h)	0.00						
h= TD - DTW [ft-btoc		(11)							
Calculated Well Volum						-		2	
V = vol in gal; d = wel									12
			WELL DEVEL	OPMENT/PU	JRGING I	DATA			
Date/Time	Cumulative Volume (gal)	рН	Specific Conductivity (mS/cm)	Temperature (°C)	1	urbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
2-3-2006/1247	0,0	5,99	645	21.3	7.	42			spen &
1251	0.25	6,08	402	21.4	- 4	,65			odor!
1 1255	0,50	6,08	445	21,3		. 88			
1300	0.75	408	643	21.3		, 38			j
1200		400							
· · · · · · · · · · · · · · · · · · ·									
				ļ					
		·· -							
	2			1					
		0	a.			22		11	
			1						
v							1		
							<u> </u>		<u> </u>
•••	<u> </u>	I,	L	<u>.</u>	1		<u></u>		
Sample Identification:	1150	- ML	17-0206			GR	OUNDWATE	R SAMPLE CONT	AINERS
	иор		11-0000		-	Date	Time	Sample Container	Preservative
Weather Conditions Du	ring Sampling	clo	man		MAN	2-3-2006		3-40m1 VON	HC
	6p6		SF		- •		1305	1-1LA6	
Comments:	chan		shion ? J	dor	-				
					-				
					-		1		
Sample Technician:	CT	Date:	2-3-2000	4					
		2		-					
Notes:	ft-btoc = feet l	below top o	of casing.				-		
	gal = gallons.	-	6						
	mS/cm = milli	iSiemens p	er centimeter.						
	°C = degrees (Celsius.							
	NTU = Nephe	elometric T	urbidity Units.						
)	mg/L = millig	rams per li	ter.						

Collection Log

Eco-Systems, Inc.

Environmental Engineers and Scientists

Page_of__

Name:	Her	cules Quart	erly GW Monitor	ing		Boring ID:		MW-09			
Project Number:			080-CC-MS			Site Location:		Hattiesburg, Missi	ssippi		
				~ 7 7 7	. /			*************			
	2-3-20			2-3-2				-to-Water (DTW) M			
ample Technician:			Errell / Br	ut con	ves_		Date	Time	DTW (ft-btoc)		
urge/Sample Method:			peristaltic pump				2-2-2006		12.58		
Vell Diameter (d):			2"	÷ 41			2-3-2000	12.18	12.00		
otal Depth (TD):	Water Caluma	(h)	0.00 20.	50							
Approximate Depth of h= TD - DTW [ft-btoc]):	(n)	7.43	3							
Calculated Well Volum V = vol in gal; d = wel	· ·		1.26	>							
			WELL DEVEL	OPMENT/PL	JRGING D	ATA					
Date/Time	Cumulative Volume (gal)	рН	Specific Conductivity (mS/cm)	Temperature (°C)		urbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments		
2-3-2000 / 1210	1.0	5.94	495.1	20.4	7	39			odor		
/ 12,14	0.25	5,94	511.0	20.5		.67					
17	0.50	6.00	553,0	20.5		.63		6			
/ 12.18		5.88	461.0	20.5		.49					
/ 1222	0.75 1.N	5,98		20, 3		.65			· · · · · · · · · · · · · · · · ·		
11200	1.00	5,70	668.0	20,4		.65					
<u>.</u>		ļ				3					
	l	<u> </u>		1	2	<u> </u>		<i>8</i> 8			
Sample Identification:	HER	- MHO	7-0206		-	GF		R SAMPLE CONT			
	HER-					Date	Time	Sample Container	Preservative		
Weather Conditions D	uring Sampling	<u>د</u> د	londy		MW9	2-3-2004	1230	3-40 1 10A	Hel		
			0°F		507	11		1-12AG	Hel		
Comments:	ih	micol	oder		FD3	· · ·		3-40-110A	69		
			· · · ·		-	· · ·		1-1LAG			
Sample Technician:	দ	Date:	2-3-200	6							
Notes:	ft-btoc = feet	below top	of casing.						······································		
	gal = gallons.	-	č								
	mS/cm = mill		er centimeter.								
	°C = degrees	-									
	-		urbidity Units.								
	mg/L = millig		•								

mV = millivolts.

Eco-Systems, Inc.

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Environmental Engineers and Scientists

Groundwater Sample **Collection Log**

ct Name:	Her		terly GW Monitor	ing	0	Boring ID: Site Location:		MW - 02 Hattiesburg, Miss	issippi
Start Date:	2-2-200	6	Finish Date:	2-2-2	006	-	Dept	h-to-Water (DTW) N	Aeasurements
Sample Technician:		ms T	Evrell / Bre	nt Eam	18		Date	Time	DTW (ft-btoc)
Purge/Sample Method:			peristaltic pump				2-2-200	9:38	4.25
Well Diameter (d):		_	2"				11	/3://	4.51
Total Depth (TD):			0.00				15	13:15	4.51
Approximate Depth of (h= TD - DTW [ft-btoo		(h)					ر د د	13:24	4.51
Calculated Well Volum (V = vol in gal; d = well	ne (V=6hd²)								
			WELL DEVEL	OPMENT/PU	RGING D	DATA		X	
Date/Time	Cumulative Volume (gal)	рН	Specific Conductivity (m8/cm)	Temperature (°C)		urbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments
2-2-2006/1310	0.0	5,26	94.6	18.9	7	.86	n		
13/5	0.25	540	88.8	18.3	(3				
1320	0.50	5.48	92.6	18.5		.3			
/324	0.75	5.51	95.9	18.5			9		
1331	1.00	5.56	95.C	18.2		c			
	1100	5.50	13.0	18.6			1 13 7		
3.									
					1.1				
						0			
L. <u></u>		2		<u> </u>		<u> </u>			
Sample Identification:	HER	- MWO	2-0206			GRC	UNDWATE	R SAMPLE CONT	AINERS
	•					Date	Time	Sample Container	Preservative
Weather Conditions Du	iring Sampling	t	londy		MH02	2-2-2000	1335	3-4and Val	Her
		60	°F			× .	1335	1-1LAG	
Comments:									
							36		
	-						1		
Sample Technician:	_CT	Date:	2-2-2004		-				

ft-btoc = feet below top of casing. Notes: gal = gallons. mS/cm = milliSiemens per centimeter.

°C = degrees Celsius.

NTU = Nephelometric Turbidity Units.

mg/L = milligrams per liter.

mV = millivolts.

l	GRU	UNDWAIE	R SAMPLE CONT	AINERS
	Date	Time	Sample Container	Preservative
?[2-2-2000	1335	3-40-1 VOA	Hei
	× -	1335	1-1LAG	
	-	ж		
		1		_
ſ				
ſ	3 			
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Eco-Systems, Inc.

Environmental Engineers and Scientists

𝑁 Groundwater Sample

Collection Log

-				-	0				
Name:	Hero	cules Ouart	erly GW Monitori	ng		Boring ID:	}	112-03	
reject Number:			080-CC-MS		-	Site Location:		Hattiesburg, Missis	sippi
					•				
tart Date:			Finish Date:				Depth	-to-Water (DTW) M	easurements
Sample Technician:	C	wis Te	melli /Bre	int Eam	<i>cs</i>		Date	Time	DTW (ft-btoc)
Purge/Sample Method:			peristaltic pump				2.2.200	04:35	7.42
Well Diameter (d):			2"					12:30	6,62
Total Depth (TD):			0.00					12:36	6.61
Approximate Depth of	Water Column	(h)							
(h= TD - DTW [ft-bto									
Calculated Well Volur	ne (V=6hd ²)							×	
V = vol in gal; d = we	ell diam. in ft):								
			WELL DEVEL	OPMENT/PI		ΑΤΑ			
	1		Specific		Γ		Dissolved	Oxidation/Reduction	
Date/Time	Cumulative	pH	Conductivity	Temperature		urbidity	Oxygen	Potential	Comments
Dure time	Volume (gal)	,	(mS/cm)	(°C)		NTU)	(mg/l)	(mV)	_
2-2-06/1225	0.0	6.30	84,8	20.5	4	.36	12		<u></u>
	0.25	5.00	82.7	18.5	1	40			
/1229	0.50					. 74			
12.35		5,06	81,0	1 <u>B.0</u>					
1240	0.75	5.00	82.2	18.0	<u> </u>	161			
						·			
			×						
							-		
	×								
	1	<u> </u>							
, <u></u> , .	-						+		
		<u> </u>		<u> </u>					
				ļ					
				8					
		. ~	- 1						
Sample Identification:	AEK-	MN05-	0206 (M	<u>15/MSD</u>	<u>/</u>			R SAMPLE CONT	AINERS Preservative
					- And al	Date	Time	Sample Container	
Weather Conditions I	During Sampling	<u>s_ do</u>	udy		- MNS/19/10	2-2-2006	1245	9-40-1 VOA	Hei
		^	5°F		_		+	3-16A6	
Comments:	·				_				
					-				
		-		,				<u> </u>	
Sample Technician:		Date:	02-02-200	Ŷ					
			. .						
Notes:	ft-btoc = feet	-	of casing.						
	gal = gallons.					L		<u> </u>	
		-	er centimeter.						
	°C = degrees								
\frown			urbidity Units.						
	mg/L = milli		iter.						
	mV = millivo	oits.							

👁 Groundwater Sample Environmental Engineers and Scientists **Collection** Log

Eco-Systems, Inc.

Name:	Herc		erly GW Monitori 080-CC-MS	ng		Boring ID: Site Location:	Mu - 04 Hattiesburg, Mississippi			
Start Date: Sample Technician: Purge/Sample Method: Well Diameter (d): Total Depth (TD): Approximate Depth of V (h= TD - DTW [ft-btoc] Calculated Well Volume	Water Column	Chros.	Finish Date: Terren / B peristaltic pump 2" 0.00	2-2-2 rent 22	0060 W=3		Depth Date 2-2-2.444	-to-Water (DTW) M Time 0955 /Y!53 15:02	easurements DTW (ft-btoc) 11, 20 /(.3/ //.32	
(V = vol in gal; d = well										
Date/Time	Cumulative Volume (gal)	pН	WELL DEVEL Specific Conductivity	Temperature (°C)	Т	OATA Turbidity (NTU)	Dissolved Oxygen (mg/l)	Oxidation/Reduction Potential (mV)	Comments	
		CIG	(mS/cm)45/	m 21.5		23	(ing/i)	14	Odorí	
2-7-2006 1450 1454	0.0	5.69 5.82	260.1	21.5	Z.		2			
1457	0.50	5,86	257.9 256.9	21.7 21.7		67				
1505	1.00	5.88	264.8	21.7	į .	84				
					÷.,					
	ile.	2 . M.	104 - 0206			G	ROUNDWAT	ER SAMPLE CON	AINERS	
Sample Identification:	HER	2- FD	2 - 0206		- 	Date	Time	Sample Container	Preservative	
Weather Conditions D	ouring Samplin	g	60°F		Minor	2.2-2004	1510	1-1LAG		
Comments:	ch	micel	_oden		FOZ		1510	3-40m1 VOA 1-14AG	Hel	
Sample Technician:	CT	Date:	2-2-28	Û,	-					
Notes:	ft-btoc = fee gal = gallons	s.	p of casing. s per centimeter.							
\bigcirc	°C = degree	s Celsius. helometric	c Turbidity Units.							

mV = millivolts.

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Eco-Systems, Inc.

Environmental Engineers and Scientists

Groundwater Sample

Collection Log

-			COM		208				
Name:	Hero	ules Ouart	erly GW Monitor	ing		Boring ID:	13	MW-05	
Project Number:			080-CC-MS	<u>.a</u>		Site Location:		Hattiesburg, Missi	ssippi
Start Date:	2-2-2	Locy	Finish Date:	2-2-2	0010		Depth	-to-Water (DTW) M	
Sample Technician:		(Imi	STENER B	rent Ean			Date	Time	DTW (ft-btoc)
Purge/Sample Method:			peristaltic pump				2-2-200	0846	8.75
Well Diameter (d):			2"				·	1559	8.81
Total Depth (TD):			0.00				1	1604	8.84
Approximate Depth of	Water Column	(h)							
(h= TD - DTW [ft-btoc			_			_			<u></u>
Calculated Well Volum	e (V=6hd²)								
(V = vol in gal; d = wel	l diam. in ft):					-	L		
· · · · · · · · · · · · · · · · · · ·		·····	WELL DEVEL	.OPMENT/PL	JRGING I	DATA			
			Specific				Dissolved	Oxidation/Reduction	
Date/Time	Cumulative	pН	Conductivity	Temperature (°C)		`urbidity (NTU)	Oxygen	Potential	Comments
	Volume (gal)	100	(mS/cm)			(NTO)	(mg/l)	(mV)	
2-2-2000 /1553	0,0	6,17	110.5	19.3	1	35		0	Particulate in Sample
1 1557	0,25	6.33	469.6	19.0		89			- 1
1401	0.50	6.33	469.8	19.0		1.3			
			475.0			4,0			
1605	0.75	6.41		19.0					
1409	1.00	6.47	485.0	18.7		3.2			
1615	1.25	6.48	482.4	18.7	1	7.5	r		
						·			
		2							
	×								
		5							
		İ							12
									3
		ł							
	6		I			2.9	<u> </u>		
	Iles	0	oc . 62 m/a			GR		ER SAMPLE CON	TAINERS
Sample Identification:	ны	c - pin	05,0206		-	Date	Time	Sample Container	
Weather Conditions D	uring Sompling		•		MWS	2-2-2006	1620	3-40-1 VOA	HCI
weather Continions D	unig Samping	5 3	sof		_ 1.005	10 20-1	1420	1-12AG	
Comments:	Potenti			feril	-		112		
Comments.	otens		H.O	[M 10]	-				
- efforve	Sense 1010	h in Served	in samples		-				
Sample Technician:	(T	Date:	2-2-20	76					
Sample Teennelan									
Notes:	ft-btoc = feet	below top	of casing.						
	gal = gallons.	-	o -						<u> </u>
			per centimeter.						
	°C = degrees								
	-		Furbidity Units.						
	mg/L = millip								
	mV = millivo								

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Groundwater SampleCollection Log

Eco-Systems, Inc.

Environmental Engineers and Scientists

Name:	Hero		erly GW Monitori	ng		Boring ID:		Hattiesburg, Missi	
Project Number:		HER25	5080-CC-MS			Site Location:		Hamesourg, Missi	ssippi
Start Data	7 2 70		Finish Date:	7-2-7	201-2		Dent	n-to-Water (DTW) N	
Start Date: Sample Technician:	2-3-20		Finish Date.	1 5 Q			Date	Time	DTW (ft-btoc)
Sample Technician:		Aris	Terrezi Br	ent can	*		2.2.2eite	0858	8.84
Purge/Sample Method:			peristaltic pump				2-3-2000	0815	9.27
Well Diameter (d):			2"					0824	9.11
Total Depth (TD):			0.00				· 、、	0009	
Approximate Depth of		(h)							
(h= TD - DTW [ft-btoo	-								
Calculated Well Volum									
(V = vol in gal; d = well	il diam.in ft):								
		· · ·	WELL DEVEL	OPMENT/PL	JRGING D	ΑΤΑ	· · · · ·		
			Specific				Dissolved	Oxidation/Reduction	
Date/Time	Cumulative	pН	Conductivity	Temperature		urbidity	Oxygen	Potential	Comments
	Volume (gal)	F = -	(mS/cm)	(°C)		(NTU)	(mg/l)	(mV)	
2-3-2006/17810	0.0	1 27 6	Et+ 175.7	17.5	3.	63	2		
					-				
0813	0,25	5.76	181.3	18.		.29			
0818	0.50	5,84	178.0	17.8		31			
0822	0.75	5.82	178.3	12,7	3	. 62			
0827	1.00	5.84	178.1	17.9		51			
	1.00	0.01	110.1			<u> </u>			
							<u> </u>		
	<u> </u>						<u> </u>		
				с II					
	1		·		1				
5.		<u></u>				·····			
							<u> </u>	<u></u>	
							L		
		=							
	1	1	1 <u> </u>		dear-	94.) -			.59
Sample Identification:	lice	-MILA	6-0206			GR	JUNDWATI	ER SAMPLE CONT	AINERS
Sample recitineation.					-	Date	Time	Sample Container	Preservative
Weather Conditions D	uring Sempling		c 0. 1		MHOL	62-03-2002	0830	3-40~1 VOR	HEI
weather Conditions D	unig sanping	s	55°F			00-3 2000	0830	1 - 1LAG	
			50 F		-		0000	1- Tunu	
Comments:					-		<u> </u>		
					-			┼─────	
	•			~					· · · · · · · · · · · · · · · · · · ·
Sample Technician:	<u> </u>	Date:	2-3-200	L.					<u> </u>
									ļ
Notes:	ft-btoc = feet	-	of casing.			l	ļ	 	
	gal = gallons.					L		<u> </u>	l
	mS/cm = mill	liSiemens p	per centimeter.						
	$^{\circ}C = degrees$	-							
\sim	-		Furbidity Units.						
	mg/L = millig		-						
	mV = millivo								

Eco-Systems, Inc. Environmental Engineers and Scientists

Groundwater SampleCollection Log

			Com					
Name:	Here	ules Quarte	erly GW Monitori	ng	Boring ID:		MN07	
roject Number:	<u>nerc</u>		080-CC-MS	<u> </u>	Site Location:		Hattiesburg, Missis	sippi
		110100						
art Date:	7.2.	2004	Finish Date:	2.3-2	locia	Depth	-to-Water (DTW) M	leasurements
ample Technician:		hris Ic		ent Ear		Date	Time	DTW (ft-btoc
urge/Sample Method:			peristaltic pump			2-2-2000	1009	14.15
/ell Diameter (d):			2"			2-3-200	0846	14.03
otal Depth (TD):			0.00				0851	14.03
approximate Depth of	Water Column	(h)		·				
h= TD - DTW [ft-btoc		()				-		
Calculated Well Volum								
V = vol in gal; d = wel								
					IRGING DATA			
				I I	JKOINO DATA	Dissolved	Oxidation/Reduction	
Date/Time	Cumulative Volume (gal)	pН	Specific Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	Oxygen (mg/l)	Potential (mV)	Comments
272		CUA		19.9	7.28			
2-3-2006 0845	0.0	5.49	122.8	20,4	14,6			
0850	0.75	5.28	123,8					
0854	0.50	5.15	127.0	20.2	13.3	+		
0858	0.75	5.18	124.6	20.2	10.35			
6900	1.00	518	124.1	20.3	8.16	· · · · · · · · · · · · · · · · · · ·		
					8			
	1							
· · · · · · · · · · · · · · · · · · ·								
· · · · · · · · · · · · · · · · · · ·								
	_	+			2			
				_ <u></u>				
					1		<u></u>	
	400	11.100	in intel				ER SAMPLE CON	TAINERS
Sample Identification	HEK-	mwo /.	. 0206 (MS/	<u>му)</u>	- Date	Time	Sample Container	
			11 0 1.		- MAGOZ 2 3-2006		9-40~1 VOA	HCI
Weather Conditions I	During Samplin	g	athy donly		- /MSA49)	0905	3-146	
	<u> </u>		10°7					
Comments:					-			
	. <u> </u>				-			
Sample Technician:	P.	Date:	2-3-20	do				ļ
sample recimician:	_4_	Date.		24				<u> </u>
Notes:	ft-btoc = fee gal = gallons	-	o of casing.					
			per centimeter.		L			
	mS/cm = mi $^{\circ}C = degrees$		per centimeter.					
	-		Turbidity Units.					
\frown	mg/L = mill							
	mg/L = million mV = million	÷ .						
	$m \mathbf{v} - minv$	0115.				18		

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Eco-Systems, Inc.

Environmental Engineers and Scientists

Groundwater Sample

Collection Log

\frown						7			
t Name:	He	cules Quar	terly GW Monitor	ring		Boring ID:		MW-10	
hoject Number:		HER2	5080-CC-MS		-	Site Location:		Hattiesburg, Miss	issippi
Start Date:			Finish Date:			_	Dept	h-to-Water (DTW)	Measurements
Sample Technician:	C	hris T	errell / Bro	nt Ean	<u>85</u>	-	Date	Time	DTW (ft-btoc)
Purge/Sample Method			peristaltic pump			-	2-2-2000	09:46	11.27
Well Diameter (d):			2"			-		14:16	11.48
Total Depth (TD):			0.00					14:24	11.56
Approximate Depth of		(h)			8	_			
(h= TD - DTW [ft-bto						_			
Calculated Well Volur								12	
(V = vol in gal; d = we	ll diam. in ft):					_			
			WELL DEVEL	OPMENT/PI	URGING	DATA			
	Cumulative		Specific				Dissolved	Oxidation/Reduction	
Date/Time	Volume (gal)	pH	Conductivity	Temperature (°C)		Furbidity	Oxygen	Potential	Comments
t	voidine (gai)		(mS/cm)	(0)		(NTU)	(mg/l)	(mV)	
2-2-2006 #: 15	0.0	5.65	34.2	19:3	5	34.4			
~ 14:18	0.25	5.50	38.1	19.0	<u> </u>	4.5			· · · · · · · · · · · · · · · · · · ·
174:22		5.33	38,8	18.9		5.9			
14:24	0.75	5.16	38,2	19.0					
111124	1.00					6.1	<u> </u>		
1. 14:30	1.00	5.18	38.7	18,9	- 4	D.			
				<u> </u>				>	
					_	_			
							127		
	-								
				÷.					
Sample Identification:	U=P	MIL	0-0206				<u>.</u>		
Sumple reentineation.	100	1.1.4.1	0-0200			Date	Time	R SAMPLE CONT	
Weather Conditions Du	ring Sampling	clos	1.		MAN	2-2-2006		Sample Container	Preservative
	goapiiiig	<u> </u>			parto	2-2-2006	1435	3-40m1 VOA	HCI
Comments:			e**			62000	1435	1-1LAG	
	<u></u>								
						·			
Sample Technician:	CT	Date:	2-2-2006	,					
•								150A	
Notes:	ft-btoc = feet b	elow top o	f casing.						
	gal = gallons.		B.				·		
	mS/cm = milli	Siemens pe	r centimeter						- <u>.</u>
	°C = degrees C								
	NTU = Nephe		urbidity Units.						
	mg/L = milligr								
	mV = millivolt								

Groundwater SampleCollection Log

Eco-Systems, Inc.

Environmental Engineers and Scientists

	Environmental Engineer	rs ana scientis	IS	Colle	ection	Log				
\bigcup		17			-	r	Boring ID:	r	1~11	
	t Name:	Herc		erly GW Monitori 080-CC-MS	ng		Site Location:		Hattiesburg, Missis	sippi
	t Number:			080-00-000						
\Box	Start Date:	2-7-20		Finish Date:	2-2-2	000		Depth	-to-Water (DTW) M	easurements
	Sample Technician:	<u>k</u>	11 - 2	Jerrett /B	NI PA	425		Date	Time	DTW (ft-btoc)
	Purge/Sample Method:		Chris	peristaltic pump	<u> </u>			222000	1000	8.23
L	Well Diameter (d):			2"					1527	8.44
	Total Depth (TD):		···	0.00	····					
	Approximate Depth of	Water Column	(h)			·				
	(h= TD - DTW [ft-btoc		()							
	Calculated Well Volum									
	(V = vol in gal; d = wel									
U	· · · · · · · · · · · · · · · · · · ·				ODMENT/011	PCDIC D	Δ.Τ.Δ			
		<u> </u>		WELL DEVEL	OPMEN I/PU	RGING D		Dissolved	Oxidation/Reduction	
	Date/Time	Cumulative	pН	Specific Conductivity	Temperature		urbidity	Oxygen	Potential	Comments
	Date/Time	Volume (gal)	рп	(mS/cm)	(°C)	(NTU)	(mg/l)	(mV)	
-	2224/1721	0.0	5.89	174.3	18.5	28	.9		<u>ې</u>	
	2-2-2000/1521	····			18.2		1.5			
	15:26	0.25	5,90	173,6	18.1		2,0			· ·
	15:28	0.50	5,86	174.8			- <u>, v</u> '- Y			
	15:32	0.75	5.82	174.0	18.0	<u> </u>	<u> </u>			
									++	
			ļ							
			l <u> </u>					ļ		
Ú										
0							<u> </u>			
0										
m	· · · · · · · · · · · · · · · · · · ·									
	0									
Q										
		1	1	<u> </u>	10					a
	Sample Identification:	14-1	A. Mist	- 0206			GR	OUNDWAT	ER SAMPLE CONT	AINERS
	Sample Identification.			- 0200		-	Date	Time	Sample Container	Preservative
	Weather Conditions D	uring Samplin	_σ ζ	Swing		MAI	2-2-2000	1540	3-40ml VOA	HCI
		a9 amirpini	<u> </u>	SF			in	1540	1-1LAG	
U	Comments:					-				
						_				
						-	·			
	Sample Technician:	G	Date:	2-2-200	4					
	·									
	Notes:	ft-btoc = feet	t below top	of casing.						·
		gal = gallons					L			L
én				per centimeter.						
		°C = degrees								
U	\sim			Turbidity Units.						
		mg/L = milli		liter.						
		mV = milliv	olts.							

𝑁 Groundwater Sample

Eco-Systems, Inc.

	Environmental Engine	ers and Scientis	sts.	Coll	ection	Log	-			
	Name:	Her	cules Quart	terly GW Monitor	ing		Boring ID:		MW.12	
"	ct Number:			5080-CC-MS			Site Location:		Hattiesburg, Missi	ssippi
			·····							
	Start Date:	2-3-20	ະພຸ	Finish Date:	2-3-	2006	_	Dept	-to-Water (DTW) N	Aeasurements
	Sample Technician:	Ch	n's Terra	11 Brent	Eznes		-	Date	Time	DTW (ft-btoc)
	Purge/Sample Method:			peristaltic pump			_	2-2-2000	0830	8,10
	Well Diameter (d):			2"			-	2-3-2000	0737	8.47
	Total Depth (TD):			0.00			-	2-3-200	0742	8.60
	Approximate Depth of		(h)					2-3-206	0750	8.82
Ļ	(h='TD - DTW [ft-bto			- · · · · ·			-			
	Calculated Well Volum							ļ		
	(V = vol in gal; d = we	ll diam. in ft):					_			
		······		WELL DEVEL	OPMENT/PU	JRGING I	DATA	Τ		
	Date/Time	Cumulative		Specific	Temperature	L I	urbidity	Dissolved	Oxidation/Reduction Potential	Comments
	Date/Time	Volume (gal)	pН	Conductivity (m8/cm)ریخ	(°C)		(NTU)	Oxygen (mg/l)	(mV)	Comments
	-2.2.1		C. ()					(ing/i)		
	2-3-2014 0135	0.0	5.65	80,4	15.5		<u>41</u>	X.		
Ĵ	0739	0,25	5.69	77,2	15.7		1.7			
	0743	0,50	5.62	76.8	15.8		4.7			
	0747	0,75	5.68	76.4	15.7		6.6			
	0751	1,00	5.47	76.7	15.7		1.5			
	0755	1.25	5.68	76.6	15,8	29			2	
_				· ·····						
	-						· · · · · · · · · · · · · · · · · · ·	1		
1								1		
	6			· · · · · ·						56 m
						2		5		
	0	ine a	7- 14.	110 10 4						
	Sample Identification:		RS3 -	112-0206			Date	Time	R SAMPLE CONT Sample Container	Preservative
'n	Weather Conditions D	HBK -					2-3-2004	0800		HC
1	Weather Conditions D	unig Samping		ny) ⁰ F		Plan	17-2006	600	3-40ml VOA 1- 1 LAG	
	Comments:		70	· +		R53		0745	3-40ml V04	uci
	000000					. 10-22		0745	1-12AG	<u> </u>
				<u> </u>					1 (CAL)	
	Sample Technician:	A	Date:	2.3-2000	0					
			•		-					
	Notes:	ft-btoc = feet	below top o	of casing.						
		gal = gallons.					2			
h		mS/cm = mill	•	er centimeter.						
		°C = degrees								
۰.,	\frown	•		urbidity Units.						
(mg/L = millig	-	ter.						
ļ		mV = millivo	Its.							

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Eco-Systems, Inc.

Environmental Engineers and Scientists

Groundwater SampleStsCollection Log

t Name:	Her		erly GW Monitori 5080-CC-MS	ing		Boring ID: Site Location:		MW-13 Hattiesburg, Missi	ssippi
				2 2 2					
Start Date:	2-3.24		Finish Date:	2-3-20	200			-to-Water (DTW) N	
Sample Technician:	C	m3 Je	mest / Bren	t Eanes			Date	Time	DTW (ft-btoc)
Purge/Sample Method:			peristalfic pump	<u></u>			2.2.2006	0955	9.53
Well Diameter (d):			2"	<u></u>			2-3-2046	j1 32	4.33
'Total Depth (TD):		24	• 0.00 Ø,	50			2-3-300	1141	9.32
Approximate Depth of		(h)	0.0	า					·····
(h=TD - DTW [ft-btoc			8,9	1					
Calculated Well Volum			100						
(V = vol in gal; d = well	ll diam. in ft):	• • • •	1.52	•					
		-	WELL DEVEL	OPMENT/PL	JRGING D	ΑΤΑ			
	Cumulative		Specific			unhidita.	Dissolved	Oxidation/Reduction	
Date/Time	Volume (gal)	pН	Conductivity	Temperature (°C)		urbidity (NTU)	Oxygen	Potential	Comments
	volulie (gal)		EmS/cm) and	(0)		(1410)	(mg/l)	(mV)	
2-3-2001 / 113U	0.0	5.45	201,3	22.1	7				
1 / 1134	0.25	5,43	199.2	22.3		.90			-
1,1138	0.50	5,42					+		
			198.5	22.2		12			
1,1142	975	5.60	207.8	22.4		.91			
11,46	1,00	5.50	217.0	223	/	.12			
/ N 5U	1,25	5,57	230,4	22.4	1.	31			
1 1154	1.50	5.61	239.1	224	,	.47			
1 1158	475	5.70	260,8	22.2		19	1		
	<u> </u>	5.10	and	0-12			+		
					·				
	12			<u> </u>					
	itro	54117	4706-				OUDIDWATE		ADIEDS
Sample Identification:	FIBR	- MINI	5-0206				- T	R SAMPLE CONT Sample Container	Preservative
			····		54.117	Date 2-3-2006	Time		HCI
Weather Conditions Du	uring Sampling		udy		17147		1205	3-40~ (VOA	FICT
		<u> </u>	5°F		-	<u>``</u>	1205	1-12AG	
Comments:	·····								
					-				
				,					
Sample Technician:		Date:	2-3-2004	-					
Notes:	ft-btoc = feet	h-1	- fi					19. 	
HULES.	gal = gallons.	-	or casing.						
			or continuetor			<u></u>			
	mS/cm = mill	-	er centimeter.						
	°C = degrees								
C M	•		urbidity Units.						
	mg/L = millig	-	ter.						
	mV = millivo	ITS.							