



October 9, 2008

Hercules Incorporated
Research Center
500 Hercules Road
Wilmington, DE 19808-1599
(302) 995-3000
www.herc.com

Mr. Jerry B. Banks – PE. BCEE – Chief
MDEQ-GARD
Office of Pollution Control
P.O. Box 2261
Jackson, MS 39225-2261



Dear Mr. Banks:

This letter is a follow up response to your letter of June 9, 2008 in which you asked a series of questions related to our planned closure of our impounding basin and equalization tank. Hercules provided MDEQ a response to all the questions on July 7 2008.

To make our responses easier to follow, I have reprinted your questions preceding each response.

MDEQ Question 4. *An analyses of sludge contained in the proposed lagoons. The analyses of a minimum of 2 (two) composite sludge samples from each of the lagoons, depending on the depth and potential layering of the sludges in the lagoons, should include pH, percent solids, sulfide, cyanide, including TCLP analyses for metals, volatiles, semi-volatiles, herbicides, and pesticides. Each composite sample should be comprised of 5 representative sludge samples collected from 5 different areas of the proposed lagoon. In order to process this matter effectively and efficiently the MDEQ recommends that you use an independent third party laboratory for sampling and analysis of these samples.*

Hercules Follow-up Response

Composite samples consisting of five aliquots were collected from Et-10 (SS-3) and two samples were taken from the Impounding Basin (IB). The IB samples were taken from the east (SS-2) and west areas (SS-1) of the basin which are separated by a baffle. The results of the samples SS-2 and SS-3 demonstrated that these sludges were non-hazardous and these waste streams were profiled and accepted at the Pine Belt Regional Landfill. However, the results of SS-1 indicated that the some of the sludges in this part of the Basin may be characteristic Hazardous Waste for Benzene. Hercules then proceeded to reanalyze and resample this section. The results of this analyses are described in the attached report.

Based on the analysis in this report Hercules proposed to remove and dispose of the Hazardous Waste sludges in this section in the following manner:

The western area will be isolated by using sheet pile or other suitable means. Upon removal of the contents of the western portion of the basin, Hercules proposes the collection of confirmatory soil samples. Hercules proposes that the samples shall be collected from the earthen walls and floor. Based on the earthen basin's dimensions, 70' x 65' x 8', Hercules proposes the collection of nine (9) samples from the three (3) walls, three (3) samples per wall, and nine (9) samples from the floor. Sample collection will be in accordance with the protocols outlined by the US EPA Region IV and the Mississippi Department of Environmental Quality. Samples will be collected via the use of Terra Core™ soil samplers, in accordance with USEPA SW-846 Method 5035. The eighteen (18) samples will be submitted to an NELAC approved laboratory for analysis for Benzene by EPA method 8021. If soil sample concentrations are below the MDRQ TRG for Industrial Clean up for benzene, 1.36 ppm, all over excavation activities shall cease. In the event that sample results are found to be greater than 1.36 ppm, over excavation and sampling activities shall recommence.

MDEQ Question 6. *The anticipated time for completion of the proposed closure;*

Hercules Follow-Up Response

We have selected a contractor(s) and plan to start the work in the fourth quarter. The work is planned for completion in 2008.

MDEQ Question 10. *A plan to effectively manage odor during the sludge removal process must be developed. Also, notification of the Mayor and other stakeholders of the proposed closure project should be done well in advance of the actual closure because of all the recent problems in Hattiesburg with odor complaints. Also, we suggest that you include references to the removal of wastewater for treatment and disposal in the letter of notification, especially*

Hercules Follow-up Response

We required bidders in the contractor bid process for the sludge removal to include a plan for how they will manage odor control. Attached is the Clean Harbors plan to address odors during the sludge removal and loading process.

As indicated in the two letters we previously sent MDEQ, we have implemented, or will implement prior to taking the units out of service, all the suggestions that you have provided.

Hercules looks forward to meeting or conducting a conference call with the MDEQ to answer any questions your or your staff may have and to resolve any concerns at your earliest convenience, as Hercules is planning to begin its work promptly. If possible, we would like to set up a conference call on Tuesday, October 14, 2008.

Please feel free to contact me at (414) 461-4000, ext. 157, Tim Hassett at (302) 995-3456 or Charlie Jordan at (601) 584-3360 to set up the meeting, or if you have any questions we may answer by phone.

Sincerely,


for Rod Bolton
Regional Manager

RB/ijc

Enclosures:

1. Clean Harbors Odor Management Plan
2. Sludge Sampling Analyses Report

cc: R. L. Williams/Hercules
T. D. Hassett/Hercules
C. Jordan/Hercules-Hattiesburg

Clean Harbors Odor Management Plan



**Hercules Corp.
Hattiesburg, Mississippi**

Odor Management & Air Sampling Plan

The following paragraphs outline Clean Harbors' proposed Odor Management and Air Sampling Plan for the Hercules Hattiesburg facility, located in Hattiesburg, Mississippi.

Please note that in addition to the measures described below, the physical and chemical nature of the solidification agent, in this case fly ash, is composed primarily of oxides comprised of silicon, magnesium, and calcium and associated alkalies, which provides odor suppression similar to lime.

Odor Management

Clean Harbors proposes the use of a foam based odor agent for the duration of the project to mask and/or eliminate potential odors encountered from the sludge during dewatering, excavation, solidification and transportation and disposal of sludge. Odor Management activities will be in effect during any period when odors are present or material is being moved.

AC-645 Long Duration Foam is a patented product that produces a thick, long-lasting, viscous foam barrier for immediate control of dust, odors and volatile organic compounds (VOCs). AC-645 is designed for use with Rusmar Pneumatic Foam Units.

AC-645 foam is recognized by the Environmental Protection Agency and the U.S. Army Corps of Engineers as that which provides superior emission control for a period up to 17 hours. AC-645 has been specified for use at Superfund and other hazardous waste sites across the United States and Canada.

The remediation of hazardous waste sites often includes excavation of soil contaminated with odorous compounds. AC-645 has little or no odor itself. It forms a barrier between contaminants and the atmosphere and can be applied during active excavation to provide an immediate and effective barrier to minimize or eliminate odors. It is completely biodegradable and poses no threat to workers, neighboring residents or groundwater. Furthermore, AC-645 will not add to soil volume or treatment costs.

AC-645 can also be applied on top of trucks for emission control during transport of materials such as contaminated soils or sewage sludge. Ammonia tests performed on trucks containing sewage sludge resulted in a drop of concentration levels from 170 ppm prior to foaming down, to 6 ppm following the application of AC-645.



Air Sampling


Clean Harbors proposes using Draeger™ tubes for the daily collection (at a minimum), of air samples. Per the specifications outlined in the RFP, Clean Harbors will utilize 9 tubes for the sampling of sulfide and nitrogen compounds, benzene, toluene, epichlorohydrin, ethylene, ammonia, mercaptans and phenols. Air sampling activities will be in effect during the entire project. Sample results will be logged and reported daily to the Hercules on site Engineer.

In addition, Clean Harbors proposes using a Photo Ionization Device (PID) for the collection of air samples from the perimeter of the field activities zone on an hourly basis, and logging the results for recordkeeping purposes. In the event that an air sampling indicates excessive levels, Clean Harbors will notify Hercules' on site supervisor and request direction for the collection of additional air samples via Draeger™ tubes and propose alternative actions to mitigate problematic odors, such as additional foam control, oxidative or other chemical treatment (hypochlorite addition) as well.

Sludge Sampling Analyses Report

MEMORANDUM

To: Timothy Hassett
Hercules, Incorporated

From: Charles Coney 
Eco-Systems, Inc.

Date: October 3, 2008

Re: Sludge Sample Analyses
Hattiesburg, Mississippi

At your request, Eco-Systems has conducted sampling of sludges from the wastewater impoundment and the wastewater holding tank and submitted those samples for analysis. The purpose of the sludge sampling effort was to characterize the sludge for disposal as part of the forthcoming sludge removal project. In general, the sampling was conducted and the samples were analyzed according to information supplied by Hercules. Initial sampling was conducted on July 1, 2008, and re-sampling of one area was conducted on July 30, 2008 and September 4, 2008. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) of Savannah, Georgia for analysis. A split of the sample collected on July 30, 2008 was also submitted to Bonner Analytical and Testing Company (BATCO).

Background

Hercules began conducting improvements to the Hattiesburg facility in 2006. These improvements include removing unused facilities from the site. Since facility operations no longer require on-site wastewater treatment, wastewater at the site is being discharged, under permit, to the municipal wastewater treatment system. Since the existing wastewater impoundment basin and wastewater holding tank are no longer necessary, Hercules has contracted for the removal and disposal of the sludges contained in the two structures. Following removal of the sludges, the holding tank and structures associated with the impoundment basin will be demolished and removed. The remaining excavations will be backfilled, graded, and landscaped. Prior to backfill of the impoundment, confirmation sampling will be conducted to ensure that soil containing concentrations of constituents above regulatory limits has been removed.

Hercules notified the MDEQ of their intent to close the impoundment basin and holding tank in a letter dated April 22, 2008. In response to the notification, the MDEQ requested in a letter dated June 8, 2008 additional information regarding the closure operations including a request for Hercules to characterize the sludge prior to generation. The sludge sampling reported in this memo was conducted in response to the request from the MDEQ.

Historical Sampling and Analysis

Sludge samples from the site have been analyzed on seven other occasions since 1990. Six of these samples were collected from the wastewater treatment basin, and one sample was collected from the sludge disposal pits, which are located in the northwestern portion of the site. The analyses conducted for the seven samples included TCLP VOCs, SVOCs, and metals. Analysis for TCLP pesticides, herbicides, and PCBs, reactivity, corrosivity, and ignitibility was also conducted on five of the seven samples. Concentrations of benzene, 1,1-dichloroethene, chlorobenzene, 2-butanone, chloroform, methyl phenols, cresols, dieldrin, barium, cadmium, chromium, lead, and selenium have been detected in one or more samples at concentrations less than their respective TCLP limits. Other tests for hazardous characteristics (corrosivity, reactivity, and ignitibility) have not indicated that the sludge is hazardous. Historical analytical results are attached.

Samples Collected July 1, 2008

During the initial sampling, three composite samples were collected. Samples SS-1 & SS-2 were collected from the wastewater impoundment, and sample SS-3 was collected from the wastewater holding tank. Samples SS-1 and SS-2 were each composed of 5 aliquots collected from the perimeter of the wastewater impoundment. The aliquots for sample SS-1 were collected from the west end of the impoundment, and the aliquots for SS-2 were collected from the east end of the impoundment. The western end of the wastewater impoundment, which is the influent end of the impoundment, is approximately one quarter of the total area of the impoundment and is separated from the eastern end of the impoundment by a baffle. The baffle slows the flow of wastewater through the impoundment, which forces heavier solid material to precipitate. Consequently, sludge on the west side of the baffle generally has a higher solid content than sludge on the eastern side of the baffle. Much of the sludge on the western side of the baffle is also covered by resinous cap of dried sludge ranging from approximately six inches to one foot in thickness. Aliquot locations for SS-1 and SS-2 are shown on the attached Figure 1.

Sample SS-3 was composed of two aliquots collected from the platform on the western rim of the tank and one aliquot collected from the platform on the eastern rim of the tank.

Each sample aliquot was collected with a decontaminated hand auger. The samples were collected by pushing the hand auger through the upper, relatively solid, surficial sludge and then, to the extent practical, vertically mixing the aliquot location. This was accomplished by pumping the hand auger from the surface to the base of the sludge or the limit of the auger rods, whichever was shallower. After mixing, the aliquot was collected and placed on clean plastic sheeting. Aliquots were composited in the field using stainless steel spoons and placed in laboratory supplied containers. Samples collected on July 1, 2008 were analyzed according to the TCLP for VOCs, SVOCs, Pesticides, PCB, Herbicides, and Metals, and also for reactive cyanide, reactive sulfide, pH (corrosivity) and percent solids.

Analysis for sample SS-1 detected 1.3 mg/L of benzene in the leachate. Per federal regulations, if TCLP benzene concentrations are 0.5 mg/L, or above, the waste is considered hazardous by the characteristic of toxicity. Benzene was detected in sample SS-2 at a concentration of 0.21 mg/L and was not detected in sample SS-3. Chloroform was also detected in the sample collected from SS-1 at a concentration of 0.19 mg/L, which is less than the TCLP limit of 6 mg/L. Other VOCs were not detected in the three samples.

Total methyl phenols, which are SVOCs, were detected in the three sludge samples at concentrations ranging from 0.18 mg/L in sample SS-3 to 0.72 mg/L in sample SS-2. Methyl Phenols are not listed in 40CRF 261.24, therefore the maximum concentration for toxicity characteristic is not available.

Pesticides, PCBs, herbicides, and metals were not detected. PH ranged from 5.59 in sample SS-1 to 6.89 in sample SS-3. Reactive cyanide and sulfide were not detected.

Sample Collected July 30, 2007

At the request of Hercules, Eco-Systems conducted re-sampling of SS-1 to confirm the presence of benzene at concentrations above the TCLP limit in the western end of the wastewater impoundment. Sample SS-1-073008 was composited from five aliquots that were collected in approximately the same locations as the previous sample SS-1-070108. (The last 6 digits of the sample I.D. are the collection date.) Sample SS-1-073008 was submitted to TestAmerica for analysis of VOCs by the TCLP. A split of the sample was also submitted to BATCO for the same analysis.

Analytical results of the sample split submitted to TestAmerica detected benzene at a concentration of 0.44 mg/L. Analytical results of the sample split submitted to BATCO detected benzene at a concentration of 0.586 mg/L. Other VOCs were not detected in either split of sample SS-1-073008.

Samples Collected September 4, 2008

After consideration of previous sludge sample analytical results, a third sampling event was conducted to investigate whether benzene concentrations detected in previous samples collected from the western end of the wastewater impoundment were the result of influence from aliquots collected from a localized area of elevated benzene concentration. During the third sampling event, six samples, SS-5 through SS-10, were collected from discrete locations, which are shown on Figure 1. Samples collected from each of the six locations were mixed vertically, as described for the July 1, 2008 sampling event. The six discrete samples were submitted to TestAmerica for analysis of VOCs by the TCLP.

Benzene concentrations detected in the samples are shown in the Table 1. Benzene concentrations in samples SS-5, SS-6, and SS-8 are above the TCLP limit for benzene.

Benzene concentrations in samples SS-7, SS-9, and SS-10 are below the TCLP limit for benzene. Carbon tetrachloride and chloroform were also detected in sample SS-8 at concentrations less than TCLP limits for those compounds.

TABLE 1
SUMMARY OF TCLP BENZENE ANALYTICAL RESULTS
Samples Collected September 4, 2008

Location	Date Collected	TCLP Benzene (mg/L)
SS-5	9/4/2008	5.5
SS-6	9/4/2008	3.2
SS-7	9/4/2008	0.4
SS-8	9/4/2008	3.2
SS-9	9/4/2008	0.043
SS-10	9/4/2008	0.062
Average Concentration ¹	-	0.626
TCLP Limit		0.5

¹ - Logarithmic mean

Backfill Material

The excavation that remains after sludge removal and demolition of the wastewater impoundment will be backfilled with soils obtained from an onsite source located in the (describe area of site) portion of the site. In order to characterize potential fill materials, a soil sample from the proposed fill excavation area was collected on August 26, 2008 and submitted for analysis of VOCs, SVOCs, pesticides, herbicides, and PCBs. One VOC, tetrachloroethene, was detected at a concentration of 0.017 mg/kg, which is less than the TRG (restricted use) for tetrachloroethene of 18.2 mg/kg. SVOCs, pesticides, herbicides, and PCBs were not detected in the soil sample collected from the proposed fill excavation area.

Conclusions

Historical analytical results for samples collected between 1990 and 2001 do not indicate that wastewater sludge from the site is characteristically hazardous.

Analytical results for the samples collected from the east end of the wastewater impoundment and from the wastewater holding tank (SS-2 and SS-3) were submitted by Hercules to the MDEQ on September 15 & 18, 2008. Based on these analytical results, the MDEQ approved the waste streams represented by SS-2 and SS-3 for disposal in the Pine Belt Regional Landfill. The approval was provided in a letter dated September 19, 2008 from the MDEQ to the landfill. A copy of the letter is attached.

Based on the analytical results of the discrete samples collected from the western end of the wastewater impoundment on September 4, 2008, there would not appear to be a discrete area of the western end of the wastewater impoundment that is the source of the benzene detected in the earlier, composite samples.

The proposed source for backfill material to be used in the wastewater impoundment area appears suitable for use on site.

Recommendations

It is recommended that confirmation samples be collected from the excavation remaining after demolition of the wastewater impoundment. Confirmation soil samples should be collected from the sidewalls and bottom of the excavation and analyzed for benzene. If benzene is detected at concentrations above the applicable TRG in one or more confirmation samples, additional excavation may be necessary. If saturated soils are encountered in the excavation created by demolition of the wastewater impoundment, a sample of the water from the pit should be submitted for analysis in lieu of soil samples from the bottom of the excavation.

Attachments

Attachment A Historical Analytical Results
Attachment B Figure 1
Attachment C Analytical Results - July 1, 2008
Attachment D Analytical Results - July 30, 2008
Attachment E Analytical Results - September 4, 2008
Attachment F Analytical Results - Backfill Material
Attachment G MDEQ Approval Letter

MEMORANDUM

To: Timothy Hassett
Hercules, Incorporated

From: Charles Coney
Eco-Systems, Inc.

Date: September 22, 2008

Re: Sludge Sample Analyses
Hattiesburg, Mississippi

At your request, Eco-Systems has conducted sampling of sludges from the wastewater impoundment and the wastewater holding tank and submitted those samples for analysis. In general, the sampling was conducted and the samples were analyzed according to information supplied by Hercules. Initial sampling was conducted on July 1, 2008, and re-sampling of one area was conducted on July 30, 2008 and September 4, 2008. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) of Savannah, Georgia for analysis. A split of the sample collected on July 30, 2008 was also submitted to Bonner Analytical and Testing Company (BATCO).

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Samples Collected September 4, 2008

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samples collected from the western end of the wastewater impoundment were the result of influence from aliquots collected from a localized area of elevated benzene concentration. During the third sampling event, six samples, SS-5 through SS-10, were collected from discrete locations, which are shown on Figure 1. Samples collected from each of the six locations were mixed vertically, as described for the July 1, 2008 sampling event. The six discrete samples were submitted to TestAmerica for analysis of VOCs by the TCLP.

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SS-7	9/4/2008	0.4
SS-8	9/4/2008	3.2
SS-9	9/4/2008	0.043
SS-10	9/4/2008	0.062
TCLP Limit		0.5

Conclusions

Based on the analytical results of the discrete samples collected on September 4, 2008, there would not appear to be a discrete area of the western end of the wastewater impoundment that is the source of the benzene detected in the earlier, composite samples.



Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
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CERTIFIED MAIL – RETURN RECEIPT REQUESTED
CERTIFIED #: 7005 0390 0000 1703 9301

April 22, 2008

Jan Patton
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385

Dear Ms. Patton:

The purpose of this letter is to outline Hercules' plans to exit both our industrial wastewater impounding basin and five million gallon wastewater equalization tank. As you are aware, the company is working towards completing two years of major downsizing operations, while at the same time, improving the remaining operations at Hattiesburg.

The exiting of these units, as outlined in our October 25, 2005 letter to Ms. Carla Brown, and subsequent discussions, is scheduled for completion in the 3rd quarter of 2008. The work will soon be awarded to the successful remediation contractor bid. The sludge will be removed and properly disposed in an approved subtitle D landfill. Once the sludge has been removed, without disturbing the clay bottom, the impounding basin will be back-filled with dirt.

During the final cleanout, we would anticipate some localized odor as a result of disturbing the sludge upon its removal. Any odor will most likely be a mercaptan or sulfur type odor. We will utilize the latest technology-based techniques, such as the possibility of pH adjustment, to minimize the generation of any odors. We anticipate the removal of approximately 10,000 cubic yards of sludge from both units.

Attached is a draft letter we intend to send to area residents before we actually start any sludge removal. We solicit any suggestions you may have as to the content of this letter, as well as how to best communicate this project to the City and to our neighbors. Our goal, of course, is to allay any fears or concerns that any of our neighbors may have.

In addition, attached are a total of seven different past sampling events of the sludge material. We would like to update this data and believe that it may be best if the update data is generated by the State. We would be happy to reimburse the State for the cost of any analysis.

We would like to discuss the above with you at your earliest convenience. Please contact Mr. Charles Jordan, our Environmental Professional, at 601-545-3360, or myself at 414-461-4000 ext. 157, so we may discuss our path forward, including community communications.

Sincerely,

Rodney S. Bolton
Regional Manager

Jan Patton
Bureau of Pollution Control
April 22, 2008
Page 2

Attachments:

cc: Toby Cook, MDEQ, CMRRR: 7005 0390 0000 1703 9318
Rick Sumrall, MDEQ, CMRRR: 7005 0390 0000 1703 9325
Carla Brown, MDEQ, CMRRR: 7005 0390 0000 1703 9332
Willie McKercher, MDEQ, CMRRR: 7005 0390 0000 1703 9349
Tim Hassett, Hercules Incorporated
Roger Moore, Hercules Incorporated

DRAFT

April 22, 2008

Honorable Mayor, Mr. Johnny Dupree, City of Hattiesburg
Mr. Terry Steed, Executive Director, Emergency Management District
Hercules Hattiesburg CAP members
Area Residents

Dear Neighbor:

The purpose of this letter is to make our community leaders and neighbors aware of current and future planned activities at the Hercules Incorporated Hattiesburg, Mississippi, plant. The company is working towards completing two years of major downsizing operations, while at the same time, improving the operations remaining at Hattiesburg.

This is most evident in the plants physical change with the removal of several past plant operating structures at the facility. The plant is also exiting both its industrial wastewater impounding basin and a five million gallon wastewater equalization tank. This is possible because of the major downsizing of operations that has taken place.

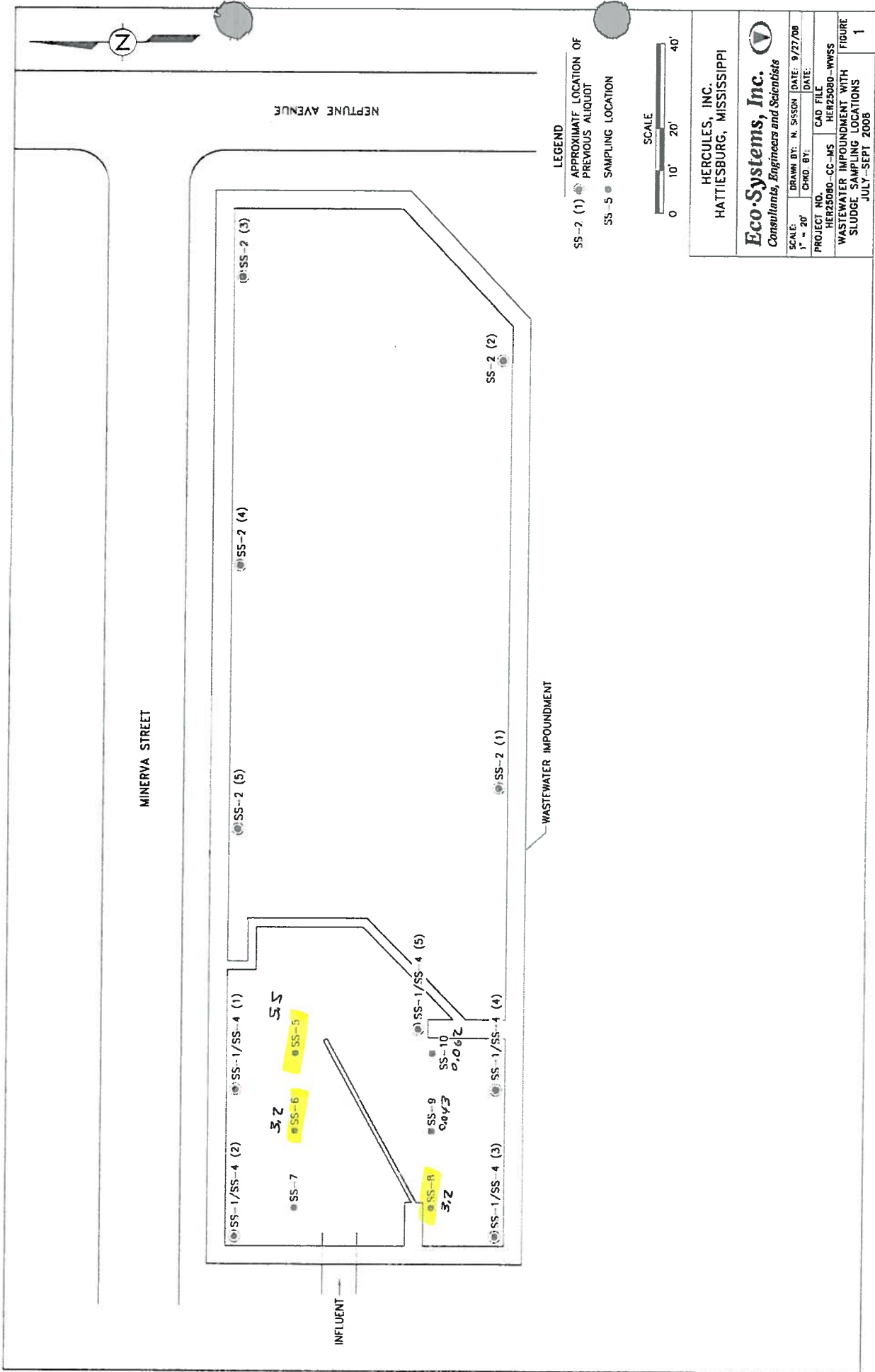
The exiting of both of these wastewater units will involve the cleanout of residual wastewater sludge. This work will be completed in concurrence with the Mississippi Department of Environmental Quality (MDEQ) oversight. The sludge will be removed and properly disposed of in an approved landfill.

The final clean out may generate some localized odors. This may occur when the sludge is disturbed during the removal. We do not expect any odors to create any risk to the community. Any odor will most likely be a mercaptan or sulfur type odor. The human nose can detect these substances at very low levels - levels that are far below levels that might be harmful. We will utilize the latest technology-based techniques, such as the possibility of pH adjustment, and we will monitor any odors as the work progresses. We anticipate both starting and completing this work during the 3rd quarter of 2008.

If you have any questions, or we can provide any additional information, please contact Mr. Charles Jordan, our Environmental Professional, at 601-545-3360, or myself at 414-461-4000 ext. 157.

Sincerely,

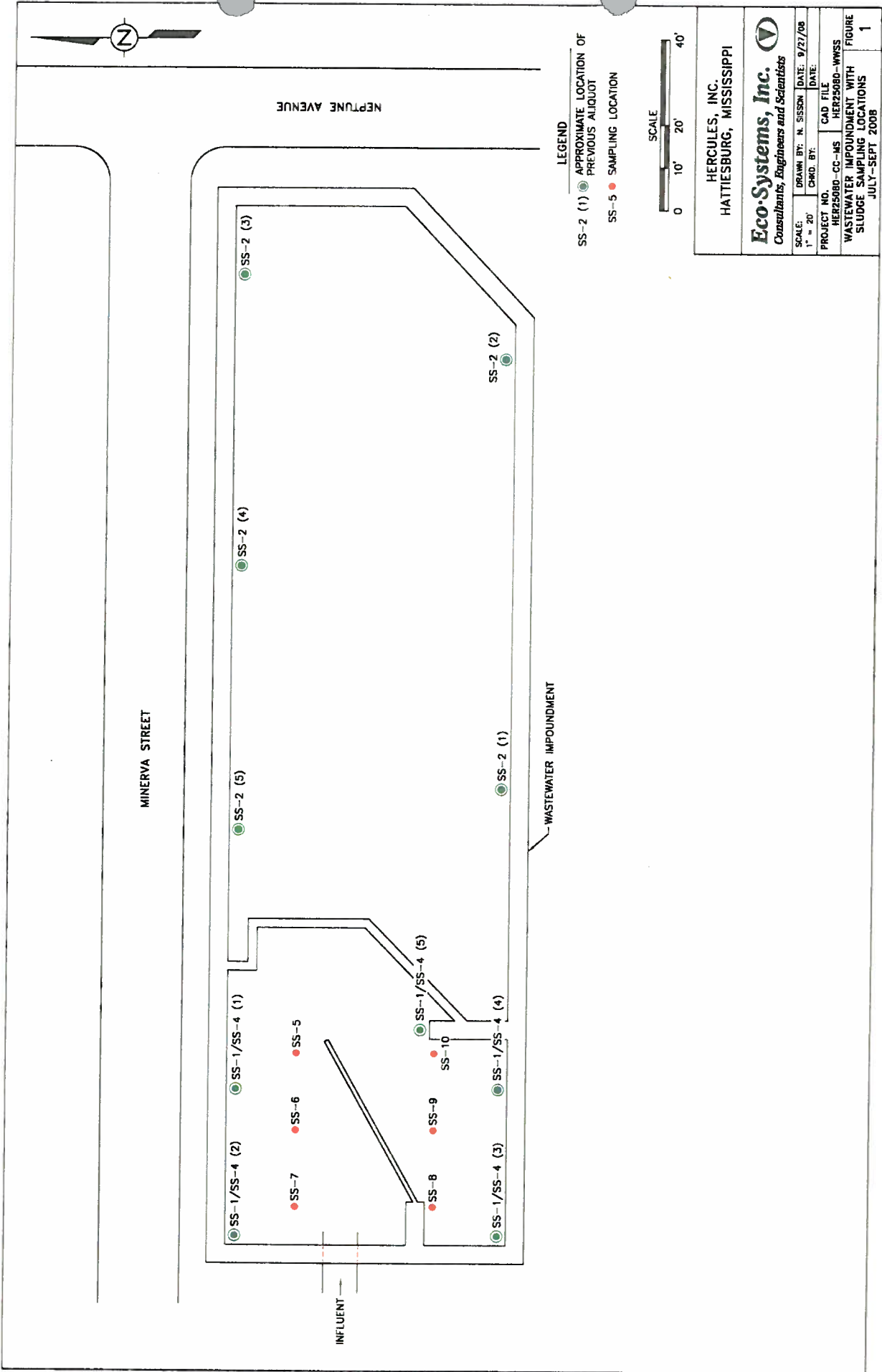
Rodney S. Bolton
Regional Manager



HERCULES, INC.
HATTIESBURG, MISSISSIPPI

Eco-Systems, Inc.
Consultants, Engineers and Scientists

SCALE:	DRAWN BY: N. SROSON	DATE: 9/27/08
1" = 20'	CHD BY:	DATE:
PROJECT NO.	CAD FILE	
HER25080-CC-MS	HER25080-WWSS	
WASTEWATER IMPOUNDMENT WITH SLUDGE SAMPLING LOCATIONS		
JULY-SEPT 2008		
FIGURE		1



LEGEND
 SS-2 (1) ● APPROXIMATE LOCATION OF PREVIOUS ALIQUOT
 SS-5 ● SAMPLING LOCATION

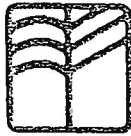


HERCULES, INC.
 HATTIESBURG, MISSISSIPPI

Eco-Systems, Inc.
Consultants, Engineers and Scientists

SCALE: 1" = 20'	DRAWN BY: N. Sisson	DATE: 9/27/08
	CHKD. BY:	DATE:
PROJECT NO. HER2508D-CC-MS		CAD FILE HER2508D-WMSS
WASTEWATER IMPOUNDMENT WITH SLUDGE SAMPLING LOCATIONS		FIGURE 1

ATTACHMENT A
HISTORICAL ANALYTICAL RESULTS



SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 08, 2001

1

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

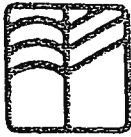
Date Collected: 7/27/01
Date Received: 7/30/01
Project #: Current Sludge Pit (7/01)
Client ID #: Current sludge pit
Laboratory ID #: 012875-01
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/7/01

TCLP Metals

<u>Parameter</u>	<u>Detection Limit</u> (mg/l)	<u>Results</u> (mg/l)	<u>Regulatory Level</u> (mg/l)
Arsenic	0.50	<0.5	5.0
Barium	1.0	<1.0	100.0
Cadmium	0.10	<0.1	1.0
Chromium	0.20	<0.2	5.0
Lead	0.50	<0.5	5.0
Mercury	0.0020	<0.002	0.20
Selenium	0.50	<0.5	1.0
Silver	0.50	<0.5	5.0

Laboratory Manager: Bassam Youssef

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Email: summitenvironmental@msn.com



SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 08, 2001

2

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

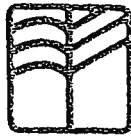
Date Collected: 7/27/01
Date Received: 7/30/01
Project #: Current Sludge Pit (7/01)
Client ID #: Current sludge pit
Laboratory ID #: 012875-01
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/7/01

TCLP Volatiles

<u>Parameter</u>	<u>Detection Limit</u> (mg/L)	<u>Results</u> (mg/L)	<u>Regulatory Level</u> (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

Laboratory Manager: Bassam Youssef

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Email: summitenvironmental@msn.com



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ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 08, 2001

3

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

Date Collected: 7/27/01
Date Received: 7/30/01
Project #: Current Sludge Pit (7/01)
Client ID #: Current sludge pit
Laboratory ID #: 012875-01
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/6/01

TCLP BNA

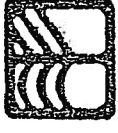
<u>Parameter</u>	<u>Detection Limit</u> (mg/l)	<u>Results</u> (mg/l)	<u>Regulatory Level</u> (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6--Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	0.10	<0.1	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

Laboratory Manager: Bassam Youssef

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 595 EAST TALLMADGE AVENUE
 AKRON, OHIO 44310
 TEL: 330/253-8211; FAX: 330/253-4489

CHAIN OF CUSTODY

AZLA CERTIFICATION #: 0724-01



S.E.T.

PROJECT NAME: Grant Study # 7/01 PROJECT LOCATION: _____ PO#: _____
 CLIENT NAME: Houlihan CLIENT ADDRESS: 613 W 7th STREET HATTEsburg Ms 39401
 CONTACT PERSON: Charles Jackson PHONE # 601-545-3450 FAX #: _____ SAMPLED BY: [Signature] SEC

#	SAMPLE ID#	MEDIA	TIME	DATE	BTEX 8020	GRO 8015M	DRO 8015M	IPH 418.1	TCLP METALS	TCLP VOCs	TCLP BNAS	TCLP PEST/HERB	OTHERS
									X	X	X		
		SOLID	9:20AM	7-27-99									

012875-01

SPECIAL INSTRUCTIONS: _____
 RELINQUISHED BY: [Signature] DATE: 7-27-99 RECEIVED BY: [Signature] DATE: 7-27-99
 RECEIVED AT THE LAB BY: [Signature] DATE: 7/30/01



SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

September 08, 2000

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

Date Collected: 8/24/00
Date Received: 8/28/00
Project #: N/A
Client ID #: 1B Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/5/00

TCLP Metals

<u>Parameter</u>	<u>Detection Limit</u> (mg/l)	<u>Results</u> (mg/l)	<u>Regulatory Level</u> (mg/l)
Arsenic	0.010	<0.01	5.0
Barium	1.0	<1.0	100.0
Cadmium	0.0050	0.011	1.0
Chromium	0.050	<0.05	5.0
Lead	0.10	<0.1	5.0
Mercury	0.0020	<0.002	0.20
Selenium	0.020	<0.02	1.0
Silver	0.010	<0.01	5.0

Laboratory Manager: Bassam Youssef

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Email: sel3746@dapk.net



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Analytical Laboratories

September 08, 2000

2

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

Date Collected: 8/24/00
Date Received: 8/28/00
Project #: N/A
Client ID #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/1/00

TCLP Volatiles

<u>Parameter</u>	<u>Detection Limit</u> (mg/L)	<u>Results</u> (mg/L)	<u>Regulatory Level</u> (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

Laboratory Manager: Bassam Youssef

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Email: set3746@apk.net

September 08, 2000

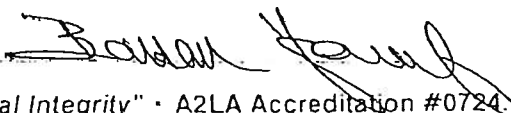
Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

Date Collected: 8/24/00
Date Received: 8/28/00
Project #: N/A
Client ID #: 1B Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 8/31/00

TCLP BNA

<u>Parameter</u>	<u>Detection Limit</u> (mg/l)	<u>Results</u> (mg/l)	<u>Regulatory Level</u> (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6--Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	0.10	1.8	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

Laboratory Manager: Bassam Youssef





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Analytical Laboratories

4

September 08, 2000

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

Date Collected: 8/24/00
Date Received: 8/28/00
Project #: N/A
Client ID #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/7/00

TCLP Herbicides

<u>Parameter</u>	<u>Detection Limit</u> (mg/l)	<u>Results</u> (mg/l)	<u>Regulatory Level</u> (mg/l)
2,4,5-TP(Silvex)	0.0050	<0.005	1.0
2,4,D	0.020	<0.02	10.0

Laboratory Manager: Bassam Youssef

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Email: se13746@apk.net



September 08, 2000

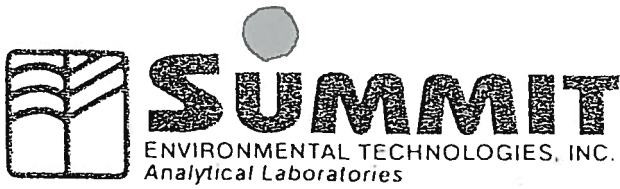
Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

Date Collected: 8/24/00
Date Received: 8/28/00
Project #: N/A
Client ID #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/1/00

TCLP Pesticides

<u>Parameter</u>	<u>Detection Limit</u> (mg/l)	<u>Results</u> (mg/l)	<u>Regulatory Level</u> (mg/l)
Chlordane	0.010	<0.01	0.030
Endrin	0.0020	<0.002	0.020
Gamma-BHC	0.0020	<0.002	0.0020
Heptachlor	0.0020	<0.002	0.0080
Heptachlor Epoxide	0.0020	<0.002	0.0080
Methoxychlor	0.0020	<0.002	10.0
Toxaphene	0.10	<0.1	0.50

Laboratory Manager: Bassam Youssef



September 08, 2000

6

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

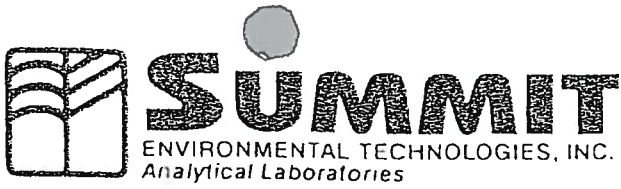
Date Collected: 8/24/00
Date Received: 8/28/00
Project #: N/A
Client ID #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Analyst: TRS

<u>Parameter</u>	<u>Method</u>	<u>Detection Limit (mg/l)</u>	<u>Results (mg/l)</u>	<u>Date of Analysis</u>
Reactive Cyanide	7.3.3.2	0.500	<0.50	8/31/00
Reactive Sulfide	7.3.4.2	25.000	150.000	9/1/00

Laboratory Manager: Bassam Youssef

A handwritten signature in black ink, appearing to read "Bassam Youssef", is written over the printed name.

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Email: set3746@apkc.net



September 08, 2000

7

Client: Hercules
Address: 613 West 7th ST
Hattiesburg, MS 39401

Date Collected: 8/24/00
Date Received: 8/28/00
Project #: N/A
Client ID #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Analyst: BY

<u>Parameter</u>	<u>Method</u>	<u>Results</u>	<u>Date of Analysis</u>
Flash Point	1010	>140F	9/6/00
pH	EPA 150.1	5.01s.u.	9/3/00

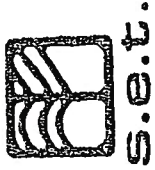
Laboratory Manager: Bassam Youssef

A handwritten signature in black ink, appearing to read "Bassam Youssef", written over a horizontal line.

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Email: set3746@apkc.net

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
 595 EAST TALLMADGE AVENUE
 AKRON, OHIO 44310
 TEL: 330/253-8211; FAX: 330/253-4489

CHAIN OF CUSTODY
 A2LA CERTIFICATION #: 0724-01



PROJECT NAME: HERCULES PROJECT LOCATION: 613 WEST 7th St. Hattiesburg Miss 39401 PO#: _____
 CLIENT NAME: HERCULES CLIENT ADDRESS: 613 WEST 7th St. Hattiesburg Miss 39401
 CONTACT PERSON: CHARLIE SORRELL PHONE # 584-3360 FAX # _____ SAMPLED BY: [Signature]

#	SAMPLE ID#	MEDIA	TIME	DATE	BTEX 8020	GRO 8015M	DRO 8015M	TPH 418.1	TCLP METALS	TCLP VOCS	TCLP BNAS	TCLP PEST/HERB	OTHERS
		<u>FB evidence</u>		<u>10/10/01 8-2400</u>					<u>X</u>	<u>X</u>	<u>X</u>		<u>RCT</u>

003248-01

SPECIAL INSTRUCTIONS: _____
 ELINQUISHED BY: [Signature] DATE: 8-25-00 RECEIVED BY: S.E.T. DATE: 8-25-00

BONNER ANALYTICAL TESTING COMPANY

2703 OAK GROVE ROAD
 HATTIESBURG, MS 39402
 PH. (601) 264-2854

Client: HERCULES

File Number: BT45075
 Collected By: CMC

Sample Date/Time: 05-13-98 @ 1345
 Date/Time Rec'd: 05-13-98 @ 1500

TCLP EVALUATION - SLUDGE PIT COMPOSITE

Analyte/Method #	Result	MDL	Date/Time/Analyst
LEACHABLE METALS:			
Arsenic/6010	ND	0.02	05-26-98/1804/GMR
Barium/6010	0.22	0.002	06-01-98/1553/GMR
Cadmium/7130	ND	0.02	05-27-98/1437/SLH
Chromium/7190	ND	0.04	05-21-98/1330/SLH
Lead/6010	ND	0.02	05-21-98/1155/SLH
Mercury/7470	ND	0.001	05-20-98/1546/SLH
Selenium/6010	ND	0.03	06-04-98/1137/SLH
Silver/7760	ND	0.05	05-26-98/1321/SLH
pH, S.U./9045	3.42	+0.01	06-01-98/1142/JDS
REACTIVITY			
Cyanides (mg/kg)/9010	0.04	0.01	06-01-98/1111/JDS
Sulfides (mg/kg)/9030	ND	1	06-01-98/1115/JDS
Ignitability °F/1010	144	+1	06-01-98/1335/JDS

Data reported in mg/L unless otherwise noted. All analyses performed in accordance with 40 CFR 136 and amendments.

MDL = Method Detection Limit.

Certified by: Michael S. Bonner
 Michael S. Bonner, Ph.D.
 BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY

2703 OAK GROVE ROAD
HATTIESBURG, MS 39402
PH. (601) 264-2854

Client: HERCULES

File Number: BT45075
Collected By: Client

Sample Date/Time: 05-13-98 @ 1345
Date/Time Rec'd: 05-13-98 @ 1500

QA/QC RESULTS

Analyte	Method Blank	Spike Amount	Matrix Spike Recovery %	Matrix Spike Duplicate Recovery %	RPD%
Arsenic	ND	1.0	85.9	92.3	6.38
Barium	ND	0.50	100	98.9	1.1
Cadmium	ND	0.50	96.4	100.4	4
Chromium	ND	0.50	99.0	104	5
Lead	ND	1.0	110.3	100.7	10.11
Mercury	ND	0.003	102	100	1.98
Selenium	ND	2.0	104.1	96.5	7.61
Silver	ND	2.5	96.9	95.9	0.99

All analyses performed in accordance with 40 CFR 136 and amendments.

Certified by: Michael S. Bonner
Michael S. Bonner, Ph.D.
BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILES - TCLP - GC/MS ANALYSIS DATA

TCLP Compound Name	MDL mg/L (ppm)	Regulatory Level (ppm)	SAMPLE			BLANK			MATRIX			MATRIX DUPLICATE		
			Detected Amount mg/L (ppm)	Spike		Detected Amount mg/L (ppm)	Spike		Detected Amount ng/ml in the extract	Spike		Detected Amount ng/ml in the extract	Spike	
				Amount ng	% Recovery		Amount ng	% Recovery		Amount ng	% Recovery		Amount ng	% Recovery
D029 1,1-Dichloroethene	0.002	0.7	ND		ND	46.4	250.0	92.8	45.4	250.0	45.4	250.0	90.8	
D018 Benzene	0.002	0.5	ND		ND	47.1	250.0	94.2	48.4	250.0	48.4	250.0	96.8	
D040 Trichloroethene	0.003	0.5	ND		ND	51.4	250.0	102.8	50.3	250.0	50.3	250.0	100.6	
D021 Chlorobenzene	0.002	100.0	ND		ND	50.7	250.0	101.4	54.0	250.0	54.0	250.0	108.0	
D043 Vinyl Chloride	0.003	0.2	ND		ND	40.5	250.0	81.0	37.3	250.0	37.3	250.0	74.6	
D035 2-Butanone (MEK)	0.01	200.0	0.012		ND	66.0	250.0	132.0	65.0	250.0	65.0	250.0	130.0	
D022 Chloroform	0.002	6.0	ND		ND	45.5	250.0	91.0	47.2	250.0	47.2	250.0	94.4	
D019 Carbon Tetrachloride	0.002	0.5	ND		ND	46.8	250.0	93.6	46.5	250.0	46.5	250.0	93.0	
D028 1,2-Dichloroethane	0.002	0.5	ND		ND	52.0	250.0	104.0	53.5	250.0	53.5	250.0	107.0	
D039 Tetrachloroethene	0.002	0.7	ND		ND	51.1	250.0	102.2	48.4	250.0	48.4	250.0	96.8	
Surrogate Compounds			Detected Amount	Spiked Amount	Detected Amount	Spiked Amount	Detected Amount	Spiked Amount	Detected Amount	Spiked Amount	Detected Amount	Spiked Amount	Detected Amount	Spiked Amount
Dibromofluoromethane			48.1	250.0	50.0	250.0	96.2	100.0	47.6	250.0	50.8	250.0	101.6	
Toluene-d8			46.9	250.0	48.0	250.0	96.0	96.0	51.0	250.0	51.7	250.0	103.4	
4-Bromofluorobenzene			47.4	250.0	44.8	250.0	89.6	89.6	44.4	250.0	48.7	250.0	97.4	

Certified by:

Michael S. Bonner, Ph.D.
 Bonner Analytical Testing Company

Client: Hercules
 Location: Sludge Pit Composite
 File #: BT45075

Collected: 05/13/98
 Extracted: 05/20/98
 Analyzed: 05/21/98

Client: 13 45
 CRR
 CRR

Sample Type: Solid
 Analysis Method: 8260
 Extraction Method: 1311

BONNER ANALYTICAL TESTING COMPANY
 QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
 BASE NEUTRALS AND ACIDS - GC/MS ANALYSIS DATA


Client: Hercules
 Location: TCLP
 File #: BT45075

Collected: 5/13/97 13:45 Client
 Extracted: 5/21/97 9:30 JMR
 Analyzed: 5/28/97 9:55 JMR Analyst

Sample Type: TCLP
 Extraction Method: 1311
 Analysis Method: 8270

Compound Name	CAS Number	MDL mg/L (ppm)	SAMPLE				BLANK				MATRIX				Matrix Duplicate			
			Detected Amount mg/L (ppm)	Spiked Amount ug	% Recovery	Regulatory Level mg/L (ppm)	Detected Amount ug/L (ppb)	Spiked Amount ug	% Recovery	Detected Amount ng/l in the extract	Spiked Amount ug	% Recovery	Detected Amount ng/l in the extract	Spiked Amount ug	% Recovery	Detected Amount ng/l in the extract	Spiked Amount ug	% Recovery
D03E Pyridine	110-86-1	0.0025	ND	ND	ND	ND	ND	ND	25.00	25.00	26.00	25.00	22.77	25.00	22.77	25.00	91.08	
D027 1,4-Dichlorobenzene	106-46-7	0.0061	ND	ND	7.50	ND	ND	ND	100.00	100.00	54.98	100.00	55.48	100.00	55.48	100.00	55.48	
D023 2-Methylphenol	95-48-7	0.0056	ND	ND	200.00	ND	ND	ND	150.00	150.00	28.64	150.00	27.59	150.00	27.59	150.00	18.39	
D025 3/4-Methylphenol	106-44-5	0.0174	ND	ND	200.00	ND	ND	ND	150.00	150.00	27.51	150.00	28.07	150.00	28.07	150.00	18.71	
D034 Hexachloroethane	67-72-1	0.0080	ND	ND	3.00	ND	ND	ND	100.00	100.00	33.45	100.00	35.31	100.00	35.31	100.00	35.31	
D036 Nitrobenzene	98-95-3	0.0082	ND	ND	2.00	ND	ND	ND	100.00	100.00	48.88	100.00	50.21	100.00	50.21	100.00	50.21	
D033 Hexachlorobutadiene	87-68-3	0.0094	ND	ND	0.50	ND	ND	ND	100.00	100.00	34.31	100.00	36.09	100.00	36.09	100.00	36.09	
D042 2,4,6-Trichlorophenol	88-06-2	0.0091	ND	ND	2.00	ND	ND	ND	150.00	150.00	46.68	150.00	49.80	150.00	49.80	150.00	33.20	
D041 2,4,5-Trichlorophenol	95-95-4	0.0071	ND	ND	400.00	ND	ND	ND	100.00	100.00	88.37	100.00	87.81	100.00	87.81	100.00	87.81	
D030 2,4-Dinitrotoluene	121-14-2	0.0083	ND	ND	0.13	ND	ND	ND	100.00	100.00	40.83	100.00	39.08	100.00	39.08	100.00	38.08	
D032 Hexachlorobenzene	118-74-1	0.0080	ND	ND	100.00	ND	ND	ND	150.00	150.00	147.87	150.00	129.90	150.00	129.90	150.00	86.60	
D037 Pentachlorophenol	87-86-5	0.0125	ND	ND	100.00	ND	ND	ND	200.00	200.00	40.64	200.00	35.46	200.00	35.46	200.00	17.73	
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Z-Fluorophenol		65.64	154.88	200.00	77.34		40.64	200.00	20.32	40.64	200.00	20.32	35.46	200.00	17.73	35.46	200.00	17.73
Phenol-d6		41.56	155.97	200.00	77.99		23.30	200.00	11.65	23.30	200.00	11.65	22.42	200.00	11.21	22.42	200.00	11.21
Nitrobenzene-d5		73.10	65.70	100.00	65.70		38.38	100.00	38.38	38.38	100.00	38.38	36.12	100.00	36.12	36.12	100.00	36.12
2-Fluorobiphenyl		97.76	85.57	100.00	85.57		53.04	100.00	53.04	53.04	100.00	53.04	46.98	100.00	46.98	46.98	100.00	46.98
2,4,6-Tribromophenol		193.52	184.12	200.00	92.06		148.62	200.00	74.31	148.62	200.00	74.31	133.58	200.00	66.79	133.58	200.00	66.79
Terphenyl-d14		116.10	136.08	100.00	136.08		58.80	100.00	58.80	58.80	100.00	58.80	52.96	100.00	52.96	52.96	100.00	52.96

Results Outside of QA Limits

Certified by: 
 Michael S. Bonner, Ph. D.
 Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
PESTICIDE / HERBICIDE - ECD ANALYSIS DATA


EPA HW No.	COMPOUNDS	Regulatory Level ug/L (ppb)	MDL ug/L (ppb)	SAMPLE			METHOD BLANK			MATRIX SPIKE			MATRIX SPIKE DUPLICATE					
				Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Amount ug	% Recovery			
	Pesticides																	
D012	Endrin *	20.00	0.10	ND			ND		159.2	200	79.60	170.2	200	85.10				
D013	Gamma-BHC *	400	0.05	ND			ND		144.9	200	72.45	149.9	200	74.95				
D014	Methoxychlor *	10000	0.50	ND			ND		180.7	200	90.35	194.4	200	97.20				
D015	Toxaphene	500	1.00	ND			ND											
D020	Chlordane	30.00	0.50	ND			ND		140.9	200	70.45	164.5	200	82.25				
D031	Heptachlor *	8.00	0.05	ND			ND		165.3	200	82.65	155.9	200	77.95				
D031	Heptachlor Epoxide *	8.00	0.10	ND			ND											
D016	Herbicides	10000	0.50	ND			ND		310.4	400	77.60	353.9	400	88.48				
D017	2,4-D *	1000	0.50	ND			ND		334.8	400	83.70	324.1	400	81.03				
	SURROGATE COMPOUNDS																	
	Decachlorobiphenyl			16.08	20.00	80.40	16.40	15.60	20.00	20.00	78.00	18.13	20.00	90.65				
	2,4-Dichlorophenylacetic acid			34.66	40.00	86.65	35.76	36.84	40.00	40.00	92.10	38.89	40.00	97.23				

Client: Hercules
 Sample ID: Sludge Pit Composite
 File #: BT45075

Collection: 5/13/98
 Pesticide Extraction: 5/21/98
 Pesticide Analysis: 5/21/98
 Herbicide Extraction: 5/21/98
 Herbicide Analysis: 5/22/98

Time: 13:45
 Analyst: RML

Sample Type: ICLP Extract
 Pesticide Extraction Method: SW846 1311 / 3510C
 Pesticide Analysis Method: SW846 8081A
 Herbicide Extraction Method: SW846 1311 / 8151A
 Herbicide Analysis Method: SW846 8151A

Certified by: 
 Michael S. Bonner, Ph.D.
 BONNER ANALYTICAL TESTING COMPANY

* - Matrix Spiking Compounds



BONNER ANALYTICAL TESTING COMPANY
 Phone: 2703 Oak Grove Road
 Hattiesburg, MS 39402 (601) 268-7084
 Fax: (601) 264-2854

"Testing Your World for a Safer Tomorrow"

YOUR COMPANY NAME Hedwick
 YOUR COMPANY ADDRESS Hattiesburg, MS
 NAME OF PERSON TO CONTACT Randy Harvey, Raymond Park
 CONTACT PERSON'S PHONE _____

YOUR PROJECT NO. _____ YOUR PROJECT NAME: _____
 YOUR PO # _____

YOUR SAMPLE DESCRIPTION	DATE	TIME	MATRIX
<u>Sledge Pit Composite</u>	<u>5/3/98</u>	<u>1:45pm</u>	<u>Soil</u>

PARAMETERS FOR ANALYSIS	NUMBER OF CONTAINERS	PRESERVATIONS	REMARKS
<u>RCI</u>			Turnaround Time
<u>Sew Vols</u>			Detection Limits Special Limits Required Yes No
<u>VOLs</u>			
<u>Metals</u>			
			<u>BT45075</u>

RELINQUISHED BY: (Signature) _____ DATE _____ TIME _____ RECEIVED BY: (Signature) _____

RELINQUISHED BY: (Signature) _____ DATE _____ TIME _____ RECEIVED BY: (Signature) _____

COURIER (Signature) _____ RECEIVED FOR BATCO BY: (Signature) _____ DATE/TIME _____

SHIPPED BY (Signature) _____

METHOD OF SHIPMENT _____

REVISION DATE 2/94

REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS _____ (Signature) _____ (Date) _____

IF SAMPLE REMAINDER IS DETERMINED TO BE HAZARDOUS, A MINIMUM ADDITIONAL CHARGE OF \$25.00 PER SAMPLE WILL BE ASSESSED FOR DISPOSAL.

SAMPLE REMAINDER DISPOSAL
 RETURN SAMPLE REMAINDER TO CLIENT VIA _____
 (SOME SHIPPING CHARGES MAY BE INCURRED)

BONNER ANALYTICAL TESTING COMPANY

2703 OAK GROVE ROAD
 HATTIESBURG, MS 39402
 PH. (601) 264-2854

Client: HERCULES, INC.

File Number: BT34003
 Collected By: Client

Sample Date/Time: 08-28-96
 Date/Time Rec'd: 08-28-96 @ 1600

 TCLP EVALUATION--IMPOUNDMENT BASIN SLUDGE

Analyte/Method #	Result	MDL	Date/Time/Analyst
LEACHABLE METALS:			
Arsenic/6010	ND	0.02	09-06-96/1255/JMD
Barium/6010	0.425	0.002	09-06-96/1255/JMD
Cadmium/7130	ND	0.02	09-05-96/1545/JMD
Chromium/7190	ND	0.04	09-06-96/0900/JMD
Lead/7420	ND	0.15	09-06-96/0920/JMD
Mercury/7470	ND	0.001	09-06-96/1530/JMD
Selenium/6010	ND	0.03	09-06-96/1255/JMD
Silver/7760	ND	0.05	09-05-96/1540/JMD
pH, s.u./9045	5.95	+0.01	09-24-96/1645/RML
REACTIVITY:			
Cyanide (mg/kg)/9010	0.02	0.02	10-03-96/1000/TEB
Sulfide (mg/kg)/9030	64	1	09-23-96/1400/RML
Ignitability °F/1020	>180	+0.5	09-18-96/1045/RML

 Data reported in mg/L, unless otherwise noted. All analyses performed in accordance with 40 CFR 136 and amendments.

MDL = Method Detection Limit.

Certified by: _____

Michael S. Bonner
 Michael S. Bonner, Ph.D.

BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY

2703 OAK GROVE ROAD
HATTIESBURG, MS 39402
PH. (601) 264-2854

Client: HERCULES, INC.

File Number: BT34003
Collected By: Client

Sample Date/Time: 08-28-96
Date/Time Rec'd: 08-28-96 @ 1600

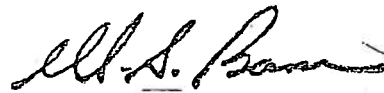
TCLP EVALUATION--IMPOUNDMENT BASIN SLUDGE

Analyte/Method #	Result	MDL	Date/Time/Analyst
Total Solids/---	11.64	0.1	09-23-96/1430/RWC
TKN/351.3	1,350	14	09-10-96/1130/KAW
Ammonia/350.2	180	14	09-19-96/1130/KAW
Phosphorus/365.2	170	0.1	09-18-96/1000/RML
Potassium/6010	32.2	0.6	09-18-96/0825/JMD

Data reported in mg/L, unless otherwise noted. All analyses performed in accordance with 40 CFR 136 and amendments.

MDL = Method Detection Limit.

Certified by:



Michael S. Bonner, Ph.D.
BONNER ANALYTICAL TESTING COMPANY

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BONNER ANALYTICAL TESTING COMPANY
 QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
 BASE NEUTRALS AND ACIDS - GC/MS ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
 Extraction Method - EPA 1311 Analysis Method - SW-846 Method 8270
 Sediment Collected: 082896 @ 1400
 Basin Sludge Analyzed: 091096 @ 1413
 TCLP SAMPLE POINT DATE

EPA HW NO.	Compound	BATCO File #		Hercules COMPANY		TCLP SAMPLE TYPE		Basin Sludge SAMPLE POINT		EXTRACTION METHOD		ANALYSIS METHOD		DATE				
		BT34003																
		MDL (ppm)		Detected Concn. (ppm)		Spike Amt. ug		% Recov		Concn. (ppm)		Detected Concn. (ppm)		Spike Amt. ug		% Recov		
		Regulatory Level		Blank		Matrix		Duplicate Matrix										
0038	Pyridine*																	
0027	1,4-Dichlorobenzene*	.020	ND	5.0	ND	70.0	100	70.0	100	65.6	100	65.6	100	100	76.1	65.6	76.1	
0023	2-Methylphenol*	.020	ND	7.5	ND	86.9	100	86.9	100	76.1	100	76.1	100	100	76.1	76.1	76.1	
0024	3-Methylphenol*	.020	0.328	200.0	200.0	131.4	150	131.4	150	130.3	150	130.3	150	150	130.3	130.3	130.3	
0025	4-Methylphenol*	.020	0.506	200.0	200.0	140.1	150	140.1	150	136.5	150	136.5	150	150	136.5	136.5	136.5	
0034	Hexachloroethane*	.020	0.478	200.0	200.0	132.3	150	132.3	150	128.6	150	128.6	150	150	128.6	128.6	128.6	
0036	Nitrobenzene*	.020	ND	3.0	ND	79.4	100	79.4	100	81.0	100	81.0	100	100	81.0	81.0	81.0	
0033	Hexachlorobutadiene*	.020	ND	2.0	ND	80.0	100	80.0	100	76.4	100	76.4	100	100	76.4	76.4	76.4	
0042	2,4,6-Trichlorophenol*	.020	ND	0.5	ND	92.8	100	92.8	100	82.9	100	82.9	100	100	82.9	82.9	82.9	
0041	2,4,5-Trichlorophenol*	.100	ND	2.0	ND	139.1	150	139.1	150	133.6	150	133.6	150	150	133.6	133.6	133.6	
0030	2,4-Dinitrotoluene*	.020	ND	400.0	400.0	138.2	150	138.2	150	138.2	150	138.2	150	150	138.2	138.2	138.2	
0032	Hexachlorobenzene*	.020	ND	0.13	ND	78.1	100	78.1	100	79.6	100	79.6	100	100	79.6	79.6	79.6	
0037	Pentachlorophenol*	.100	ND	100.0	100.0	94.3	100	94.3	100	82.4	100	82.4	100	100	82.4	82.4	82.4	
	SURROGATES:																	
	Fluorophenol		155.2		152.6		200	75.3	100.8		200	97.8	200	200	97.8	48.9	200	48.9
	Phenol-d6		118.1		98.9		200	49.5	71.1		200	69.3	200	200	35.6	34.6	200	34.6
	Nitrobenzene-d5		69.9		85.2		100	81.7	84.7		100	73.7	100	100	73.7	73.7	100	73.7
	Fluorobiphenyl		82.5		81.7		100	81.7	97.8		100	83.9	100	100	83.9	83.9	100	83.9
	2,4,6-Tribromophenol		180.6		201.1		200	100.6	172.4		200	159.4	200	200	159.4	159.4	200	159.4
	Terphenyl-d14		99.4		100.3		100	100.3	78.5		100	73.4	100	100	73.4	73.4	100	73.4

Michael S. Bonner
 MICHAEL S. BONNER, Ph. D.
 BONNER ANALYTICAL TESTING COMPANY

Certified by:

* MATRIX SPIKING COMPOUNDS

BONNER ANALYTICAL TESTING COMPANY
 QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
 VOLATILES - GC/MS ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
 Analysis Method - SH-846 (8260) Collected: 08/28/96 @ 1400
 IMPOUNDMENT Analyzed: 09/05/96 @ 1537
 BASIN SLUDGE DATE TIME
 SAMPLE POINT

Compound	BATCO File #	HERCULES COMPANY	TCLP EXTRACTION SAMPLE TYPE	REGULATORY LEVEL			MATRIX (BT34002)			DUPLICATE MATRIX (BT34002)							
				MDL mg/L (ppm)	Detected Concn. mg/L (ppm)	Spike Amt. ng	Spike % Recov	Concn. mg/L (ppm)	Detected Concn. mg/L	Amt. ng	Spike % Recov	Detected Concn. mg/L	Amt. ng	Spike % Recov			
EPA HW NO.																	
0029 1,1-Dichloroethene																	
0018 Benzene																	
0040 Trichloroethene																	
0021 Chlorobenzene																	
0043 Vinyl Chloride																	
0035 2-Butanone (MEK)																	
0022 Chloroform																	
0019 Carbon Tetrachloride																	
0028 1,2-Dichloroethane																	
0039 Tetrachloroethene																	
Surrogates:																	
Dibromofluoromethane																	
Toluene-d8																	
4-Bromofluorobenzene																	

Certified by: *Michael S. Bonner*
 MICHAEL S. BONNER, P.E.
 BONNER ANALYTICAL TESTING COMPANY

J - results estimated or Below Method Detection Level.

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
PESTICIDE/POLYCHLORINATED BIPHENYLS - ECD ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports

Collected: 08/28/96 1400
Sediment
Analysis Method - SN-846,8080
Date: 09/23/96 2255

Sample Point: Basin Sludge


TCLP SAMPLE TYPE

Hercules COMPANY

BT34003T
BATCO File #

Compound	NDL ug/L (ppb)	SAMPLE			BLANK			MATRIX			DUPLICATE MATRIX		
		Detected Concn. ug/L (ppb)	Spike		Detected Concn. ug/L (ppb)	Spike		Detected Concn. ug/L (ppb)	Spike		Detected Concn. ug/L (ppb)	Spike	
			Amt. ug	% Recov		Amt. ug	% Recov		Amt. ug	% Recov		Amt. ug	% Recov
* Gamma-BHC (Lindane)	0.05	ND			7.74	12.5	61.9	7.49	12.5	59.9	12.5	59.9	
* Heptachlor	0.10	ND			6.35	12.5	50.8	6.62	12.5	53.0	12.5	53.0	
* Endrin	0.05	ND			13.21	25.0	52.8	13.53	25.0	54.1	25.0	54.1	
* Heptachlor epoxide	0.50	ND			9.63	12.5	77.0	9.00	12.5	72.0	12.5	72.0	
* Methoxychlor	1.00	ND			1.29	2.0	64.5	1.61	2.0	80.5	2.0	80.5	
* Toxaphene	0.50	ND			1.57	2.0	78.5	0.91	2.0	45.5	2.0	45.5	
* Chlordane	0.50	ND											
* 2,4-D	0.50	ND											
* 2,4,5-TP (Silvex)	0.50	ND											
Sutrogate:		0.182	0.20	91.0	0.075	0.20	37.5	0.100	0.20	50.0	0.064	0.20	
Tetrachloro-m-xylene		0.116	0.20	58.0	0.059	0.20	29.5	0.111	0.20	55.5	0.107	0.20	
Decachlorobiphenyl		1.604	2.00	80.2	2.200	2.00	110.0	1.160	2.00	58.0	0.951	2.00	
Dichlorophenylacetic acid													

Extracted 09/03/96
Herbicide analyzed on 09/26/96 @0734
*Matrix Spiking Compounds

Certified by: 
MICHAEL S. BONNER, Ph. D.
BONNER ANALYTICAL TESTING COMPANY

YOUR COMPANY NAME: Hevelly

YOUR COMPANY ADDRESS: _____

NAME OF PERSON TO CONTACT: Charlie Jordan

CONTACT PERSON'S PHONE: _____

YOUR PROJECT NO.: _____ YOUR PROJECT NAME: _____

YOUR SAMPLE DESCRIPTION: _____ DATE: _____ TIME: _____ MATRIX: _____

Sediment Basin Sludge 8-28 1400

(IN PREDOMINANT BASIN SLUDGES)

SAMPLE IN COOLIN 1-gallon CONTAINER
MUST BE FROZEN

RELINQUISHED BY: _____ DATE: _____ TIME: _____ RECEIVED BY: _____ (Signature)

METHOD OF SHIPMENT AIR

SHIPPED BY: _____ (Signature)

COURIER MLC

RECEIVED FOR BATCO BY: _____ (Signature)

DATE/TIME: 8-28-1602

REVISION DATE: _____

REMARKS: _____



BONNER ANALYTICAL TESTING COMPANY

Phone: 2703 Oak Grove Road (601) 264-2854
 Fax: 268-7084
 Hattiesburg, MS 39402 (601) 268-7084

"Testing your World for a Safer Tomorrow"

PARAMETERS FOR ANALYSIS

PARAMETER	TESTED
TESTING TCP METALS	X
TRE	X
TRP-UGA	X
TRP-BVA	X
TRP-PARTICULATE	X
TRP-HEAVY METALS	X
TRP-PCB	X

NUMBER OF CONTAINERS: _____ PRESERVATIONS: _____

REMARKS

Turnaround Time

Detection Limits Special Limits Require Yes No
 Please circle one. If Yes or include separate sheet detailing requirements.

RT34003

SAMPLE REMAINDER DISPOSAL

RETURN SAMPLE REMAINDER TO CLIENT VIA _____
 (NAME SHIPPING CHARGES MAY BE INCURRED)

I REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS

IF SAMPLE REMAINDER IS DETERMINED TO BE HAZARDOUS, A MINIMUM ADDITIONAL CHARGE OF \$2500 PER SAMPLE WILL BE ASSESSED FOR DISPOSAL.

UK 3766

From: Environmental Diagnostic Laboratories
P.O. Box 15098
Hattiesburg, MS 39404-5098
(800) 606-7363 or (601) 264-2222

From Leo

March 13, 1996

To: Mr. Charles Jordan
Hercules, Inc.
P.O. Box 1937
Hattiesburg, MS 39403

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AA13228 Location Code: HERCULES
Sample Description: I.B Sludge Sample collector: J HUSBANDS
Sample collection date: 03/05/96 Time: 11:30
Lab submittal date: 03/05/96 Time: 16:21
Received by: JPH Validated by: JPH

Parameter: TCLP Extraction (Leach)
Method reference: SW846-1311
Result: Completed MDL or sensitivity:
Date started: 03/06/96 Date finished: 03/07/96
Time started: 16:00 Analyst: JFL

Parameter: TCLP Extraction for volatiles
Method reference: SW846-1311
Result: Completed MDL or sensitivity:
Date started: 03/06/96 Date finished: 03/07/96
Time started: 16:00 Analyst: JFL

Parameter: Acid Digestion
Method reference: SW846-3010
Result: Completed MDL or sensitivity:
Date started: 03/11/96 Date finished: 03/11/96
Time started: 08:45 Analyst: HPG

Parameter: Mercury water digestion
Method reference: SW846-7470
Result: Completed MDL or sensitivity:
Date started: 03/11/96 Date finished: 03/11/96
Time started: 09:45 Analyst: HPG

Parameter: TCLP Metals
Method reference: EPA 200's
Result: see below
Date started: 03/11/96 Date finished: 03/11/96
Time started: 13:15 Analyst: HPG

Mr. Charles Jordan Sample I.D. AA13228 (continued)
Page: 2
March 13, 1996

Parameter: TCLP Volatiles
Method reference: SW846-8240
Result: see below
Date started: 03/06/96
Time started: 12:34

Date finished: 03/06/96
Analyst: DCB

Parameter: TCLP Semivolatiles
Method reference: SW846-8270
Result: see below
Date started: 03/07/96
Time started: 14:44

Date finished: 03/07/96
Analyst: WHD

Parameter: BNA Extraction on TCLP Fluid
Method reference: SW846-3510
Result: Completed
Date started: 03/07/96
Time started: 11:45

MDL or sensitivity:
Date finished: 03/07/96
Analyst: RWL

Parameter: % Solids
Method reference: EPA 160.3m
Result: 14.2 %
Date started: 03/06/96
Time started: 09:08

MDL or sensitivity: 1
Date finished: 03/12/96
Analyst: DLV

Parameter: Reactive Cyanide
Method reference: SW846
Result: Not detected mg release/Kg
Date started: 03/06/96
Time started: 08:20

MDL or sensitivity: 10
Date finished: 03/06/96
Analyst: DLV

Parameter: Reactive Sulfide
Method reference: SW846
Result: Less than mg release/Kg
Date started: 03/06/96
Time started: 08:20

MDL or sensitivity: 10
Date finished: 03/06/96
Analyst: DLV

Parameter: Corrosivity (pH)
Method reference: SW846
Result: 5.48 SU
Date started: 03/06/96
Time started: 08:53

MDL or sensitivity: 0.05
Date finished: 03/06/96
Analyst: DLV

Parameter: Ignitability
Method reference: SW846-1010
Result: > 160 deg F
Date started: 03/06/96
Time started: 09:30

MDL or sensitivity: 70
Date finished: 03/06/96
Analyst: DLV

Data for TCLP Metals mg/L:

Component Name	Result	Component MDL
Arsenic	Not detected	0.01
Barium	0.378	0.001

Data for TCLP Metals (continued):

Component Name	Result	Component MDL
Cadmium	Not detected	0.05
Chromium	0.015	0.001
Lead	0.027	0.01
Mercury	Not detected	0.001
Selenium	Not detected	0.01
Silver	0.007	0.001

Data for TCLP Volatiles ug/L:

Component Name	Result	Component MDL
Benzene	95.1	75
Carbon Tetrachloride	Not detected	75
Chlorobenzene	(39.0)	75
Chloroform	Not detected	75
1,2-Dichloroethane	Not detected	75
1,1-Dichloroethene	Not detected	75
2-Butanone	(442)	750
Tetrachloroethene	Not detected	75
Trichloroethene	Not detected	75
Vinyl Chloride	Not detected	150
1,2-Dichloroethane-d4 (surr) % Recovery	103	
Toluene-d8 (surr) % Recovery	105	
4-Bromofluorobenzene (surr) % Recovery	88	

Data for TCLP Semivolatiles ug/L:

Component Name	Result	Component MDL
2-Methylphenol (o-Cresol)	160	100
3- & 4-Methylphenol (m- & p-Cresol), total	280	100
1,4-Dichlorobenzene	Not detected	100
2,4-Dinitrotoluene	Not detected	100
Hexachlorobenzene	Not detected	100
Hexachlorobutadiene	Not detected	100
Hexachloroethane	Not detected	100
Nitrobenzene	Not detected	100
Pentachlorophenol	Not detected	500
Pyridine	Not detected	200
2,4,5-Trichlorophenol	Not detected	500
2,4,6-Trichlorophenol	Not detected	500
2-Fluorophenol (surr) % Recovery	64	
Phenol-d5 (surr) % Recovery	42	
2-Chlorophenol-d4 (surr) % Recovery	76	
1,2-Dichlorobenzene (surr) % Recovery	80	
Nitrobenzene-d5 (surr) % Recovery	46	
2-Fluorobiphenyl (surr) % Recovery	86	
2,4,6-Tribromophenol (surr) % Recovery	95	
Terphenyl-d14 (surr) % Recovery	93	

Mr. Charles Jordan Sample I.D. AA13228 (continued)
Page: 4
March 13, 1996

Sample comments:


Reference Lab Report No. R3766.

Quality Control/Quality Assurance Comments are included on an attached sheet.

If there are any questions regarding this data, please call.

Reviewed by: J. Paul Hollomon, Ph.D.
Laboratory Manager

orig Results To: Charles Jordan
Copy: Leo Hernandez

 Environmental Diagnostic
Laboratories, Inc.

39 King Road • Hattiesburg, MS 39402
P.O. Box 15098
Office: 601-264-2222 • Fax: 601-268-2030

CHAIN OF CUSTODY RECORD

PROJ NO. Project Name Heracles

Sampers: (signature) J. HUSBANDS / John Husband

SAMP NO	STA. NO.	DATE	TIME	COMP	CRAB	DESCRIPTION	No. of Containers	REMARKS

Relinquished by:	Date	Time	Received by:	Date	Time	Relinquished by:	Date	Time	Received by:	Date	Time
J. H.	3/5/96	11:30 AM	J. H.	3/5/96	11:30 AM						

REMARKS
FB = Impounding Basin

BONNER ANALYTICAL TESTING COMPANY
2703 Oak Grove Road
Hattiesburg, MS 39402
(601) 264-2854

Client: HERCULES

File Number: BT26020
Collected By: ClientSample Date/Time: 05-10-95 @ 0800
Date/Time Rec'd: 05-10-95 @ 0910


Corrected Copy

TCLP EVALUATION

Analyte/Method #	Southwest Sludge Pit	MDL	Date/Time/Analyst
LEACHABLE METALS:			
Arsenic/6010	ND	0.02	05-24-95/0910/DE
Barium/6010	0.211	0.003	05-24-95/0910/DE
Cadmium/7130	ND	0.03	05-15-95/1145/DE
Chromium/7190	ND	0.04	05-15-95/1450/DE
Lead/7420	ND	0.15	05-15-95/1350/DE
Mercury/7470	ND	0.001	05-24-95/1132/DE
Selenium/6010	ND	0.03	05-24-95/0910/DE
Silver/7760	ND	0.05	05-15-95/1310/DE
pH S.U./9045	5.18	±0.01	05-15-95/1155/JMD
Reactivity			
Cyanides (mg/kg)/9010	ND	0.02	06-01-95/1320/JMD
Sulfides (mg/kg)/9030	25	1	05-10-95/1600/JMD
Ignitability °F/1010	>200	±1	06-22-95/1700/RWC

Data reported in mg/L, unless otherwise noted. All analyses performed in accordance with 40 CFR 136 and amendments.

MDL = Method Detection Limit.

Certified by: Michael S. Bonner, Ph.D.
BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY
 2703 Oak Grove Road
 Hattiesburg, MS 39402
 (601) 264-2854

*#21578
 13978
 Cocc data
 to E. Jordan*

Client: HERCULES

File Number: BT26020
 Collected By: Client

Sample Date/Time: 05-10-95 @ 0800
 Date/Time Rec'd: 05-10-95 @ 0910

TCLP EVALUATION

Analyte/Method #	Southwest Sludge Pit	MDL	Date/Time/Analyst
LEACHABLE METALS:			
Arsenic/6010	ND	0.02	05-24-95/0910/DH
Barium/6010	0.211	0.003	05-24-95/0910/DH
Cadmium/7130	ND	0.03	05-15-95/1145/DH
Chromium/7190	ND	0.04	05-15-95/1450/DH
Lead/7420	ND	0.15	05-15-95/1350/DH
Mercury/7470	ND	0.001	05-24-95/1132/DH
Selenium/6010	ND	0.03	05-24-95/0910/DH
Silver/7760	ND	0.05	05-15-95/1310/DH
pH S.U./9045	5.18	±0.01	05-15-95/1155/JMD
Reactivity			
Cyanides (mg/kg)/9010	ND	0.02	06-01-95/1320/JMD
Sulfides (mg/kg)/9030	25	1	05-10-95/1600/JMD
Ignitability °F/1010	≤120	±1	05-10-95/1535/JMD

Data reported in mg/L, unless otherwise noted. All analyses performed in accordance with 40 CFR 136 and amendments.

MDL = Method Detection Limit.

Certified by: *Redney W. Williams*
 Michael S. Bonner, Ph.D.
 BONNER ANALYTICAL TESTING COMPANY

BANNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
BASE NEUTRALS AND ACIDS - GC/MS ANALYSIS DATA

Chain of Custody Data Required for BAIKO Data Management Summary Reports
 Extraction Method - EPA 1311 Analysis Method - SW-846 Method 8270
 Sample from back forty
 Date Collected: 051095 @ 0800
 Date Analyzed: 051895 @ 1305

Compound EPA HW NO.	REGULATORY LEVEL		BLANK		MATRIX		DUPLICATE MATRIX	
	MCL ng/L (ppm)	Concen. mg/L (ppm)	Detected Concen. ng/L (ppm)	Spike Amt. ug	Detected Concen. ng/ul in the extract	Spike Amt. ug	Detected Concen. ng/ul in the extract	Spike Amt. ug
D038 Pyridine	.010	5.0	ND		65.8	100	68.3	100
D027 1,4-Dichlorobenzene*	.010	7.5	ND		83.0	100	79.1	100
D023 2-Methylphenol*	.010	200.0	ND		145.8	150	121.0	150
D024 3-Methylphenol*	.010	200.0	ND		127.0	150	104.6	150
D025 4-Methylphenol*	.010	200.0	ND		117.5	150	120.1	150
D034 Hexachloroethane*	.010	3.0	ND		62.6	100	63.9	100
D036 Nitrobenzene*	.010	2.0	ND		92.6	100	82.3	100
D033 Hexachlorobutadiene*	.010	0.5	ND		41.1	100	48.2	100
D042 2,4,6-Trichloropheno[*]	.010	2.0	ND		120.5	150	102.8	150
D041 2,4,5-Trichloropheno[*]	.050	400.0	ND		125.6	150	104.5	150
D030 2,4-Dinitrotoluene*	.010	0.13	ND		107.8	100	96.5	100
D032 Hexachlorobenzene*	.010	0.13	ND		86.0	100	77.2	100
D037 Pentachloropheno[*]	.050	100.0	ND		149.4	150	138.4	150
SURROGATES:								
Fluoropheno	81.1	150	88.6	150	98.9	150	75.8	150
Phenol-d6	67.2	150	69.4	150	79.1	150	63.0	150
2-Chloropheno[*]-d4	139.3	150	150.9	150	159.0	150	130.8	150
1,2-Dichlorobenzene-d4	75.0	100	77.8	100	82.3	100	72.2	100
Nitrobenzene-d5	99.9	100	84.6	100	88.3	100	75.7	100
Fluorobiphenyl	91.3	100	81.7	100	71.6	100	69.5	100
2,4,6-Trifluoropheno	153.9	150	138.9	150	144.3	150	124.0	150
Terphenyl-d14	120.3	100	119.4	100	113.5	100	105.1	100

Certified by: *Richard S. Borrer*
 RICHARD S. BORRER, PH. D.
 BANNER ANALYTICAL TESTING COMPANY

* MATRIX SPIKING COMPOUNDS

BONNER ANALYTICAL TESTING COMPANY
 QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
 VOLATILES - GC/MS ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
 Analysis Method - SW-846 (8260)
 Collected: 05/10/95 @ 0800
 Analyzed: 05/12/95 @ 1555
 FROM BACK FORTY SW
 SLUDGE PIT 6' FROM EDGE
 DATE TIME

Compound	BATCO File #		HERCULES COMPANY		TCLP EXTRACTION		SLUDGE PIT 6' FROM EDGE		DATE		TIME				
	8T26020	8ATCO File #	Sample Type	Sample Point	Sample Type	Sample Point	Sample Type	Sample Point	Sample Type	Sample Point	Sample Type	Sample Point			
EPA HW ND.	MDL mg/L (ppm)	Detected Concn. mg/L (ppm)	Amt. ng	% Recov	Detected Concn. ng/L (ppm)	Amt. ng	% Recov	Concn. mg/L (ppm)	REGULATORY LEVEL	Detected Concn. mg/L	Amt. ng	% Recov	Detected Concn. ng/L	Amt. ng	% Recov
D029 1,1-Dichloroethene	0.005	ND			ND			0.7		0.050	250	101.4	0.050	250	100.2
D018 Benzene	0.005	0.202			ND			0.5		0.042	250	84.00	0.032	250	64.00
D040 Trichloroethene	0.005	ND			ND			0.5		0.052	250	104.6	0.050	250	100.8
D021 Chlorobenzene	0.005	0.001 J			ND			100.0		0.051	250	102.0	0.052	250	103.4
D033 Vinyl Chloride	0.01	ND			ND			0.2		0.050	250	100.0	0.052	250	103.8
D035 2-Butanone (MEK)	0.01	0.032 J			ND			200.0		0.039	250	78.6	0.048	250	95.4
D022 Chloroform	0.005	0.002 J			ND			6.0		0.046	250	92.8	0.051	250	101.6
D019 Carbon Tetrachloride	0.005	ND			ND			0.5		0.056	250	111.8	0.050	250	100.4
D028 1,2-Dichloroethane	0.005	ND			ND			0.5		0.052	250	104.0	0.049	250	97.6
D039 Tetrachloroethene	0.005	ND			ND			0.7		0.059	250	117.8	0.051	250	102.6
		ug/L (ppb)			ug/L (ppb)					ug/L (ppb)			ug/L (ppb)		
Surrogates:		43.1	250	86.2	49.0	250	98.0			43.7	250	87.4	44.1	250	88.2
Dibromofluoromethane		47.3	250	94.6	48.0	250	96.0			48.6	250	97.6	52.3	250	104.6
Toluene-d8		44.8	250	89.6	50.4	250	100.8			49.2	250	98.4	43.8	250	99.6
4-Bromofluorobenzene															

J - results estimated or Below Method Detection Level.

Certified by: *Richard W. Culpeper*
 RICHARD W. BONNER, P.E.
 BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY
 QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
 PESTICIDES & HERBICIDES - ECD ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
 Extraction Method EPA 1311. Analysis Method-8080/8150.
 Collected: 05/10/95 0800
 Analyzed: 05/26/95 2234
 Date: 05/26/95 TIME

BT26020 BATCO File # Hercules Inc. TCLP EXTRACTION SAMPLE TYPE
 COMPANY SAMPLE POINT

Compound EPA HW NO.	MDL ug/L (ppb)	SAMPLE			BLANK			REGULATORY LEVEL			MATRIX			DUPLICATE MATRIX		
		Detected Concn. ug/L (ppb)	Amt. ng	% Recov	Detected Concn. ug/L (ppb)	Amt. ng	% Recov	Concn. ug/L (ppb)	Detected Concn. ug/ml	Amt. ng	% Recov	Detected Concn. ug/ml	Amt. ng	% Recov		
D013 * Lindene	2.68	ND			ND		400.0	1.09	2.0	54.7	1.20	2.0	60.0			
D031 * Heptachlor	2.01	ND			ND		8.0	0.75	2.0	37.3	0.87	2.0	43.4			
D012 * Endrin	4.02	ND			ND		20.0	1.62	2.0	81.0	1.72	2.0	86.0			
D031 * Heptachlor Epoxide	55.6	ND			ND		8.0	1.29	2.0	64.6	1.38	2.0	69.0			
D014 * Methoxychlor	117.9	ND			ND		10000.0	1.85	2.0	92.5	1.93	2.0	96.5			
D020 Chlordane (technical)	9.38	ND			ND		30.0	ND			ND					
D015 Toxaphene	160.8	ND			ND		500.0	0.94	2.0	47.2	0.99	2.0	49.6			
D017 * 2,4,5-TP (Stivex)	0.28	ND			ND		1000.0	0.85	2.0	42.5	0.917	2.0	45.9			
D016 * 2,4-D	0.11	ND			ND		10000.0									
Surrogates:																
Tetrachloro-m-xylene		0.106	0.2	53.0	0.11	0.2		0.032	0.2	15.9	0.04	0.2	20.0			
Dichlorophenylacetic acid		5.670	5.0	113.5	4.35	5.0		2.40	5.0	48.0	2.37	5.0	47.4			
Decachlorobiphenyl		0.220	0.2	110.0	0.29	0.2		0.183	0.2	91.7	0.19	0.2	95.0			

HERBICIDE ANALYZED ON 05/27/95 @ 1152.
 * MATRIX SPIKING COMPOUNDS

Certified by: *Richard W. Culpeper*
 MICHAEL S. BONNER, PA.
 BONNER ANALYTICAL TESTING COMPANY



BONNER ANALYTICAL TESTING COMPANY

Phone: 2703 Oak Grove Road
(601) 264-2854 Hattiesburg, MS 39402 (601) 268-7084
Fax: (601) 268-7084

"Testing Your World for a Safer Tomorrow"

YOUR COMPANY NAME: Hercules Inc

YOUR COMPANY ADDRESS: HATTIESBURG MS

NAME OF PERSON TO CONTACT: C. Jordan

CONTACT PERSON'S PHONE: _____

YOUR PROJECT NO: _____ YOUR PROJECT NAME: _____

YOUR PO.# _____

YOUR SAMPLE DESCRIPTION: _____ DATE _____ TIME _____ MATRIX _____

SAMPLE from BACK forty
Southwest Sludge P.T-6 Remedy 5.10.95 0800 Soil

REMARKS

Turnaround Time _____

Detection Limits
Special Limits Required
Yes NO

Please circle one, if
please describe below
or include separate
sheet detailing
requirements.

PARAMETERS FOR ANALYSIS	NUMBER OF CONTAINERS	PRESERVATIONS
TLP Methyl	2	N/A
TLP-VGA		
TLP-BNA		
TLP Posthole		
TLP-THRASTICONS		
DOT		
REACTIVITY (w+s)		
TOXICITY		

BT26020

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
<u>Joe Jordan</u>	<u>5/10/95</u>	<u>0910</u>	<u>[Signature]</u>			
METHOD OF SHIPMENT <u>J.P.</u>			SHIPPED BY: (Signature)			RECEIVED FOR BATCO BY: (Signature)
			COURIER (Signature)			DATE/TIME

SAMPLE REMAINDER DISPOSAL
 RETURN SAMPLE REMAINDER TO CLIENT VIA _____
 (SOME SHIPPING CHARGES MAY BE INCURRED)

I REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS
 IF SAMPLE REMAINDER IS DETERMINED TO BE HAZARDOUS, A MINIMUM
 ADDITIONAL CHARGE OF \$2500 PER SAMPLE WILL BE ASSESSED FOR DISPOSAL.
 (Signature) _____ (Date) _____



Hercules Incorporated
West 7th Street
P.O. Box 1937
Hattiesburg, MS 39401-1937
(601) 545-3450

April 22, 1992

Certified Mail - Return Receipt Requested
No. P 904 256 183

John C. Taylor
Office of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385

April 22, 1992 Inspection

Re your request, please find the attached TCLP extraction data on our wastewater sludge.

Very truly yours,

Charles S. Jordan
Environmental Supervisor

CSJ:mcl
42

Attachments

BONNER ANALYTICAL TESTING COMPANY
 658 Weathersby Road
 Hattiesburg, MS 39402
 (601) 264-2854

Client: Hercules, Inc. (Attn: Charlie Jordan)

File Number: HER090490-19
 Collected By: Client

Sample Date/Time: 9/04/90 @ 2
 Date/Time Rec'd: 9/04/90 @ 1400
 Date/Time Begun: 9/04/90 @ 1400

TCIP Extraction

Parameter	Sludge	MDL	Date/Time/Analyst
LEACHABLE METALS:			
Arsenic	0.214	0.04	9-18-90/1121/LSC
Barium	0.18	0.2	9-18-90/1121/LSC
Cadmium	ND	0.02	9-18-90/1121/LSC
Chromium	0.05	0.04	9-18-90/1121/LSC
Lead	0.15	0.02	9-18-90/1121/LSC
Mercury	ND	0.001	9-18-90/1430/LSC
Selenium	0.154	0.04	9-18-90/1121/LSC
Silver	ND	0.04	9-18-90/1121/LSC
pH	4.10	± 0.01	9-19-90/1100/RWC
Total Solids	23.68	0.01	9-19-90/1330/RKM

Data reported in mg/l unless otherwise noted. All analyses performed in accordance with 40 CFR 136 and amendments.

MDL = Method Detection Limit.

Certified by:



Michael S. Bonner, Ph.D.
 BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

HERCULES COMPANY SLUDGE SAMPLE TYPE

Chain of Custody Data Required for BATCO Data Management Summary Reports

Analysis Method - CLP Statement of Work for Organic Analysis

HERCULES COMPANY SLUDGE SAMPLE TYPE


Collected: 090490

Analyzed: 091090

HER090490-19
BATCO File #

DATE:
 TIME:

Compound	SAMPLE			BLANK			MATRIX			DUPLICATE MATRIX			
	HOL ug/L (ppb)	Detected: Concen. ug/L (ppb)	Spike Amt. ng	% Recov	Detected: Concen. ug/L (ppb)	Spike Amt. ng	% Recov	Detected: Concen. ng/ml	Spike Amt. ng	% Recov	Detected: Concen. ng/ml	Spike Amt. ng	% Recov
-Dichloroethene	5	36.0			BMDL	250	90.1	47.3	250	94.6	17.3	250	94.6
Chloroethene	5	7.7	ND		ND	250	103.1	53.5	250	107.1	53.5	250	107.1
Chlorobenzene	5	ND	ND		ND	250	101.9	52.4	250	104.9	52.4	250	104.9
Ul Chloride	10	ND	ND		ND	250	100.2	51.0	250	102.1	51.0	250	102.1
Uterone (KEK)	5	119.7	ND		ND	250		ND			ND		
prof DM	5	BMDL	ND		ND			ND			ND		
bon Tetrachloride	5	ND	ND		ND			ND			ND		
-Dichloroethene	5	ND	ND		ND			ND			ND		
-Dichloroethene-d4	5	ND	ND		ND			ND			ND		
omofluorobenzene	5	45.1	250	90.8	49.7	250	99.1	19.1	250	88.2	43.9	250	87.8
		52.6	250	103.2	51.1	250	103.3	53.6	250	107.1	48.7	250	97.4
		51.2	250	102.5	52.7	250	102.5	51.2	250	118.4	51.7	250	103.4

Carried by:  MICHAEL S. BONNER, Ph. D.
BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
BASE NEUTRALS AND ACIDS - GC/MS ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
Extraction Method - EPA 3520 Analysis Method - CLP Statement of Work for Organic Analysis
HER090490-19
HERCULES COMPANY
SLUDGE SAMPLE TYPE
SLUDGE SAMPLE POINT
2148
Collected: 09/04/90
Analyzed: 09/21/90
DATE TIME

Compound	HOL			SAMPLE			BLANK			DUPLICATE MATRIX			DUPLICATE MATRIX		
	ug/L (ppb)	Detected: Concen. ug/L	Spike Amt. ug	Detected: Concen. ug/L (ppb)	Spike Amt. ug	% Recov	Detected: Concen. ug/L (ppb)	Spike Amt. ug	% Recov	Detected: Concen. ng/ul	Spike Amt. ug	% Recov	Detected: Concen. ng/ul	Spike Amt. ug	% Recov
Chlorophenyl-phenyl ether	10	ND		ND			ND			ND			ND		
Nitroethylene	50	ND		ND			ND			ND			ND		
6-Dimino-2-methyl phenol	10	ND		ND			ND			ND			ND		
Nitrosodiphenylamine	10	ND		ND			ND			ND			ND		
2-Diphenylhydrazine	10	ND		ND			ND			ND			ND		
Bromophenylphenylether	10	ND		ND			ND			ND			ND		
Hexachlorobenzene X	10	ND		ND			ND			ND			ND		
1,2-Dichlorobenzene X	50	ND		ND			ND			ND			ND		
Anthracene	10	ND		ND			ND			ND			ND		
n-butylphthalate	10	ND		ND			ND			ND			ND		
noranthene	10	ND		ND			ND			ND			ND		
urene	10	ND		ND			ND			ND			ND		
ethylbenzophthalate	10	ND		ND			ND			ND			ND		
1,2,3-trichlorobenzene	10	ND		ND			ND			ND			ND		
3,4-dichlorobenzidine	20	BMDL		ND			ND			ND			ND		
rysene	10	BMDL		ND			ND			ND			ND		
5-ethylhexylphthalate	10	BMDL		ND			ND			ND			ND		
n-octylphthalate	10	ND		ND			ND			ND			ND		
n-octylfluorenone	10	ND		ND			ND			ND			ND		
n-octylfluorenone	10	ND		ND			ND			ND			ND		
n-octylpyrene	10	ND		ND			ND			ND			ND		
benzo(1,2,3-c,d)pyrene	10	ND		ND			ND			ND			ND		
benzo(a,h)anthracene	10	ND		ND			ND			ND			ND		
n-o(9,10)perylene	10	ND		ND			ND			ND			ND		
PROGATES:															
norophenol			200			89.1									
enol-d5			200			62.9									
trobenzene-d5			100			100.9									
norobiphenyl			100			43.8									
4,6-Tribromophenol			200			87.9									
rphenyl-d14			100			59.4									
			200			17.2									
			200			21.6									
			100			47.4									
			100			90.9									
			200			101.6									
			100			79.4									
			200			89.1									
			200			62.9									
			100			100.9									
			100			43.8									
			200			87.9									
			100			59.4									
			200			17.2									
			200			21.6									
			100			47.4									
			100			90.9									
			200			101.6									
			100			79.4									
			200			89.1									
			200			62.9									
			100			100.9									
			100			43.8									
			200			87.9									
			100			59.4									
			200			17.2									
			200			21.6									
			100			47.4									
			100			90.9									
			200			101.6									
			100			79.4									
			200			89.1									
			200			62.9									
			100			100.9									
			100			43.8									
			200			87.9									
			100			59.4									

Certified by:  MICHAEL S. BONNER, PH. D.
BONNER ANALYTICAL TESTING COMPANY

x TCLP BASE NEUTRALS AND ACIDS

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
PESTICIDES & HERBICIDES - ECD ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
Analysis Method - CLP Statement of Work for Organic Analysis

HERCULES COMPANY
SLUDGE
SAMPLE TYPE

HER090490-19
BATCO File #

Collected: 09/04/90
Analyzed: 09/13/90
DATE

1030
TIME

SAMPLE POINT

Compound	NDL			SAMPLE			BLANK			MATRIX			DUPLICATE MATRIX		
	ug/L (ppb)	Detected: Concn. (ppb)	Spike % Recov	Detected: Concn. (ppb)	Amt. ug	Spike % Recov	Detected: Concn. (ppb)	Amt. ug	Spike % Recov	Detected: Concn. (ppb)	Amt. ug	Spike % Recov	Detected: Concn. (ppb)	Amt. ug	Spike % Recov
Lindane *	1.0	ND		ND	0.20	83.5	0.157	0.20	83.5	0.163	0.20	81.5	0.163	0.20	81.5
Heptachlor *	1.0	ND		ND	0.20	75.5	0.151	0.20	75.5	0.173	0.20	86.5	0.173	0.20	86.5
Aldrin	1.0	ND		ND	0.20	84.0	0.168	0.20	84.0	0.181	0.20	90.5	0.181	0.20	90.5
Dieldrin	1.0	13.4		ND	0.50	86.0	0.430	0.50	86.0	0.425	0.50	85.0	0.425	0.50	85.0
Endrin *	1.0	ND		ND	0.50	101.6	0.506	0.50	101.6	0.505	0.50	101.0	0.505	0.50	101.0
p,p-DDT	1.0	ND		ND	0.50	95.0	0.475	0.50	95.0	0.459	0.50	91.8	0.459	0.50	91.8
Alpha-BHC	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta-BHC	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Delta-BHC	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DOE	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor *	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane *(alpha and gamma)	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene *	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin ketone	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TP (Silvex) *	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenoxy acetic acid	1.0	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surrogate:		0.0551	0.1	0.078	0.1	78.0	0.0915	0.1	91.5	0.077	0.1	77.0	0.077	0.1	77.0
Diethylchlorodate		0.300	0.5	0.165	0.5	93.0									
Dichlorophenylacetic acid															

Certified by: *[Signature]*
MICHAEL S. BONNER, PH. D.
BONNER ANALYTICAL TESTING COMPANY

* TCLP PESTICIDES & HERBICIDES

ATTACHMENT B

FIGURE 1

ATTACHMENT C

ANALYTICAL RESULTS - JULY 1, 2008

ANALYTICAL REPORT

Job Number: 680-38282-1

Job Description: Hercules Hattiesburg Sludge TCLP 7/1/08

For:

Hercules Inc.

Research Center - Bldg 8139/15

500 Hercules Road

Wilmington, DE 19808-1599

Attention: Mr. Timothy Hassett



Lidya Gulizia

Project Manager I

lidya.gulizia@testamericainc.com

07/21/2008

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who signed this test report.

TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404

Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com



Job Narrative
680-J38282-1

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

GC/MS Semi VOA

No analytical or quality issues were noted.

GC Semi VOA

Method(s) 8151A: Surrogate recovery for the following sample was outside control limits: HER-SS1-070108 (680-38282-1). Re-extraction and re-analysis was performed with acceptable results. Both sets of data have been reported.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Comments

No additional comments.

METHOD SUMMARY

Client: Hercules Inc.

Job Number: 680-38282-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds by GC/MS	TAL SAV	SW846 8260B	
Toxicity Characteristic Leaching Procedure (ZHE)	TAL SAV		SW846 1311
Purge and Trap on Leachates	TAL SAV		SW846 5030B
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	TAL SAV	SW846 8270C	
Toxicity Characteristic Leaching Procedure	TAL SAV		SW846 1311
Continuous Liquid-Liquid Extraction	TAL SAV		SW846 3520C
Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081A_8082	
Toxicity Characteristic Leaching Procedure	TAL SAV		SW846 1311
Continuous Liquid-Liquid Extraction	TAL SAV		SW846 3520C
Chlorinated Herbicides by GC	TAL SAV	SW846 8151A	
Toxicity Characteristic Leaching Procedure	TAL SAV		SW846 1311
Chlorinated Herbicides by GC - Aqueous Prep	TAL SAV		SW846 8151A
Inductively Coupled Plasma - Atomic Emission Spectrometry	TAL SAV	SW846 6010B	
Toxicity Characteristic Leaching Procedure	TAL SAV		SW846 1311
Acid Digestion of Aqueous Samples and Extracts for	TAL SAV		SW846 3010A
Mercury in Liquid Waste (Manual Cold Vapor Technique)	TAL SAV	SW846 7470A	
Toxicity Characteristic Leaching Procedure	TAL SAV		SW846 1311
Mercury in Liquid Waste (Manual Cold Vapor)	TAL SAV		SW846 7470A
Reactive Cyanide Analysis using method 9014	TAL SAV	SW846 9014	
Cyanide, Reactive (SW7.3.3)	TAL SAV		SW846 7.3.3
Titrimetric Procedure for Acid-Soluble and Acid-Insoluble Sulfides	TAL SAV	SW846 9034	
Sulfide, Reactive (SW7.3.4)	TAL SAV		SW846 7.3.4
Soil and Waste pH	TAL SAV	SW846 9045C	

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Hercules Inc.

Job Number: 680-38282-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8270C	Johnson, Brad	BJ
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8151A	Kellar, Joshua	JK
SW846 8151A	Smith, Crystal	CAS
SW846 6010B	Bland, Brian	BCB
SW846 7470A	Bland, Brian	BCB
SW846 9014	McDonald, Debbie	DM
SW846 9034	McDonald, Debbie	DM
SW846 9045C	Williams, Dyanne	DW

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS1-070108

Lab Sample ID: 680-38282-1

Date Sampled: 07/01/2008 1530

Client Matrix: Solid

Date Received: 07/03/2008 0852

8081A_8082 Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography-TCLP

Method:	8081A_8082	Analysis Batch: 680-111410	Instrument ID:	GC SemiVolatiles - M
Preparation:	3520C	Prep Batch: 680-110858	Lab File ID:	mg11028.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	20 mL
Date Analyzed:	07/11/2008 1923		Final Weight/Volume:	10 mL
Date Prepared:	07/08/2008 1342		Injection Volume:	1.0 uL
Date Leached:	07/07/2008 1400		Column ID:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chlordane (technical)		<0.025		0.025
Endrin		<0.0050		0.0050
gamma-BHC (Lindane)		<0.0025		0.0025
Methoxychlor		<0.025		0.025
Heptachlor		<0.0025		0.0025
Heptachlor epoxide		<0.0025		0.0025
Toxaphene		<0.25		0.25

Surrogate	%Rec	Acceptance Limits
Tetrachloro-m-xylene	56	35 - 120
DCB Decachlorobiphenyl	67	14 - 115

SAMPLE SUMMARY

Client: Hercules Inc.

Job Number: 680-38282-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-38282-1	HER-SS1-070108	Solid	07/01/2008 1530	07/03/2008 0852
680-38282-2	HER-SS2-070108	Solid	07/01/2008 1545	07/03/2008 0852
680-38282-3	HER-SS3-070108	Solid	07/01/2008 1700	07/03/2008 0852

Serial Number 007855

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: **PPCAMP**
 TAL (LAB) PROJECT MANAGER: **CHARLES CONEY**
 CLIENT (SITE) PM: **CHARLES CONEY**
 CLIENT NAME: **Eco-Systems Inc / Charles Coney**
 CLIENT ADDRESS: **0360 I 55 North Suite 330 Jackson, MS 39211**
 COMPANY CONTRACTING THIS WORK (if applicable): **Charles Coney Dev-Systems inc. CO**

PROJECT NO.: **HER-25020-CC-MS**
 P.O. NUMBER: **MS**
 CONTRACT NO.: **MS**
 CLIENT PHONE: **601-936-0444**
 CLIENT FAX:
 CLIENT E-MAIL: **charles.coney@dev-systems-inc.com**

MATRIX TYPE:
 AQUEOUS (WATER)
 SOLID OR SEMISOLID
 AIR
 NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS:
 STANDARD REPORT DELIVERY: **1** OF **1**
 DATE DUE:
 EXPEDITED REPORT DELIVERY (SURCHARGE): **0**
 DATE DUE:
 NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE		NUMBER OF CONTAINERS SUBMITTED		REMARKS
			DATE	TIME	DATE	TIME	
7/1/08	1530	HER-551-070108	C		1	1	
7/1/08	1545	HER-552-070108	C		1	1	
7/1/08	1700	HER-555-070108	C		1	1	
TEMP 1.6							

RELINQUISHED BY: (SIGNATURE) **[Signature]** DATE: **07/02/2008** TIME: **1740**
 RECEIVED BY: (SIGNATURE) **[Signature]** DATE: TIME:

RECEIVED FOR LABORATORY BY: (SIGNATURE) **[Signature]** DATE: **07/02/08** TIME: **0852**
 CUSTODY SEAL NO.: **0** CUSTODY INTACT YES NO
 SAVANNAH LOG NO.: **08033282** LABORATORY REMARKS:

SAMPLE RESULTS

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS1-070108

Lab Sample ID: 680-38282-1

Date Sampled: 07/01/2008 1530

Client Matrix: Solid

Date Received: 07/03/2008 0852

8260B Volatile Organic Compounds by GC/MS-TCLP

Method:	8260B	Analysis Batch:	680-111100	Instrument ID:	GC/MS Volatiles - A
Preparation:	5030B			Lab File ID:	a0869.d
Dilution:	20	Leachate Batch:	680-110884	Initial Weight/Volume:	5 mL
Date Analyzed:	07/09/2008 1803			Final Weight/Volume:	5 mL
Date Prepared:	07/09/2008 1803				
Date Leached:	07/07/2008 1515				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Benzene		1.3		0.020
Carbon tetrachloride		<0.020		0.020
Chlorobenzene		<0.020		0.020
Chloroform		0.19		0.020
1,2-Dichloroethane		<0.020		0.020
1,1-Dichloroethene		<0.020		0.020
2-Butanone (MEK)		<0.20		0.20
Tetrachloroethene		<0.020		0.020
Trichloroethene		<0.020		0.020
Vinyl chloride		<0.020		0.020

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	91	75 - 120
Dibromofluoromethane	87	75 - 121
Toluene-d8 (Surr)	102	75 - 120

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS2-070108

Lab Sample ID: 680-38282-2

Date Sampled: 07/01/2008 1545

Client Matrix: Solid

Date Received: 07/03/2008 0852

8260B Volatile Organic Compounds by GC/MS-TCLP

Method:	8260B	Analysis Batch: 680-111100	Instrument ID:	GC/MS Volatiles - A
Preparation:	5030B		Lab File ID:	a0863.d
Dilution:	20	Leachate Batch: 680-110884	Initial Weight/Volume:	5 mL
Date Analyzed:	07/09/2008 1606		Final Weight/Volume:	5 mL
Date Prepared:	07/09/2008 1606			
Date Leached:	07/07/2008 1515			

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Benzene		0.21		0.020
Carbon tetrachloride		<0.020		0.020
Chlorobenzene		<0.020		0.020
Chloroform		<0.020		0.020
1,2-Dichloroethane		<0.020		0.020
1,1-Dichloroethene		<0.020		0.020
2-Butanone (MEK)		<0.20		0.20
Tetrachloroethene		<0.020		0.020
Trichloroethene		<0.020		0.020
Vinyl chloride		<0.020		0.020

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	92	75 - 120
Dibromofluoromethane	85	75 - 121
Toluene-d8 (Surr)	104	75 - 120

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS3-070108

Lab Sample ID: 680-38282-3

Date Sampled: 07/01/2008 1700

Client Matrix: Solid

Date Received: 07/03/2008 0852

8260B Volatile Organic Compounds by GC/MS-TCLP

Method:	8260B	Analysis Batch: 680-111100	Instrument ID:	GC/MS Volatiles - A
Preparation:	5030B		Lab File ID:	a0864.d
Dilution:	20	Leachate Batch: 680-110884	Initial Weight/Volume:	5 mL
Date Analyzed:	07/09/2008 1626		Final Weight/Volume:	5 mL
Date Prepared:	07/09/2008 1626			
Date Leached:	07/07/2008 1515			

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Benzene		<0.020		0.020
Carbon tetrachloride		<0.020		0.020
Chlorobenzene		<0.020		0.020
Chloroform		<0.020		0.020
1,2-Dichloroethane		<0.020		0.020
1,1-Dichloroethene		<0.020		0.020
2-Butanone (MEK)		<0.20		0.20
Tetrachloroethene		<0.020		0.020
Trichloroethene		<0.020		0.020
Vinyl chloride		<0.020		0.020

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	93	75 - 120
Dibromofluoromethane	89	75 - 121
Toluene-d8 (Surr)	108	75 - 120

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS1-070108

Lab Sample ID: 680-38282-1

Date Sampled: 07/01/2008 1530

Client Matrix: Solid

Date Received: 07/03/2008 0852

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)-TCLP

Method:	8270C	Analysis Batch: 680-111536	Instrument ID: GC/MS SemiVolatiles - G
Preparation:	3520C	Prep Batch: 680-110963	Lab File ID: g3223.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume: 200 mL
Date Analyzed:	07/12/2008 2133		Final Weight/Volume: 1 mL
Date Prepared:	07/09/2008 1404		Injection Volume: 1.0 uL
Date Leached:	07/07/2008 1400		

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
1,4-Dichlorobenzene		<0.050		0.050
2,4-Dinitrotoluene		<0.050		0.050
Hexachloroethane		<0.050		0.050
Hexachlorobenzene		<0.050		0.050
Hexachlorobutadiene		<0.050		0.050
Methyl Phenols, Total		0.29		0.10
Nitrobenzene		<0.050		0.050
Pentachlorophenol		<0.25		0.25
Pyridine		<0.25		0.25
2,4,5-Trichlorophenol		<0.050		0.050
2,4,6-Trichlorophenol		<0.050		0.050

Surrogate	%Rec	Acceptance Limits
2,4,6-Tribromophenol	76	40 - 139
2-Fluorobiphenyl	69	50 - 113
2-Fluorophenol	66	36 - 110
Nitrobenzene-d5	80	45 - 112
Phenol-d5	71	38 - 116
Terphenyl-d14	38	10 - 121

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS2-070108

Lab Sample ID: 680-38282-2

Date Sampled: 07/01/2008 1545

Client Matrix: Solid

Date Received: 07/03/2008 0852

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)-TCLP

Method:	8270C	Analysis Batch: 680-111536	Instrument ID:	GC/MS SemiVolatiles - G
Preparation:	3520C	Prep Batch: 680-110963	Lab File ID:	g3224.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	200 mL
Date Analyzed:	07/12/2008 2155		Final Weight/Volume:	1 mL
Date Prepared:	07/09/2008 1404		Injection Volume:	1.0 uL
Date Leached:	07/07/2008 1400			

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
1,4-Dichlorobenzene		<0.050		0.050
2,4-Dinitrotoluene		<0.050		0.050
Hexachloroethane		<0.050		0.050
Hexachlorobenzene		<0.050		0.050
Hexachlorobutadiene		<0.050		0.050
Methyl Phenols, Total		0.72		0.10
Nitrobenzene		<0.050		0.050
Pentachlorophenol		<0.25		0.25
Pyridine		<0.25		0.25
2,4,5-Trichlorophenol		<0.050		0.050
2,4,6-Trichlorophenol		<0.050		0.050

Surrogate	%Rec	Acceptance Limits
2,4,6-Tribromophenol	71	40 - 139
2-Fluorobiphenyl	65	50 - 113
2-Fluorophenol	57	36 - 110
Nitrobenzene-d5	68	45 - 112
Phenol-d5	60	38 - 116
Terphenyl-d14	57	10 - 121

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS3-070108

Lab Sample ID: 680-38282-3

Date Sampled: 07/01/2008 1700

Client Matrix: Solid

Date Received: 07/03/2008 0852

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)-TCLP

Method:	8270C	Analysis Batch: 680-111536	Instrument ID:	GC/MS SemiVolatiles - G
Preparation:	3520C	Prep Batch: 680-110963	Lab File ID:	g3225.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	200 mL
Date Analyzed:	07/12/2008 2217		Final Weight/Volume:	1 mL
Date Prepared:	07/09/2008 1404		Injection Volume:	1.0 uL
Date Leached:	07/07/2008 1400			

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
1,4-Dichlorobenzene		<0.050		0.050
2,4-Dinitrotoluene		<0.050		0.050
Hexachloroethane		<0.050		0.050
Hexachlorobenzene		<0.050		0.050
Hexachlorobutadiene		<0.050		0.050
Methyl Phenols, Total		0.18		0.10
Nitrobenzene		<0.050		0.050
Pentachlorophenol		<0.25		0.25
Pyridine		<0.25		0.25
2,4,5-Trichlorophenol		<0.050		0.050
2,4,6-Trichlorophenol		<0.050		0.050

Surrogate	%Rec	Acceptance Limits
2,4,6-Tribromophenol	78	40 - 139
2-Fluorobiphenyl	69	50 - 113
2-Fluorophenol	60	36 - 110
Nitrobenzene-d5	66	45 - 112
Phenol-d5	67	38 - 116
Terphenyl-d14	44	10 - 121

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS2-070108

Lab Sample ID: 680-38282-2

Date Sampled: 07/01/2008 1545

Client Matrix: Solid

Date Received: 07/03/2008 0852

8081A_8082 Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography-TCLP

Method:	8081A_8082	Analysis Batch: 680-111410	Instrument ID:	GC SemiVolatiles - M
Preparation:	3520C	Prep Batch: 680-110858	Lab File ID:	mg11029.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	20 mL
Date Analyzed:	07/11/2008 1942		Final Weight/Volume:	10 mL
Date Prepared:	07/08/2008 1342		Injection Volume:	1.0 uL
Date Leached:	07/07/2008 1400		Column ID:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chlordane (technical)		<0.025		0.025
Endrin		<0.0050		0.0050
gamma-BHC (Lindane)		<0.0025		0.0025
Methoxychlor		<0.025		0.025
Heptachlor		<0.0025		0.0025
Heptachlor epoxide		<0.0025		0.0025
Toxaphene		<0.25		0.25
Surrogate		%Rec		Acceptance Limits
Tetrachloro-m-xylene		69		35 - 120
DCB Decachlorobiphenyl		95		14 - 115

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS3-070108

Lab Sample ID: 680-38282-3

Date Sampled: 07/01/2008 1700

Client Matrix: Solid

Date Received: 07/03/2008 0852

8081A_8082 Organochlorine Pesticides & Polychlorinated Biphenyls by Gas Chromatography-TCLP

Method:	8081A_8082	Analysis Batch: 680-111410	Instrument ID:	GC SemiVolatiles - M
Preparation:	3520C	Prep Batch: 680-110858	Lab File ID:	mg11030.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	20 mL
Date Analyzed:	07/11/2008 2001		Final Weight/Volume:	10 mL
Date Prepared:	07/08/2008 1342		Injection Volume:	1.0 uL
Date Leached:	07/07/2008 1400		Column ID:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chlordane (technical)		<0.025		0.025
Endrin		<0.0050		0.0050
gamma-BHC (Lindane)		<0.0025		0.0025
Methoxychlor		<0.025		0.025
Heptachlor		<0.0025		0.0025
Heptachlor epoxide		<0.0025		0.0025
Toxaphene		<0.25		0.25
Surrogate		%Rec		Acceptance Limits
Tetrachloro-m-xylene		60		35 - 120
DCB Decachlorobiphenyl		53		14 - 115

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS1-070108

Lab Sample ID: 680-38282-1

Date Sampled: 07/01/2008 1530

Client Matrix: Solid

Date Received: 07/03/2008 0852

8151A Chlorinated Herbicides by GC-TCLP

Method:	8151A	Analysis Batch: 680-111302	Instrument ID:	GC SemiVolatiles - S
Preparation:	8151A	Prep Batch: 680-110848	Lab File ID:	sf10048.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	10 mL
Date Analyzed:	07/11/2008 0239		Final Weight/Volume:	10 mL
Date Prepared:	07/08/2008 0822		Injection Volume:	1 uL
Date Leached:	07/07/2008 1400		Column ID:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
2,4-D		<0.050		0.050
Silvex (2,4,5-TP)		<0.050		0.050
Surrogate		%Rec		Acceptance Limits
DCAA		49	X	61 - 120

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS1-070108

Lab Sample ID: 680-38282-1

Date Sampled: 07/01/2008 1530

Client Matrix: Solid

Date Received: 07/03/2008 0852

8151A Chlorinated Herbicides by GC-TCLP

Method:	8151A	Analysis Batch: 680-111770	Instrument ID:	GC SemiVolatiles - S
Preparation:	8151A	Prep Batch: 680-111394	Lab File ID:	sg15016.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	10 mL
Date Analyzed:	07/15/2008 2137	Run Type: RE	Final Weight/Volume:	10 mL
Date Prepared:	07/14/2008 0804		Injection Volume:	1 uL
Date Leached:	07/07/2008 1400		Column ID:	SECONDARY

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
2,4-D		<0.050		0.050
Silvex (2,4,5-TP)		<0.050		0.050

Surrogate	%Rec	Acceptance Limits
DCAA	83	61 - 120

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS2-070108

Lab Sample ID: 680-38282-2

Date Sampled: 07/01/2008 1545

Client Matrix: Solid

Date Received: 07/03/2008 0852

8151A Chlorinated Herbicides by GC-TCLP

Method:	8151A	Analysis Batch: 680-111302	Instrument ID:	GC SemiVolatiles - S
Preparation:	8151A	Prep Batch: 680-110848	Lab File ID:	sf10049.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	10 mL
Date Analyzed:	07/11/2008 0258		Final Weight/Volume:	10 mL
Date Prepared:	07/08/2008 0822		Injection Volume:	1 µL
Date Leached:	07/07/2008 1400		Column ID:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
2,4-D		<0.050		0.050
Silvex (2,4,5-TP)		<0.050		0.050

Surrogate	%Rec	Acceptance Limits
DCAA	103	61 - 120

Analytical Data

Client: Hercules Inc.

Job Number: 680-38282-1

Client Sample ID: HER-SS3-070108

Lab Sample ID: 680-38282-3

Date Sampled: 07/01/2008 1700

Client Matrix: Solid

Date Received: 07/03/2008 0852

8151A Chlorinated Herbicides by GC-TCLP

Method:	8151A	Analysis Batch: 680-111302	Instrument ID:	GC SemiVolatiles - S
Preparation:	8151A	Prep Batch: 680-110848	Lab File ID:	sf10050.d
Dilution:	1.0	Leachate Batch: 680-110821	Initial Weight/Volume:	10 mL
Date Analyzed:	07/11/2008 0317		Final Weight/Volume:	10 mL
Date Prepared:	07/08/2008 0822		Injection Volume:	1 uL
Date Leached:	07/07/2008 1400		Column ID:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
2,4-D		<0.050		0.050
Silvex (2,4,5-TP)		<0.050		0.050
Surrogate		%Rec		Acceptance Limits
DCAA		98		61 - 120