Hercules Response
to NOV

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Zeon reference

ASHLAND.

Ashland Hercules Water Technologies
Hercules, Inc., A Wholly Owned Subsidiar
of Ashland, Inc.
Hattiesburg, MS Plant
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450

December 12, 2008

Ms. Jan M. Patton
Chemical Branch
Environmental Compliance and Enforcement Division
Office of Pollution Control
P.O. Box 2261
Jackson, MS 39225-2261

RECEIVED
DEC 17 2008
Dept of Environmental Quality
Office of Pollution Control

Re: Notice of Violation
Hercules, Inc., Hattiesburg, MS
Impounding Basin Sludge

Dear Ms. Patton:

This is in response to your November 24, 2008 letter alleging violations of the Mississippi hazardous waste management rules due to the surface impoundment at Hercules' Hattiesburg plant containing some sludge that may be hazardous waste for benzene, based on recent sludge sample results. We have carefully reviewed the facts surrounding this matter and discussed it with our hazardous waste counsel. Based on that review, we believe a misunderstanding has occurred as to the nature of the impoundment, which I will explain in this letter using references in the enclosed tabbed documents.[1]

As our hazardous waste counsel has explained, EPA adopted the toxicity characteristic (TC) rule on March 29, 1990, and it took effect on September 25, 1990. See 55 Fed. Reg. 11798 (March 29, 1990). The rule resulted in any waste containing benzene above 500 ug/l using the TCLP Method 1311 being a TC hazardous waste. EPA recognized that on the effective date of the TC rule, due to prior operations, many surface impoundments would have had wastewater or sludge with one or more of the 28 new TC regulated constituents at levels exceeding the TC. Therefore, EPA issued a Federal Register clarification explaining when such impoundments would be subject to RCRA Subtitle C regulation. See 55 Fed. Reg. at 39409 (Sept. 27, 1990) (enclosed at Tab 1). One of the scenarios that EPA discussed was when the impoundment had received hazardous wastewater or generated hazardous waste sludge prior to the September 25, 1990 effective date of the TC rule, but not after that date. EPA explained the criteria it would use to determine whether such an impoundment is regulated under Subtitle C as follows:

1 If MDEQ were to disagree with our position in this letter, we respectfully reserve another opportunity to address and contest some of the specific allegations in the Notice of Violation. Those allegations would presumably be withdrawn if you agree with our position.

> "*Under another scenario, there may be surface impoundments that (1) contain TC wastes deposited prior to the effective date, and (2) receive or generate only non-hazardous wastes by the effective date as a result of system reconfiguration or modification. The regulatory status of such units depends on how the residual TC waste is managed after the effective date of the rule. If (1) the TC wastes remain in the surface impoundment on or after the effective date of the rule, and (2) the unit does not receive or generate any other hazardous wastes on or after the effective date, and (3) the impoundment is the final disposal site for the wastes, then the unit is not subject to Subtitle C. Note that EPA does not consider one time removal of waste from a unit on or after the TC effective date, in and of itself, to make the unit a storage unit and thus subject to Subtitle C. The Agency does not view one time removal of waste as part of a closure as changing the status of the unit, as long as there has not been ongoing management of the waste in the impoundment. Removal of waste in the context of a closure provides human health and environmental benefits since it eliminates potential sources of ground water pollution. This approach is also consistent with current operational procedures for landfills under identical circumstances with respect to newly regulated TC wastes.*"

55 Fed. Reg. at 39410/col. 2 (Sept. 27, 1990) (see Tab 1).

The scenario EPA described above is exactly what occurred at the Hattiesburg plant. The surface impoundment at Hattiesburg received benzene containing wastewaters from three production processes, but only until the late 1970s. As Tab 2 shows, benzene was used in the Poly-Pale® process until July of 1977, when it was replaced with toluene. Benzene was used in the Delnav® process through 1978, but then the benzene was replaced with cyclohexane. Benzene was also added as a system solvent in the refinery process through 1976 when it was replaced with MIBK. After 1979, no more benzene remained in the recycled system solvent, and the refinery process ended in the early 1980s. No process sources of benzene in the wastewater existed after these dates.

Further, all data show that the impoundment did not receive wastewater that was TC hazardous for benzene after the September 25, 1990 effective date of the TC rule. Specifically:

- Tab 3 contains analytical results from the two influent sources to the impoundment, the #4 Lift Station (L.S.) and the Neuphor® area. The data show benzene to be non-detectable in the #4 L.S. water and only 2.58 ug/l in the Neuphor® area. When these two sources were later analyzed together in proportion to their approximate influent contribution to the impoundment (2/3 #4 L.S. and 1/3 Neuphor), the combined sample was non-detectable for benzene.

- Tab 4 explains that in 2005 when Hercules began adding to the impoundment monitoring well water from its groundwater remediation program, Hercules' protocol was to treat with carbon any well water that exceeded TC levels to below TC levels before the water would be added to the impoundment. As a result, the impoundment would not have received hazardous waste contaminated groundwater.

- Tab 5 shows that the wastewater and groundwater the impoundment received from Zeon (which receipt ended in 2001) was non-detectable and less than 20 ug/l respectively for benzene.

Since the data above show that the wastewater the impoundment received was either nondetect or at very low ppb levels, and since we know that wastewater containing benzene used in the Poly-Pale®, Delnav® and refinery processes did not go into the impoundment after the late 1970s, the sludge Hercules recently sampled that contained TC levels of benzene would have been generated long before the TC rule took effect in 1990. In other words, all information supports the conclusion that the impoundment neither received hazardous wastewater nor generated hazardous waste sludge after September 25, 1990, and that the TC hazardous waste sludge that was recently sampled was formed almost three decades ago. This conclusion answers affirmatively the second numbered criteria quoted above by EPA that "*(2) the unit does not receive or generate any other hazardous wastes on or after the effective date.*" Id.

The first criteria from EPA's above quoted preamble that "*(1) the TC wastes remain in the surface impoundment on or after the effective date of the rule*" and the third criteria that "*(3) the impoundment is the final disposal site for the wastes*" are related in that, as EPA explains in the preamble, if the TC wastes remain in the surface impoundment or undergoes only a one-time removal, the impoundment is considered to be a disposal unit for the hazardous waste, and as such, it will not be subject to Subtitle C. Id. Specifically, EPA says:

> *"Note that EPA does not consider one time removal of a waste from a unit on or after the effective date, in and of itself, to make the unit a storage unit[2] and thus subject to Subtitle C."*

Id. Conversely, EPA notes:

> *"If a facility plans to remove on a periodic basis all or some of the TC wastes from the unit on or after the effective date of the TC rule, the unit would be subject to subtitle C (including permitting, facility wide corrective action, financial responsibility) on the effective date of the rule."*

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[2] This explanation is also consistent with EPA's definition of storage, which "*means the holding of hazardous wastes for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.*" 40 CFR § 260.10 (emphasis added).

Id. at 39410/col. 3 (see Tab 1).

Although Hercules has removed sludge, wastewater and wastewater skimmings from the impoundment since September 25, 1990, no data indicate that TC hazardous waste sludge or any other hazardous waste was removed from the impoundment after the effective date of the rule on September 25, 1990. As such, the impoundment is not regulated under Subtitle C.

Specifically, Hercules sampled on several occasions the sludge that would have been removed after the September 25, 1990 effective date and through the last sludge removal project, and on each of those occasions, the sludge was non-hazardous for benzene (less that 500 ug/l) and all other constituents and parameters. Specifically:

- Tab 6 are 9/4/90 sample results of impoundment sludge showing benzene to be only 7.7 ug/l.
- Tab 7 shows impoundment basin sludge to have had benzene at only 95.1 ug/l in a 3/5/96 sample.
- Tab 8 shows samples taken on 8/28/96 of the impoundment basin sludge to have benzene at a J value of 12 ug/l.
- Tab 9 shows a 8/24/00 impoundment basin sludge sample having nondetect levels of benzene.

These sample results demonstrate that sludge that has been removed from the impoundment after the effective date of the TC rule was not TC hazardous.

In addition, the sludge that had been taken out of the basin and placed into the "sludge pit" on the plant site has been sampled, and all results are well below the TC level for benzene. Specifically:

- Tab 10 includes sample results at location SD-03, which is one of the sludge pits. Benzene was not detected in this 6/30/92 sample.
- Tab 11 is a 5/10/95 sample of the sludge pit showing the benzene level to be 202 ug/l.
- Tab 12 includes a sludge pit composite sample dated 5/13/98 showing benzene to be nondetect.
- Tab 13 is a 7/27/01 sample result showing the sludge pit also to have nondetect levels of benzene.

Thus, both the samples of the sludge as it was removed from the basin and the sludge after disposal in the sludge pit confirm, by a considerable margin, that the sludge was not TC hazardous waste.

Further, no other wastes removed from the impoundment were hazardous wastes for benzene. The wastewater effluent contained only 14 ug/l of benzene, as demonstrated by the 2/25/04 laboratory results in Tab 14. Tab 15 is a 2/01/00 sample result for wastewater skimmings. Benzene is lighter than water. Therefore, if it had been present at all, it likely would have been skimmed off by the impoundment skimmer and would have shown up in these samples. Nevertheless, benzene was non-detected in these wastewater skimmings.

In sum, all of the data support the conclusion that no hazardous waste sludge, wastewater or skimmings were ever removed from the surface impoundment after the September 25, 1990 effective date of the TC rule. Consequently, the impoundment has acted as a disposal unit for the TC sludge that now appears to be in certain areas of the impoundment. As EPA has made clear, such a disposal unit would not be subject to RCRA Subtitle C requirements. Id. at 39410 (see Tab 1).

Note that EPA not only articulated this test for Subtitle C regulation of a surface impoundment in its September 27, 1990 Federal Register clarification at Tab 1, but also EPA reaffirmed this test ten years later in its final rule at 65 Fed. Reg. 67068, 67095 (Nov. 8, 2000) when it adopted new listings for chlorinated aliphatic wastes. Therefore, the test is still applicable. Further, the policy behind this test continues to be sound and necessary. Otherwise, units that had historically received wastes that later become hazardous wastes due to EPA promulgating a new listing or characteristic would be retroactively subjected to RCRA regulation. It is well established that EPA's new hazardous waste characteristics and listings are not retroactively imposed on units that historically received such newly-regulated hazardous wastes. See *Chemical Management Waste Management v. EPA*, 869 F.2d 1526, 1530, 1535-37 (D.C. Cir. 1989).

The surface impoundment at Hattiesburg fits squarely within the exception EPA identified in its September 27, 1990 rule clarifying when a surface impoundment would not be subject to hazardous waste regulation. The facts and data demonstrate that after September 25, 1990 the surface impoundment did not receive TC hazardous wastewater or generate TC hazardous sludge, and that no TC hazardous wastes were removed from the impoundment. Therefore, the impoundment is not subject to Subtitle C regulation, and no violations of the regulations have occurred.

Given this conclusion, the only remaining issue is whether the impoundment should be closed with the sludge in place or after a one-time removal. EPA's preamble would allow either option. ~~If the impoundment is closed with the sludge in place, it would retain its current status as a~~ disposal impoundment and not be subject to RCRA Subtitle C requirements including RCRA closure. Alternatively, EPA says that the impoundment can go through a one time removal and not become subject to Subtitle C.

> "*The Agency does not view one time removal of wastes as part of a closure as changing the status of the unit .... Removal of the waste in the context of a closure provides human health and environmental benefits since it eliminates potential sources of groundwater pollution.*"

55 Fed. Reg. at 39410/column 2 (Sept. 27, 1990) (see Tab 1).

In light of the foregoing, Hercules believes that the best resolution of these matters is for:

1. MDEQ to withdraw the Notice of Violation;

2. Hercules to close the impoundment after a one-time removal of the hazardous waste sludge; and

3. MDEQ and Hercules to meet to discuss this matter and how the closure should be conducted.

Should you have any questions in the meantime, please let me know.

Sincerely,

RS Bolton

Rodney S. Bolton
Regional Manager

Enclosures

§ 185.2275 N,N-dimethylpiperidinium chloride.

(a) A tolerance of 6 parts per million (ppm) is established for residues of the plant growth regulator *N,N*-dimethylpiperidinium chloride in the processed fraction raisins, resulting from application of the plant regulator to the growing crop groups. Such residues may be present therein only as a result of the application of the plant growth regulator to the growing grapes in accordance with an experimental use permit that expires June 30, 1991.

(b) Residues in or on raisins not in excess of 6 ppm resulting from the use described in paragraph (a) of this section remaining after expiration of the experimental use program will not be considered actionable if the pesticide is legally applied during the term of and in accordance with the provisions of the emergency use permit and food additive tolerance.

(c) BASF Corporation shall immediately notify the Environmental Protection Agency (EPA) of any findings from the experimental use that have a bearing on safety. The firm shall also keep records of production, distribution, and performance and on request make the records available to any authorized officer or employee of EPA or the Food and Drug Administration (FDA).

PART 186—[AMENDED]

2. In part 186:

a. The authority citation for part 186 continues to read as follows:

Authority: 21 U.S.C. 348.

b. In § 186.2275, by adding new paragraph (b), to read as follows:

§ 186.2275 N,N-dimethylpiperidinium chloride.

* * * * *

(b) A feed additive regulation is established permitting the combined residues of the plant growth regulator *N,N*-dimethylpiperidinium chloride in or on the following feeds resulting from application of the plant growth regulator to grapes in accordance with an experimental use program. The conditions set forth below shall be met.

Feeds	Parts per million	Expiration date
Grape pomace (wet and dry)	3.0	6/30/91
Raisin waste	26.0	6/30/91

(1) Residues in the feed not in excess of the established tolerance resulting from the use described in this paragraph remaining after expiration of the experimental program will not be considered to be actionable if the plant growth regulator is applied during the term of and in accordance with the provisions of the experimental use program and feed additive regulation.

(2) The company concerned shall immediately notify EPA of any findings from the experimental use that have a bearing on safety. The firm shall also keep records of production, distribution, and performance, and on request make the records available to any authorized officer or employee of EPA or FDA.

(3) These temporary tolerances expire June 30, 1991.

[FR Doc. 90-22905 Filed 9-26-90; 8:45 am]
BILLING CODE 6560-50-F

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40 CFR Parts 261, 264, 265, 268, 271 and 302

[EPA/OSW-FR-90-020; SWH-FRL-3836-3]

RIN 2050-AA78

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Clarifications

AGENCY: EPA.

ACTION: Final rule; clarification.

SUMMARY: On March 29, 1990 (55 FR 11798), the Environmental Protection Agency (EPA) promulgated the Toxicity Characteristics (TC) rule to revise the existing EP toxicity characteristics, which are used to identify those wastes defined as hazardous and that are subject to regulation under subtitle C of the Resource Conservation and Recovery Act (RCRA) due to their potential to leach significant concentrations of specific toxic constituents. The preamble to these regulations included implementation guidance to assist the regulated community in understanding their regulatory obligation for managing new TC wastes. This notice is intended to clarify for the regulated community the following issues: (1) The regulatory status of surface impoundments managing newly regulated TC wastes, (2) ground-water monitoring requirements for newly regulated land disposal facilities, (3) section 3010 notification requirements, and (4) permit modification requirements.

DATES: Effective September 25, 1990.

FOR FURTHER INFORMATION CONTACT: For general information about this notice, contact the RCRA/Superfund Hotline at (800) 424-9346 (toll free) or (202) 382-3000 in the Washington, DC metropolitan area. For information on specific aspects of this notice, contact Steve Cochran, Office of Solid Waste (OS-332), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 475-8551.

SUPPLEMENTARY INFORMATION:

A. Background

On March 29, 1990 (55 FR 11798), EPA promulgated a rule to revise the existing EP toxicity characteristics, which are used to identify those wastes which are hazardous and thus subject to regulation under subtitle C of RCRA. The rule broadened and refined the scope of the hazardous waste regulatory program and fulfilled specific statutory mandates under the Hazardous and Solid Waste Amendments of 1984.

Today's notice provides clarification regarding four implementation issues brought to the Agency's attention since the publication of the final rule. First, this notice provides clarification regarding the compliance options for surface impoundments managing newly regulated TC wastes. Secondly, this notice addresses the ground-water monitoring requirements that owner/operators of land disposal facilities managing newly regulated TC wastes must meet. Third, the Agency is providing additional clarification regarding § 3010 notification responsibilities for generators and owner/operators of treatment, storage, and/or disposal facilities (TSDFs) managing newly regulated TC wastes. Finally, the Agency is clarifying the permit modification requirements for hazardous waste management facilities with newly regulated wastes under the TC.

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B. Surface Impoundments

The universe of newly regulated Toxicity Characteristic (TC) wastes includes (along with other wastes) both wastewaters and wastes generated from the treatment of wastewaters. Some of these watewaters and wastewater treatment wastes are generated or managed in surface impoundments. Surface impoundments receiving, generating, or actively managing newly regulated TC wastes on or after September 25, 1990 are subject to all applicable regulations for surface impoundments managing RCRA hazardous wastes. Some of the factors that determine the regulatory status of these surface impoundments for permitting purposes and the various compliance options are discussed below.

1. Impoundments ceasing operation prior to effective date.

Facilities with impoundments in which newly regulated TC wastes currently are generated, stored, and/or disposed may cease operation of the units prior to the effective date of the TC (i.e., September 25, 1990). If these units have wastes in place but are not being used for waste management after the TC effective date, these inactive units would not be subject to regulation under 40 CFR parts 264 or 265. However, it should be noted that inactive units that are located at facilities otherwise subject to subtitle C's interim status or permitting requirements are solid waste management units subject to corrective action requirements under sections 3008(h) and 3004(u) of RCRA. All facilities, of course, may be subject to CERCLA cleanup authorities.

In some cases facilities will choose to remove some or all of the wastes from the impoundments. If the removed wastes are not managed on or after the effective date of the TC rule, they will not be subject to subtitle C. However, any TC waste contained in inactive impoundments that is removed (i.e., actively managed) after the effective date would be subject to regulation. For example, if the TC waste was excavated for treatment and disposal, it would be regulated as hazardous waste at the time of excavation and would be required to be managed at a subtitle C facility. Such a removal activity in and of itself, however, does not subject the inactive impoundment to subtitle C.

2. Conversion to non-hazardous waste impoundment.

A facility with surface impoundments in which TC wastes have been generated and/or managed may choose to redesign or reconfigure the existing wastewater treatment system prior to the effective date such that only non-hazardous wastes are generated or managed in some or all units of the treatment train on or after the effective date of the rule. If all TC sludges are removed from the surface impoundments prior to the effective date of the rule, the units may continue to be used and will not be subject to subtitle C of RCRA (provided no other hazardous wastes are generated, managed, or disposed in the unit).

Under another scenario, there may be surface impoundments that (1) contain TC wastes deposited prior to the effective date, and (2) receive or generate only non-hazardous wastes by the effective date as a result of system reconfiguration or modification. The regulatory status of such units depends on how the residual TC waste is managed after the effective date of the rule. If (1) the TC wastes remain in the surface impoundment on or after the effective date of the rule, and (2) the unit does not receive or generate any other hazardous wastes on or after the effective date, and (3) the impoundment is the final disposal site for the wastes, then the unit is not subject to subtitle C. Note that EPA does not consider one time removal of waste from a unit on or after the TC effective date, in and of itself, to make the unit a storage unit and thus subject to subtitle C. The Agency does not view one time removal of waste as part of a closure as changing the status of the unit, as long as there has not been ongoing management of the waste in the impoundment. Removal of waste in the context of a closure provides human health and environmental benefits since it eliminates potential sources of ground water pollution. This approach is also consistent with current operational procedures for landfills under identical circumstances with respect to newly regulated TC wastes.

3. Active hazardous waste management impoundments.

Facilities with units in which TC wastes are managed on or after the effective date of the rule may continue to use these units to manage TC wastes if all applicable subtitle C requirements are satisfied. These facilities are required to obtain interim status and apply for a permit (or submit a change in interim status or a permit modification, if appropriate) in accordance with the appropriate compliance dates. The units will be subject to the applicable requirements of 40 CFR parts 264 and 265 as of the effective date of the TC.

As described in section 2 above, facility owners or operators may elect to manage only non-hazardous wastes in surface impoundments so that the unit will not be subject to subtitle C. However, there are a number of scenarios where these impoundments could become regulated. For example, if any TC waste remains in the surface impoundment on the TC's effective date and the impoundment is not the final disposal site for the wastes, then the impoundment is considered to be actively managing (e.g., storing) hazardous wastes and therefore is subject to the Subtitle C requirements upon the effective date of the rule. If a facility plans to remove on a periodic basis all or some of the TC waste from the unit on or after the effective date of the TC rule, the unit would be subject to subtitle C (including permitting, facility-wide corrective action, financial responsibility) on the effective date of the rule.

A second example would be where the non-hazardous wastewater influent to a unit causes a TC hazardous sludge (disposed prior to the effective date) to be scoured from the unit so that the effluent from the unit exhibits the TC on or after the effective date. In that case, the unit generating this TC wastewater and any surface impoundment receiving that hazardous effluent would be subject to the subtitle C management standards and would need to be under interim status or obtain a permit.

A third example is where a TC waste is generated within the unit from non-hazardous wastewater on or after the TC effective date. This could occur where the hazardous constituents in the wastewater become concentrated, or if a new TC sludge is formed by settling. In these examples, once the TC waste is generated and stored or disposed of in the unit, the unit is subject to subtitle C.

C. Ground-Water Monitoring Requirements

The Agency is aware of confusion regarding the timing of the subtitle C ground-water monitoring requirements as they apply to land disposal units or facilities that are newly regulated as a result of the final TC. Subpart F of 40 CFR part 265 describes the ground-water monitoring requirements for interim status land disposal facilities managing hazardous wastes. The applicability section of subpart F (see § 265.90) is not clear as to whether such units or facilities newly regulated under the toxicity characteristic must comply with the ground-water monitoring requirements on the effective date of the

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TC (*i.e.*, September 25, 1990) or one year later on September 25, 1991.

In 1980, the Agency promulgated the interim status program, including the part 265, subpart F ground water monitoring requirements. The Agency allowed affected facilities an additional year from the effective date of the regulations for compliance with the groundwater monitoring requirements as codified at § 265.90(a): "within one year after the effective date of these regulations, the owner or operator * * * must implement a ground water monitoring program capable of determining the facility's impact on the quality of ground water. * * *" EPA provided this delayed compliance schedule for groundwater monitoring requirements in order to allow facilities sufficient time to properly plan and install groundwater monitoring systems (45 FR 33161, May 19, 1980). EPA believes that the rationale for allowing an additional year after the effective date of the initial regulations for full implementation of groundwater monitoring requirements is also applicable to newly regulated facilities. EPA believes that the 6 month effective date provided for RCRA regulations is insufficient to allow for proper site characterization and well placement. Thus, EPA interprets § 265.90(a) to provide a one year timeframe from the effective date of new listings or characteristics rules for the implementation of a complete groundwater monitoring program at newly regulated units or facilities. The Agency intends to codify this in a future rulemaking by modifying the appropriate sections of the regulations.

Consistent with EPA's implementation of the loss of interim status requirement for land disposal facilities in 1985 (50 FR 38946, September 25, 1985), land disposal facilities newly subject to the ground-water monitoring requirements must complete site characterization and design and installation of groundwater monitoring systems capable of determining the facility's impact on ground water quality by September 25, 1991. Therefore, owner/operators who have not already done so should immediately commence characterizing their facility's hydrogeology and designing and installing their groundwater monitoring systems to meet this deadline. As in 1985, EPA intends to rigorously enforce both the part 265 subpart F requirements and the loss of interim status requirements.

To certify compliance with these requirements, facilities must submit a ground-water monitoring system certification, certifications of financial responsibility and part B permit applications by September 25, 1991.

D. Section 3010 Notifications

In the preamble to the TC final rule (55 FR 11849), the Agency indicated that, pursuant to RCRA section 3010, the Administrator may require all persons who handle hazardous wastes to notify the Agency of their hazardous waste management activity within 90 days after the wastes are identified as hazardous. For the TC rule, the notification date was June 27, 1990. However, the Agency waived notification for those facilities that already have notified EPA of their hazardous waste activity under section 3010 of RCRA and have obtained an EPA identification number.

Based on inquiries received by various EPA offices concerning the notification requirements, and a review of the preamble language, the Agency understands that a significant number of regulated facilities may have been confused by certain language in the notification section of the TC preamble. As a result, the Agency is today clarifying the notification requirements for generators and TSDFs, and is also providing additional time for such notification.

Notification requirements for large quantity generators (those that generate more than 1,000 kg per month of total hazardous waste) and TSDFs, as specified in the TC final rule, required notification by June 27, 1990 unless they had already notified EPA of hazardous waste activity and obtained an EPA identification number. Based on inquiries received by various EPA offices, it is apparent that many persons did not understand that in order to have the notification requirement waived, a generator must have met two criteria: (1) They must have previously notified the Agency of hazardous waste management activity, and (2) they must have received an EPA identification number (see § 262.12). Some persons interpreted this section to mean that any previous notification under any Agency program (rather than under the RCRA program) was sufficient. Others took the interpretation that if they had an EPA identification number for any Agency program, that was sufficient to take advantage of the notification waiver. Both interpretations are incorrect. Due to this apparent confusion, the Agency is today allowing large quantity generators and TSDFs newly regulated by the TC additional time to notify the appropriate EPA Regional Office of their hazardous waste activity. Large quantity generators and TSDFs have until October 29, 1990 to notify the Agency of their hazardous waste management activity. This is done by completing a section 3010 notification form (EPA Form 8700-12, dated 7/90; see 55 FR 31389, August 2, 1990 for a copy of the form) and sending it to the appropriate EPA Regional Office. It is important to note that this extension applies only to the notification requirement, and does not provide an extension for any other requirement under TC rule, including the date by which an EPA ID number must be obtained.

For newly regulated TSDFs, RCRA specifies that in order for a newly regulated TSDF to be granted interim status, three conditions must be met: (1) The facility/unit must be in existence on the effective date of the rule; (2) the facility must submit a section 3010 notification (if required by the Agency) within the required time frame (for the TC the date was June 27, 1990); and (3) the facility must submit a part A by September 25, 1990. As indicated above, the Agency is today extending the time by which TSDFs must notify the Agency in order to be eligible for interim status to October 29, 1990. This is done by completing a section 3010 notification form (EPA Form 8700-12 as described above) and sending it to the appropriate EPA Regional Office. This extension of the section 3010 notification date does not affect the date part A applications are due, which remains September 25, 1990. It also does not affect the compliance date for any other requirement other than the section 3010 notification.

Notification requirements for small quantity generators (generators of between 100 and 1,000 kg of total hazardous waste per month) newly regulated as a result of the TC were already clarified in a TC correction notice published in the **Federal Register** on August 2, 1990 (see page 31387; see also editorial correction notice dated August 10, 1990, page 32733). Small quantity generators that are newly regulated by the TC are required to notify their respective EPA Regional Office by November 2, 1990 of their hazardous waste management activity. This is done by completing a section 3010 notification form (EPA Form 8700-12 as described above) and sending it to the appropriate EPA Regional Office.

E. Permit Modifications

The Toxicity Characteristic (TC) rule is expected to cause many permitted facilities to seek modifications to their permits. The TC is the first major expansion of regulated wastes under part 261 since the new permit modification rule was promulgated on September 28, 1988 (53 FR 37912). In the

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preamble to the TC rule, the Agency generally described the implementation of the permit modification procedures for newly regulated wastes (see 55 FR 11849, March 29, 1990). However, the Agency has received questions asking for clarification of certain provisions of the new modification rule.

Under the new permit modification procedures, permitted facilities that manage TC wastes must submit Class 1 permit modifications to the appropriate EPA Regional Office by the TC rule effective date, September 25, 1990, if they are to continue managing the newly regulated TC wastes in units that require a permit (see § 270.42(g)). A number of people have expressed confusion about the type and extent of information permitted facilities must submit with these Class 1 permit modifications. This confusion stems from the fact that § 270.42(g) does not clearly define what information must be contained in the Class 1 submission. The rule language for Class 1 modifications in § 270.42(a) suggests that facilities must also submit the detailed part B application information specified in §§ 270.13 through 270.21, 270.62 and 270.63. However, this is not the intent of the requirements under § 270.42(g) because there would be insufficient time for facilities to develop the necessary data by the effective date. Furthermore, the more extensive information requirements under § 270.42(a) are intended for facility changes initiated by an owner/operator, not for changes under § 270.42(g) resulting from new regulatory requirements imposed by the Agency.

The new waste provision of § 270.42(g) is analogous to the procedures required for interim status facilities or newly regulated facilities, where a facility can continue to manage newly regulated wastes by submitting basic information about the affected waste streams and units and then complying with the part 265 management standards for any newly regulated units until final permit conditions are developed. Therefore, the Class 1 submission would comprise a revised part A form clearly indicating all activities that are newly regulated as a result of the TC rule, and any other description that will clarify which units at the facility are managing the new wastes. This Class 1 permit modification serves as a notification to the Agency and the public of the newly regulated activities.

A subsequent Class 2 or 3 permit modification (if necessary) must be submitted 180 days after the TC effective date (i.e., March 24, 1991), and it is at this time that the detailed part B information must be submitted. It is expected that a Class 2 for 3 permit change will be necessary for virtually every facility that has wastestreams which are newly regulated as hazardous under the TC. In situations where a wastestream was already regulated as hazardous under the permit but now has additional waste codes associated with it due to the TC rule, only a Class 1 modification may be required.

Dated: September 24, 1990.

Henry L. Longest II,

Acting, Assistant Administrator, Office of Solid Waste and Emergency Response.

[FR Doc. 90-22981 Filed 9-26-90; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL EMERGENCY MANAGEMENT AGENCY

44 CFR Part 2

Information Collection Requirements Approved by the Office of Management and Budget

AGENCY: Federal Emergency Management Agency (FEMA).

ACTION: Final rule.

SUMMARY: This amendment updates and displays the Office of Management and Budget (OMB) control numbers assigned by OMB for collections of information contained in, or authorized by, FEMA regulations. The update is necessary to make corrections to parts and sections and control numbers listed incorrectly, add new requirements, and delete requirements no longer needed or controlled.

EFFECTIVE DATE: September 27, 1990.

FOR FURTHER INFORMATION CONTACT: Linda S. Borror, (202) 646-2625.

SUPPLEMENTARY INFORMATION: The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*) seeks, in part, to minimize the Federal paperwork burden. The Act requires that agencies obtain OMB review and clearance of certain reporting and recordkeeping requirements/collections of information and give public notice of such clearance numbers. This rule amends 44 CFR part 2, subpart C to update and display the control numbers assigned by OMB to FEMA's collections of information which are contained in, or authorized by, FEMA regulations.

Because this is a nonsubstantive amendment dealing with procedural matters, it is not subject to the provisions of the Administrative Procedure Act (5 U.S.C. 551-553 *et seq.*) requiring advance notice and comment. FEMA has determined that this regulation will not impose unnecessary burdens on the economy or on individuals, and therefore, is not significant for the purposes of Executive Order 12291; that a regulatory analysis is not required; that environmental impact documents under the National Environmental Policy Act of 1969 are not required since the action is administrative and categorically exempt from 44 CFR part 10; and that the updated cumulative list of assigned OMB control numbers is not subject to further review and clearance by OMB under the Paperwork Reduction Act of 1980.

List of Subjects in 44 CFR Part 2

Authority delegations (government agencies), Organization and functions (government agencies), Reporting and recordkeeping requirements.

Accordingly, title 44, chapter I, subchapter A of the Code of Federal Regulations, part 2, subpart C is amended as follows:

PART 2—[AMENDED]

Subpart C—[Amended]

1. The authority citation for part 2, subpart C continues to read as follows:

Authority: 49 FR 36503, Sept. 18, 1984; as amended at 50 FR 40008, Oct. 1, 1985; 51 FR 34604, Sept. 30, 1986

§ 2.81 OMB control numbers assigned to information collections.

2. Section 2.81 is amended by revising the cumulative list of parts and sections in 44 CFR which identifies or describes FEMA's information collection requirements that have been assigned OMB control numbers as follows:

* * * * *

	Current OMB Control No.
44 CFR part or section where identified or described:	
7 Subpart E	3067-0177
11.36	3067-0122
11.54	3067-0122
11 Subpart D	3067-0167
59.22(a)	3067-0020
59.22(b)(2)	3067-0018
60.3, 60.4, 60.5	3067-0022
61, 61 App. A(1), 61 App. A(2)	3067-0022
62 Subpart C, 62 App. A, 62 App B	3067-0189
63 Subpart B	3067-0196
64.3(c)	3067-0020
65	3067-0147
66, 67	3067-0148
70	3067-0147
71	3067-0120
75 Subpart B	3067-0127
80, 81, 83	3067-0031
151 Subpart B	3067-0141

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POLY-PALE (Cont'd.)

Materials Used

Date	M Pounds Gross H2SO4	M Pounds Lime	M Pounds Soda Ash	Lb/Lb. Poly-pale Gross H2SO4	Lb/Lb. Poly-pale Lime	Lb/Lb. Poly-pale Soda Ash	Benzene Gallons	Benzene Gal/ M Lb.	Toluene Gallons	Toluene Gal. M Lb.
1975	2,689	3.0	.0	.16	.0002	.0000	98,947	5.7		
1976	5,367	.0	.0	.17	.0000	.0000	99,929	3.2		
1977										
Jan.	356	.0	.0	.25	.0000	.0000	4,386	3.1	0	0.0
Feb.	274	.0	.0	.17	.0000	.0000	12,341	7.6	0	0.0
Mar.	612	.0	.0	.24	.0000	.0000	6,639	2.6	0	0.0
Apr.	541	.0	.0	.20	.0000	.0000	14,551	5.5	0	0.0
May	329	.0	.0	.17	.0000	.0000	883	.5	6,670	3.5
June	151	.0	.0	.21	.0000	.0000	14,223	19.7	(9,487)	(13.2)
July	330	.0	.0	.28	.0000	.0000	[illegible]	0	10,494	9.0
Aug.	479	.0	.0	.17	.0000	.0000	0	0	23,202	8.2
Sep.	326	.0	.0	.22	.0000	.0000	0	0	1,668	1.1
Oct.	528	.0	.0	.20	.0000	.0000	0	0	5,875	2.2
Nov.	473	.0	.0	.21	.0000	.0000	0	0	13,683	6.04
Dec.	0	.0	.0	.00	.0000	.0000	0	0	2,376	339.43
To Date	4,399	.0	.0	.21	.0000	.0000	53,023	2.5	54,481	2.6

DELNAV

Date	Delnav Made M Lbs.	Materials Consumed - Lbs. Benzene	Dioxane	Ethanol	Phos. Penta-Sulfide	NACL	ANH. HCL	Zinc
1977	2,160	595,412	694,684	1,510,818	1,861,400	98,400	33,598	6,780
1978	1,305	361,799	441,004	908,777	1,111,400	59,100	22,256	3,941
[redacted]								
Jan.	0	0	0	0	0	0	0	0
Feb.	0	10,536	0	0	0	0	(1,806)	0
Mar.	206	23,139	74,079	124,550	147,600	0	3,005	529
Apr.	305	5,854	83,486	177,488	213,200	16,480	3,100	721
May	237	95,848	70,235	137,766	200,900	10,000	2,652	599
June	42	19,593	10,794	21,131	24,600	0	748	100
July	145	33,481	51,638	102,347	123,000	48,000	1,501	493
Aug.	205	(21,535)	57,077	128,875	123,000	13,280	3,555	510
Sept.	91	87,193	30,117	54,984	65,600	4,800	1,369	232
Oct.	0	(562)	0	0	0	0	0	0
Nov.	15	18,587	4,258	14,806	16,400	2,400	708	60
Dec.								
To Date	1,246	272,134	381,684	761,947	914,300	94,960	14,832	3,244

*Cyclohexane

DELNAV (Cont'd)

Date	Materials Consumed Lbs. - Cont'd. Caustic Soda	DTB Peroxide	Soda Ash	Orth-Oleum	Chlorine	Limestone
1977	661,955	2,892	270,900	5,835	1,154,600	827,500
1978	318,944	4,024	118,400	3,683	655,160	829,500
1979						
Jan.	0	0	0	0	17,000	0
Feb.	0	0	0	0	0	0
Mar.	35,866	300	0	995	81,734	112,600
Apr.	39,144	257	25,600	410	124,940	93,200
May	13,646	314	23,600	750	120,047	136,000
June	8,221	64	7,400	258	22,280	16,000
July	33,255	93	20,000	213	64,320	97,300
Aug.	32,115	352	0	621	113,207	101,100
Sept.	18,967	233	16,000	441	133,017	52,000
Oct.	0	0	0	0	(110,600)	0
Nov.	6,602	167	15,000	229	16,107	44,800
Dec.						
To Date	187,816	1,780	107,600	3,917	582,052	653,000

REFINERY

Date	No. 3 Rosin Prod., M Lbs. Total	No. 3 Rosin Prod., M Lbs. Daily	MIBK Loss, GPT	Sys. Solv. % Benzene	Solv. Rec'ry Gallons	Solv. Rec'ry GPT	Waste Water % MIBK
1975	6,236	217.5	.84	13.3	53,262	.25	.04
1976	6,773	232.8	.89	10.4	42,168	.19	.02
1977							
Jan.	7,573	244.3	.32	6.8	2,622	.12	.015
Feb.	7,113	229.4	.84	5.1	2,423	.12	.018
Mar.	6,986	249.5	.34	4.4	2,021	.11	.015
Apr.	7,864	253.7	.17	4.3	2,921	.14	.035
May	7,148	238.3	.84	3.0	2,671	.14	.029
June	3,153	197.1	.94	2.3	1,316	.16	.021
July	5,465	195.2	.82	1.8	2,338	.16	.019
Aug.	7,077	228.3	.43	1.4	2,593	.13	.016
Sept.	6,899	222.6	1.18	1.5	3,308	.16	.021
Oct.	6,329	211.0	1.10	.9	3,595	.20	.022
Nov.	6,542	211.0	.49	1.2	2,400	.13	.024
Dec.	4,533	174.4	.90	.8	2,300	.18	.027
To Date	6,390	222.9	.67	[illegible]	30,508	.14	.022

PEXITE PLANT

Date	Yield, Lbs./Ton No. 3	Yield, Lbs./Ton Ref.	Yield, Lbs./Ton Vin.	Terpene Oils Rec. Gallons	Solvent Recovery Gallons	Solvent Recovery Gal/Ton	Solvent Loss Per Ton Wood Lbs. Pex.	Solvent Loss Per Ton Wood Gal. Solv.
1975	349	233	114	13,537	0	.00	3.55	.66
1976	362	251	111	18,297	80,661	.36	2.60	.24
1977								
Jan.	359	245	114	-	3,599	.17	2.93	.19
Feb.	361	246	115	-	4,577	.23	2.05	.24
Mar.	376	261	115	9,446	5,159	.28	2.34	.15
Apr.	370	257	113	8,806	6,155	.29	2.47	.16
May	377	262	115	2,949	6,815	.36	3.25	.04
June	383	266	117	-	3,062	.37	3.22	.92
July	364	253	111	-	6,243	.42	3.68	.61
Aug.	353	245	108	15,782	8,828	.44	4.60	.95
Sept.	337	234	103	3,191	6,978	.34	2.60	.67
Oct.	360	250	110	3,152	8,364	.48	1.88	.47
Nov.	355	243	112	6,471	8,326	.45	2.54	.31
Dec.	356	239	117	3,208	3,993	.31	3.05	.20
To Date	361	249	112	53,005	72,099	.34	2.86	.38

REFINERY

Date	No. 3 Rosin Prod., M Lbs. Total	Daily	MIBK Loss, GPT	Sys. Solv. % Benzene	Solv. Rec'ry Gallons	GPT	Waste Water % MIBK
1976	6,773	232.8	.89	10.4	42,168	.19	.02
1977	6,390	222.9	.67	2.8	30,508	.14	.022
1978							
Jan.	5,929	197.6	.88	.9	2,117	.12	.031
Feb.	6,286	202.8	1.55	.8	2,242	.12	.030
Mar.	6,490	231.8	.57	.9	2,878	.15	.020
Apr.	7,531	242.9	.71	.7	2,307	.11	.021
May	6,699	223.3	.66	.7	2,116	.11	.020
June	3,027	178.0	.93	.7	787	.09	.018
July	6,553	218.1	.69	.5	1,212	.06	.018
Aug.	7,645	246.6	.62	.4	2,417	.11	.021
Sept.	6,808	219.6	.62	.3	3,552	.19	.015
Oct.	6,273	209.1	.50	.3	2,208	.13	.024
Nov.	5,849	182.8	.80	.3	3,653	.22	.023
Dec.	5,159	172.0	1.08	.3	1,782	.12	.026
To Date	6,187	211.5	.79	.6	27,271	.13	.022

PEXITE PLANT

Date	Yield, Lbs./Ton No. 3	Ref.	Vin.	FF Rosin Processing M Lbs. FF Used	Production Ref.	Vin.	Terpene Oils Rec. Gallons	Solvent Recovery Gallons	Gal/Ton	Solvent Loss Per Ton Wood Lbs. Pex.	Gal. Solv.
1976	362	251	111	-	-	-	18,297	80,661	.36	2.60	.24
1977	361	249	112	-	-	-	53,005	72,099	.34	2.86	.38
1978											
Jan.	347	232	115	-	-	-	5,858	5,635	.33	3.27	.27
Feb.	340	221	119	-	-	-	2,758	5,551	.30	2.05	.39
Mar.	344	230	114	-	-	-	8,171	7,513	.40	2.28	.16
April	354	241	113	-	-	-	6,043	8,477	.40	1.69	.21
May	364	248	116	-	-	-	5,557	8,415	.46	1.48	.28
June	352	239	113	-	-	-	3,448	3,461	.40	1.81	.67
July	350	238	112	-	-	-	6,455	7,118	.38	2.38	.68
Aug.	357	243	114	214	171	43	5,851	7,248	.34	3.33	.57
Sept.	361	246	115	366	293	73	8,498	5,396	.29	1.46	.60
Oct.	363	247	116	231	185	46	2,870	4,936	.29	1.87	.42
Nov.	350	238	112	464	371	93	6,190	4,583	.27	2.44	.50
Dec.	338	230	108	522	418	104	2,686	2,655	.17	1.93	.06
To Date	352	238	114	1,797	1,438	359	64,385	70,988	.34	2.19	.39

EXTRACTOR HOUSE (Cont'd.)

Date	Total Number Extractors	Gross Tons Per Extractor	Average Number Extractors In Cycle	Total Extracted Lbs. Per Gross Ton	Number of Channels
1977	16,395	12.9	9.0	433	1,196
1978	16,446	12.8	9.1	423	745
1979					
Jan.	1,364	13.2	9.1	418	18
Feb.	1,195	13.7	9.6	421	27
Mar.	1,119	13.0	9.5	412	15
Apr.	1,211	12.2	9.8	446	2
May	1,316	12.3	9.0	427	4
June	712	12.5	9.0	433	0
July	1,345	12.2	8.9	442	3
Aug.	1,418	12.5	8.8	408	46
Sept.	1,433	12.3	9.1	422	7
Oct.	1,322	12.7	9.0	410	19
Nov.					
Dec.					
To Date	12,435	12.7	9.2	423	141

REFINERY

Date	No. 3 Rosin Prod., M Lbs. Total	No. 3 Rosin Prod., M Lbs. Daily	MIBK Loss, GPT	Sys. Solv. % Benzene	Solv. Rec'ry Gallons	Solv. Rec'ry GPT	Waste Water % MIBK
1977	6,390	222.9	.67	2.8	30,508	.14	.022
1978	6,187	211.5	.79	.6	27,271	.13	.022
1979							
Jan.	6,318	210.6	1.16	.2	1,782	.10	.023
Feb.	5,810	187.4	1.31	.2	1,653	.10	.032
Mar.	5,098	182.1	1.25	.2	2,184	.15	.006*
Apr.	5,418	174.8	.90	.2	2,212	.15	.008
May	5,834	194.5	1.09	.1	1,021	.06	.006
June	3,217	189.2	.86	.1	699	.08	.007
July	6,229	207.6	.89	.0	245	.01	.009
Aug.	6,057	195.4	1.11	.0	192	.01	.014
Sept.	6,198	199.9	.73	.0	500	.03	.006
Oct.	5,794	193.1	.49	.0	1,328	.08	.009
Nov.							
Dec.							
To Date	55,972	193.7	.98	.1	11,816	.08	.012

*Analytical Method Changed 2/26/79.

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

COMPLIANCE MONITORING REPORT

To:	JAN PATTON TONY COX	QA Type:	
		Date Collected:	01/25/2006
		Time Collected:	11:40
		Sample Collector:	TCOX
	#4 L.S.	To Lab:	SV
Sample ID:	AA30168	Sample Type:	WASTEWATER
Facility Name:	HERCULES INCORPORATION	Received By:	TAMMY SAWYER
		LIMS Login Date:	01/25/2006
Sampling Loc:	PROCESS WASTEWATER	LIMS Login Time:	15:14
Site ID:	C0350022	COC Date:	01/25/2006
Discharge No:	MSP091286-001	COC Time:	1530
Other No:		Project:	6700
Permit No:	MSP091286	Study:	COMPLIANCE
Latitude:			
Longitude:		Reporting Date:	02/13/2006
County:	035 FORREST		

ANALYTE	METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
1,1,1,2-Tetrachloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1,1-Trichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1,2,2-Tetrachloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1,2-Trichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1-Dichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1-Dichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1-Dichloropropene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,3-Trichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,3-Trichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,4-Trichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,4-Trimethylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dibromo-3-chloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dibromoethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06

1,2-Dichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,3,5-Trimethylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,3-Dichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,3-Dichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,4-Dichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
2,2-Dichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
2-Butanone (MEK)	8260W	ND	µg/L	25	BA	2/1/06	2/1/06
2-Chlorotoluene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
2-Hexanone	8260W	ND	µg/L	25	BA	2/1/06	2/1/06
4-Chlorotoluene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
4-Isopropyltoluene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
4-Methyl-2-pentanone (MIBK)	8260W	ND	µg/L	25	BA	2/1/06	2/1/06
Acetone	8260W	ND	µg/L	25	BA	2/1/06	2/1/06
Benzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromochloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromodichloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromoform	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromomethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Carbon Tetrachloride	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chloroform	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
cis-1,2-Dichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
cis-1,3-Dichloropropene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Dibromochloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Dibromomethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Dichlorodifluoromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Ethylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Hexachlorobutadiene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Isopropylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
m & p -Xylene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Methyl tertiary butyl ether	8260W	NA	µg/L	5	BA	2/1/06	2/1/06
Methylene Chloride	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Naphthalene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
n-Butylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
n-Propylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
o - Xylene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
sec-Butylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06

Styrene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
tert-Butylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Tetrachloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Toluene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
trans-1,2-Dichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
trans-1,3-dichloropropene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Trichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Trichlorofluoromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Vinyl Chloride	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
z 1,2-Dichloroethane-d4	8260W	112%	µg/L	80-120	BA	2/1/06	2/1/06
z Dibromofluromethane	8260W	98%	µg/L	80-118	BA	2/1/06	2/1/06
z p-Bromoflurobenzene	8260W	97%	µg/L	80-115	BA	2/1/06	2/1/06
z Toluene-d8	8260W	98%	µg/L	80-118	BA	2/1/06	2/1/06

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
TIE: Tentatively Identified or Estimated
>: greater than
z: surrogate

COC Date: Date Chain of Custody Signed
COC Time: Time Chain of Custody Signed

SAMPLE COMMENTS:

ENVIRONMENT CONDITIONS: WARM AND SUNNY

WHERE TAKEN:@ NUMBER

Approved By: _____

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Hercules Inc
NPDES Permit No. MSP 091286
County Code Forrest
Date Requested 1-25-06
Discharge No. 001
Sample Point Identification Process Wastewater
Data To Jan Patton
Requested By CMI
Type of Sample: Grab [X] Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Warm 45-may
Collected By Fox
Where Taken @ Number #4 L.S.

	Type	Parameters	Preservative	Date	Time
1.	water, grab	Volatiles	chill	1-25-06	1130
2.					
3.					
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )
Date 1/25/06 Time 1530

V. LABORATORY: Received By Tommy Davis
Recorded By _____
Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/l		
Oil and Grease(1)	(000550)	( )	mg/l		
Oil and Grease(2)	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks AI2022

*Date of Test Initiation

30168 ~~30168~~ JS

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

COMPLIANCE MONITORING REPORT

To:	JAN PATTON TONY COX	QA Type:	
		Date Collected:	01/25/2006
		Time Collected:	11:20
		Sample Collector:	TCOX
	Neuphor	To Lab:	SV
Sample ID:	AA30167	Sample Type:	WASTEWATER
Facility Name:	HERCULES INCORPORATION	Received By:	TAMMY SAWYER
Sampling Loc:	PROCESS WASTEWATER	LIMS Login Date:	01/25/2006
Site ID:	C0350022	LIMS Login Time:	15:14
Discharge No:	MSP091286-001	COC Date:	01/25/2006
Other No:		COC Time:	1530
Permit No:	MSP091286	Project:	6700
Latitude:		Study:	COMPLIANCE
Longitude:		Reporting Date:	02/13/2006
County:	035 FORREST		

ANALYTE	METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
1,1,1,2-Tetrachloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1,1-Trichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1,2,2-Tetrachloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1,2-Trichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1-Dichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1-Dichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,1-Dichloropropene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,3-Trichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,3-Trichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,4-Trichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2,4-Trimethylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dibromo-3-chloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dibromoethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,2-Dichloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06

1,2-Dichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,3,5-Trimethylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,3-Dichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,3-Dichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
1,4-Dichlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
2,2-Dichloropropane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
2-Butanone (MEK)	8260W	68.2	µg/L	25	BA	2/1/06	2/1/06
2-Chlorotoluene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
2-Hexanone	8260W	ND	µg/L	25	BA	2/1/06	2/1/06
4-Chlorotoluene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
4-Isopropyltoluene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
4-Methyl-2-pentanone (MIBK)	8260W	ND	µg/L	25	BA	2/1/06	2/1/06
Acetone	8260W	* 792	µg/L	250	BA	2/1/06	2/1/06
Benzene	8260W	TRACE 2.58	µg/L	5	BA	2/1/06	2/1/06
Bromobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromochloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromodichloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromoform	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Bromomethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Carbon Tetrachloride	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chlorobenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chloroethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chloroform	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Chloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
cis-1,2-Dichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
cis-1,3-Dichloropropene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Dibromochloromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Dibromomethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Dichlorodifluoromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Ethylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Hexachlorobutadiene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Isopropylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
m & p -Xylene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Methyl tertiary butyl ether	8260W	NA	µg/L	5	BA	2/1/06	2/1/06
Methylene Chloride	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Naphthalene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
n-Butylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
n-Propylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
o - Xylene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
sec-Butylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06

Styrene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
tert-Butylbenzene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Tetrachloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Toluene	8260W	TRACE 2.37	µg/L	5	BA	2/1/06	2/1/06
trans-1,2-Dichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
trans-1,3-dichloropropene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Trichloroethene	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Trichlorofluoromethane	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
Vinyl Chloride	8260W	ND	µg/L	5	BA	2/1/06	2/1/06
z 1,2-Dichloroethane-d4	8260W	110%	µg/L	80-120	BA	2/1/06	2/1/06
z Dibromofluromethane	8260W	101%	µg/L	80-118	BA	2/1/06	2/1/06
z p-Bromoflurobenzene	8260W	97%	µg/L	80-115	BA	2/1/06	2/1/06
z Toluene-d8	8260W	98%	µg/L	80-118	BA	2/1/06	2/1/06

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
TIE: Tentatively Identified or Estimated
>: greater than
z: surrogate

COC Date: Date Chain of Custody Signed
COC Time: Time Chain of Custody Signed

SAMPLE COMMENTS:

ENVIRONMENT CONDITIONS: WARM AND SUNNY

WHERE TAKEN: @ NEUPHOR SUMP

*DILUTED AT 1:10. BA

Approved By: [signature]

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Hercules Inc
County Code Forrest
NPDES Permit No. MSP 091286
Discharge No. 001
Date Requested 1-25-06
Sample Point Identification Process Wastewater
Requested By CMI
Data To Jan Patton
Type of Sample: Grab (X) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition warm + sunny
Collected By tcox
Where Taken @ neapher sump

	Type	Parameters	Preservative	Date	Time
1.	water, grab	volatiles	chill	1-25-06	1120
2.					
3.					
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle (X) Other ( )

V. LABORATORY: Received By Tommy Davis
Date 1/25/06 Time 1530
Recorded By _____
Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/l		
Oil and Grease(1)	(000550)	( )	mg/l		
Oil and Grease(2)	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks AI 2022

*Date of Test Initiation

#6700

30167

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

Client: Hercules
Location: 2/3 #4 Liftstation + 1/3 Neuphor
File #: BT47391

	Date	Time	Analyst
Collected:	11/09/06	13:30	ES
Received:	11/09/06	15:00	LR
Analyzed:	11/14/06	16:04	CEG

Sample Type: Liquid
Analysis Method: 8260B
Project Number: 017132

Compound Name	Tier 1 TRG Limits (ppb)	MDL ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	1.00E+02	1.9E-01	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	4.06E-01	1.9E-01	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	5.27E-02	3.0E-01	ND			ND			ND			ND		
Tetrachloroethene	5.00E+00	1.8E-01	ND			ND			ND			ND		
1,2,3-Trichlorobenzene		3.3E-01	ND			ND			ND			ND		
1,2,4-Trichlorobenzene	7.00E+01	2.7E-01	ND			ND			ND			ND		
1,1,1-Trichloroethane	2.00E+02	1.6E-01	ND			ND			ND			ND		
1,1,2-Trichloroethane	5.00E+00	2.3E-01	ND			ND			ND			ND		
Trichlorofluoromethane	1.29E+03	1.9E-01	ND			ND			ND			ND		
1,2,3-Trichloropropane	6.23E-03	3.6E-01	ND			ND			ND			7.1E-01		
1,2,4-Trimethylbenzene	1.23E+01	1.9E-01	ND			ND			6.6E-01			ND		
1,3,5-Trimethylbenzene	1.23E+01	2.1E-01	ND			ND			3.2E-01			ND		
Vinyl chloride	2.00E+00	1.7E-01	ND			ND			ND			1.1E+00		
Xylenes (total)	1.00E+04	3.3E-01	5.7E-01			ND			1.1E+00					
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4			4.8E+01	2.5E+02	96.7	4.8E+01	2.5E+02	96.7	4.6E+01	2.5E+02	92.9	4.8E+01	2.5E+02	96.0
Dibromofluoromethane			5.1E+01	2.5E+02	102	5.0E+01	2.5E+02	100	4.9E+01	2.5E+02	97.4	4.9E+01	2.5E+02	97.9
Toluene-d8			4.9E+01	2.5E+02	98.4	4.7E+01	2.5E+02	94.6	4.8E+01	2.5E+02	96.1	4.8E+01	2.5E+02	96.4
4-Bromofluorobenzene			4.9E+01	2.5E+02	97.6	4.8E+01	2.5E+02	95.5	4.6E+01	2.5E+02	91.5	4.7E+01	2.5E+02	93.9

J result is above MDL but below PQL.

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

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

Client: Hercules
Location: 2/3 #4 Liftstation + 1/3 Neuphor
File #: BT47391

Collected: 11/08/06 13:30 ES
Received: 11/09/06 15:00 LR
Analyzed: 11/14/06 Date 16:04 Time CEG Analyst

Sample Type: Liquid
Analysis Method: 8260B
Project Number: 017132

Compound Name	Tier 1 TRG Limits (ppb)	MDL ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	7.00E+00	2.8E-01	ND			ND			6.5E+01	2.5E+02	130	6.5E+01	2.5E+02	130
Benzene	5.00E+00	1.9E-01	ND			ND			5.8E+01	2.5E+02	116	5.9E+01	2.5E+02	117
Trichloroethene	5.00E+00	3.3E-01	ND			ND			5.6E+01	2.5E+02	112	5.5E+01	2.5E+02	110
Toluene	1.00E+03	2.8E-01	1.8E+01			ND			5.8E+01	2.5E+02	116	5.8E+01	2.5E+02	116
Chlorobenzene	1.00E+02	3.1E-01	3.2E+00			ND			5.9E+01	2.5E+02	118	5.7E+01	2.5E+02	115
Bromobenzene		1.6E-01	ND			ND			ND			ND		
Bromodichloromethane		5.5E-01	ND			ND			ND			ND		
Bromodichloromethane	1.66E-01	1.5E-01	ND			ND			ND			ND		
Bromoform	8.48E+00	2.5E-01	ND			ND			ND			ND		
Bromomethane	8.52E+00	3.6E-01	ND			ND			ND			ND		
n-Butylbenzene	2.43E+02	2.3E-01	4.7E-01			ND			ND			ND		
sec-Butylbenzene	2.43E+02	1.3E-01	ND			ND			ND			ND		
tert-Butylbenzene	2.43E+02	1.9E-01	ND			ND			ND			ND		
Carbon Tetrachloride	5.00E+00	1.6E-01	ND			ND			ND			ND		
Chloroethane	3.64E+00	2.2E-01	ND			ND			ND			ND		
Chloroform	1.55E-01	1.9E-01	ND			ND			ND			ND		
Chloromethane	1.43E+00	3.1E-01	ND			ND			ND			ND		
2-Chlorotoluene		1.5E-01	ND			ND			ND			ND		
4-Chlorotoluene	1.22E+02	1.9E-01	ND			ND			ND			ND		
Dibromochloromethane	1.26E-01	1.2E-01	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	2.00E-01	2.4E-01	ND			ND			ND			ND		
1,2-Dibromoethane	5.00E-02	1.4E-01	ND			ND			ND			ND		
Dibromomethane	6.08E+01	2.2E-01	ND			ND			ND			ND		
1,2-Dichlorobenzene	6.00E+02	2.0E-01	ND			ND			ND			ND		
1,3-Dichlorobenzene	5.48E+00	3.2E-01	ND			ND			ND			ND		
1,4-Dichlorobenzene	7.50E+01	3.1E-01	ND			ND			ND			ND		
Dichlorodifluoromethane	3.48E+02	1.3E-01	ND			ND			ND			ND		
1,1-Dichloroethane	7.98E+02	2.0E-01	ND			ND			ND			ND		
1,2-Dichloroethane	5.00E+00	1.2E-01	ND			ND			ND			ND		
cis-1,2-Dichloroethene	7.00E+01	3.3E-01	ND			ND			ND			ND		
trans-1,2-Dichloroethene	1.00E+02	2.0E-01	ND			ND			ND			ND		
1,2-Dichloropropane	5.00E+00	2.6E-01	2.0E+01			ND			ND			ND		
1,3-Dichloropropane		1.2E-01	2.0E+00			ND			ND			ND		
2,2-Dichloropropane		3.3E-01	ND			ND			ND			ND		
1,1-Dichloropropane		1.9E-01	ND			ND			ND			ND		
c-1,3-Dichloropropene	8.40E-02	1.0E-01	ND			ND			ND			ND		
t-1,3-Dichloropropene	8.00E-02	2.1E-01	ND			ND			ND			ND		
Ethyl benzene	7.00E+02	1.5E-01	ND			ND			ND			ND		
Hexachlorobutadiene	8.59E-01	4.1E-01	ND			ND			ND			ND		
Isopropylbenzene	6.79E+02	1.8E-01	ND			ND			7.4E-01			ND		
p-Isopropyltoluene		2.3E-01	1.0E+01			ND			ND			ND		
Methylene chloride	5.00E+00	3.0E-01	ND			ND			ND			ND		
Naphthalene	6.20E+00	2.6E-01	ND			ND			ND			ND		
n-Propylbenzene	2.43E+02	2.6E-01	ND			ND								

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

September 15, 2005

CERTIFIED MAIL – RETURN RECEIPT REQUESTED
CERT. #: 7004-0750-0001-6606-7896

Ms. Carla Brown
Chemical Manufacturing Branch
Environmental Permitting Division
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Hercules Incorporated
Water Ref. No. MSP091286
Hattiesburg, Mississippi
Forrest County

Dear Ms. Brown:

Hercules Incorporated (Hercules) is submitting in accordance with permit condition T-24, a notice of the following new or increased discharge which does not violate effluent limits specified in the permit (WPC-1 Chapter One Section IV.A(14)).

As you are aware, Hercules has submitted a Remedial Action Plan to MDEQ addressing site investigations. MDEQ has completed its review of the corrective action plan and has approved the corrective action plan.

As a result of this corrective action plan, there will be monitoring well water generated in need of proper disposal. For the majority of those wells, where well sampling indicates the wells to be clean, the small amount of sample water will be directed to either the POTW discharge or back onto the ground in the immediate well area (8/10/05 phone guidance from Mr. Willie McKercher, MDEQ). For sampling where any analysis is above the respective TRG, the water will be directed to the POTW discharge to the extent no effluent limits specified in the permit are violated. For sampling where the possibility exists for analysis above TCLP, the contaminant will be removed with carbon canisters and the resulting acceptable water will be diverted into the POTW discharge to the extent no effluent limits specified in the permit are violated.

Based on this information and belief formed after reasonable inquiry, the statements contained herein are true, accurate, and complete.

Sincerely,
Hercules Incorporated

Walter D. Langhans
Plant Manager

HERCULES

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

October 16, 1990

Dave Dargan
Zeon Chemicals
1301 W. 7th St.
Hattiesburg, MS 39401

Dear Mr. Dargan:

The US-EPA continues to broaden and refine the hazardous waste regulatory program as evidenced by the recent Toxicity Characteristic Rule and TCLP.

Please provide Hercules documentation that your waste-water is not defined as hazardous and is not subject to regulation under the Resource Conservation and Recovery Act.

Very truly yours,

Charles S. Jordan

Charles S. Jordan
Environmental Supervisor

CSJ:ml
58

cc: P. W. Kirkendall

ZEON CHEMICALS MISSISSIPPI, INC.

1301 W. Seventh St., Hattiesburg, Mississippi 39401
Phone: 601-583-6020 • Fax: 601-583-6032

November 13, 1990

Mr. Charles S. Jordan
Environmental Supervisor
Hercules Incorporated
P.O. Box 1937
Hattiesburg, Mississippi 39401

Dear Mr. Jordan:

I am writing in response to your letter of October 16, 1990, to Mr. Dave Dargan. Enclosed is certification for our waste-water stream which is sent to Hercules for processing. Bonner Analytical took a 24 hour composite sample and performed the enclosed analysis. If you have any further questions, please contact either Mr. Dargan or myself.

Sincerely,

Lynn Richardson

T. Lynn Richardson
Safety and Environmental
Engineer

Enclosures

cc: D.A. Dargan

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

Client: Zeon Chemicals of Mississippi, Inc.

File Number: ZC1023-11
Collected By: Client

Sample Date/Time: 10/22 & 23/90
Date/Time Rec'd: 10/23/90 @ 1330
Date/Time Begun: 10/23/90 @ 1330

TCLP Extraction - Process Wastewater Effluent

Parameter	Results	MDL	Date/Time/Analyst
LEACHABLE METALS:			
Arsenic	ND	0.001	10-30-90/1100/LSC
Barium	ND	0.2	10-31-90/1030/LSC
Cadmium	ND	0.02	10-26-90/1140/LSC
Chromium	ND	0.03	10-26-90/0915/LSC
Lead	ND	0.3	10-30-90/0945/LSC
Mercury	ND	0.001	10-31-90/1500/LSC
Selenium	ND	0.001	10-31-90/1400/LSC
Silver	ND	0.04	10-26-90/0920/LSC
pH	7.42	± 0.01	11-02-90/1900/RWC
Corrosivity, mmpy	0.08	0.01	11-03-90/1530/RWC
Reactivity:			
Cyanides	ND	0.001	11-03-90/1600/RWC
Sulfides	ND	1.0	11-02-90/1820/RWC
Water	ND	--	11-02-90/1800/RWC
Flash Point, ^{o}F	> 200	± 1.0	11-03-90/1710/RWC

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

MDL = Method Detection Limit.

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

ldb

BONNER ANALYTICAL TESTING COMPANY

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

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

ZC1023-11
BATCO File #

ZEON CHEMICAL COMPANY

COMPOSITE WATER
SAMPLE TYPE

WASTEWATER PROCESS EFFLUENT
SAMPLE POINT

Collected: 10/23/90
Analyzed: 10/27/90
DATE

1425
TIME

Compound	MDL ug/g (ppm)	SAMPLE Detected Concen. ug/g (ppm)	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	BLANK Detected Concen. ug/g (ppm)	BLANK Spike Amt. ug	BLANK Spike % Recov	MATRIX Detected Concen. ug/g (ppm)	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ug/g (ppm)	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
* Hexachlorobenzene	0.50	ND			ND			ND			ND		
* Lindane	0.50	ND			ND			0.314	0.20	157.0	0.291	0.20	145.5
* Heptachlor	0.50	BMDL			ND			0.167	0.20	83.5	0.167	0.20	83.5
Aldrin	0.50	ND			ND			0.219	0.20	109.5	0.199	0.20	99.9
Dieldrin	0.50	ND			ND			0.646	0.50	129.2	0.602	0.50	120.4
* Endrin	0.50	ND			ND			0.302	0.50	60.4	0.205	0.50	41.0
p,p-DDT	0.50	ND			ND			0.266	0.50	53.2	0.278	0.50	55.6
Alpha-BHC	0.50	ND			ND			ND			ND		
Beta-BHC	0.50	ND			ND			ND			ND		
Delta-BHC	0.50	ND			ND			ND			ND		
* Heptachlor epoxide	0.50	ND			ND			ND			ND		
Endosulfan I	0.50	ND			ND			ND			ND		
4,4-DDE	0.50	ND			ND			ND			ND		
* Methoxychlor	0.50	ND			ND			ND			ND		
* Chlordane (alpha and gamma)	0.50	ND			ND			ND			ND		
* Toxaphene	0.50	ND			ND			ND			ND		
p,p-DDD	0.50	ND			ND			ND			ND		
Endosulfan sulfate	0.50	ND			ND			ND			ND		
Endrin ketone	0.50	ND			ND			ND			ND		
Endosulfan II	1.0	ND			ND			ND			ND		
* 2,4,5-TP (Silvex)	1.0	ND			ND			ND			ND		
* 2,4-Dichlorophenoxy acetic acid													
Surrogate: Dibutylchlorendate		0.0361	0.1	36.1	0.095	0.1	95.0	0.121	0.1	121.0	0.109	0.1	109.0

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

* TCLP COMPOUNDS

BONNER ANALYTICAL TESTING COMPANY

QUANITITATIVE 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

ZC1023-11 BATCO File # | ZEON CHEMICAL COMPANY | COMPOSITE WATER (TCLP) SAMPLE TYPE | WASTEWATER PROCESS EFFLUENT SAMPLE POINT | Collected: 10/23/90 Analyzed: 10/26/90 DATE | 0951 TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L (ppb)	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ug	BLANK Spike % Recov	DUPLICATE Detected Concen. ug/L (ppb)	DUPLICATE Spike Amt. ug	DUPLICATE Spike % Recov	MATRIX Detected Concen. ng/ul in the extract	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ul in the extract	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
Pyridine *	10	ND			ND						ND			ND		
Phenol	10	ND			ND						34.9	200	17.5	88.8	200	44.4
Bis(2-chloroethyl)ether	10	ND			ND						ND			ND		
2-Chlorophenol	10	ND			ND						160.7	200	80.4	199.7	200	99.9
1,3-Dichlorobenzene	10	ND			ND						ND			ND		
1,4-Dichlorobenzene *	10	ND			ND						94.1	100	94.1	62.2	100	62.2
Benzyl alcohol	10	ND			ND						ND			ND		
1,2-Dichlorobenzene *	10	ND			ND						ND			ND		
2-Methylphenol	10	ND			ND						ND			ND		
Bis(2-chloroisopropyl) ether	10	ND			ND						ND			ND		
3-Methylphenol *	10	ND			ND						ND			ND		
4-Methylphenol *	10	ND			ND						ND			ND		
Hexachloroethane *	10	ND			ND						ND			ND		
N-Nitroso-di-N-propylamine	10	ND			ND						88.8	100	88.8	83.1	100	83.1
Nitrobenzene *	10	ND			ND						ND			ND		
Isophorone	10	ND			ND						ND			ND		
2,4-Dimethylphenol	10	ND			ND						ND			ND		
2-Nitrophenol	10	ND			ND						ND			ND		
Benzoic acid	50	ND			ND						ND			ND		
Bis(2-chloroethoxy) methane	10	ND			ND						ND			ND		
2,4-Dichlorophenol	10	ND			ND						ND			ND		
1,2,4-Trichlorobenzene	10	ND			ND						ND			ND		
Naphthalene	10	ND			ND						ND			ND		
4-Chloroaniline	10	ND			ND						ND			ND		
Hexachlorobutadiene *	10	ND			ND						ND			ND		
4-Chloro-3-methylphenol	10	ND			ND						74.1	200	37.1	179.6	200	89.8
2-Methylnaphthalene	10	ND			ND						ND			ND		
Hexachloropentadiene	10	ND			ND						ND			ND		
2,4,6-Trichlorophenol *	10	ND			ND						ND			ND		
2,4,5-Trichlorophenol *	50	ND			ND						ND			ND		
2-Chloronaphthalene	10	ND			ND						ND			ND		
2-Nitroaniline	50	ND			ND						ND			ND		
Dimethylphthalate	10	ND			ND						ND			ND		
Acenaphthylene	10	ND			ND						ND			ND		
2,6-Dinitrotoluene	10	ND			ND						ND			ND		
3-Nitroaniline	50	ND			ND						ND			ND		
Acenaphthene	10	ND			ND						71.6	100	71.6	49.3	100	49.9
2,4-Dinitrophenol	50	ND			ND						ND			ND		
4-Nitrophenol	50	ND			ND						19.4	200	10.0	50.9	200	25.5
Dibenzofuran	10	ND			ND						ND			ND		
2,4 Dinitrotoluene *	10	ND			ND						87.4	100	87.4	70.7	100	70.7
Diethylphthalate	10	ND			ND						ND			ND		
Fluorene	10	ND			ND						ND			ND		

* TCLP BASE NEUTRALS AND ACIDS

BONNER ANALYTICAL TESTING COMPANY

QUANITITATIVE 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

ZC1023-11 BATCO File # | ZEON CHEMICAL COMPANY | COMPOSITE WATER(TCLP) SAMPLE TYPE | WASTEWATER PROCESS EFFLUENT SAMPLE POINT | Collected: 10/23/90 Analyzed: 10/26/90 DATE | 0951 TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ug	BLANK Spike % Recov	DUPLICATE Detected Concen. ug/L (ppb)	DUPLICATE Spike Amt. ug	DUPLICATE Spike % Recov	MATRIX Detected Concen. ng/ul	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ul	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
4-Chlorophenyl-phenyl ether	10	ND			ND						ND			ND		
4-Nitroaniline	50	ND			ND						ND			ND		
4,6-Dinitro-2-methyl phenol	50	ND			ND						ND			ND		
N-Nitrosodiphenylamine	10	ND			ND						ND			ND		
1,2-Diphenylhydrazine	10	ND			ND						ND			ND		
4-Bromophenylphenylether	10	ND			ND						ND			ND		
Hexachlorobenzene *	10	ND			ND						ND			ND		
Pentachlorophenol *	50	ND			ND						ND			ND		
Phenanthrene	10	ND			ND						ND			ND		
Anthracene	10	ND			ND						ND			ND		
Di-n-butylphthalate	10	ND			ND						ND			ND		
Fluoranthene	10	ND			ND						ND			ND		
Pyrene	10	ND			ND						ND			ND		
Butylbenzlphthalate	10	ND			ND						ND			ND		
Benzo(a)anthracene	10	ND			ND						ND			ND		
3,3'-Dichlorobenzidine	20	ND			ND						ND			ND		
Chrysene	10	ND			ND						ND			ND		
Bis(ethylhexyl)phthalate	10	ND			ND						ND			ND		
Di-n-octylphthalate	10	ND			ND						ND			ND		
Benzo(b)fluoranthene	10	ND			ND						ND			ND		
Benzo(k)fluoranthene	10	ND			ND						ND			ND		
Benzo(a)pyrene	10	ND			ND						ND			ND		
Indeno(1,2,3-c,d)pyrene	10	ND			ND						ND			ND		
Dibenzo(a,h)anthracene	10	ND			ND						ND			ND		
Benzo(g,h,i)perylene	10	ND			ND						ND			ND		
SURROGATES:																
Fluorophenol			200	75.3		200	59.8					200	27.7		200	67.3
Phenol-d6			200	78.7		200	39.7					200	14.2		200	27.0
Nitrobenzene-d5			100	76.6		100	87.5					100	76.0		100	96.6
Fluorobiphenyl			100	76.2		100	68.8					100	73.8		100	94.4
2,4,6-Tribromophenol			200	73.8		200	113.9					200	51.9		200	111.1
Terphenyl-d14			100	48.8		100	70.6					100	60.1		100	98.7

* TCLP CONSTITUENTS

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

BONNER ANALYTICAL TESTING COMPANY

QUANITITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILES - GC/MS ANALYSIS DATA

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

ZC102311 BATCO File # | ZEON CHEMICAL COMPANY | WATER SAMPLE TYPE | PROCESS WASTE-WATER EFFLUENT SAMPLE POINT | Collected: 102390 @ 1100 Analyzed: 102690 @ 1413 DATE TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L (ppb)	SAMPLE Spike Amt. ng	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ng	BLANK Spike % Recov	DUPLICATE Detected Concen. ug/L (ppb)	DUPLICATE Spike Amt. ng	DUPLICATE Spike % Recov	MATRIX Detected Concen. ng/ml	MATRIX Spike Amt. ng	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ml	DUPLICATE MATRIX Spike Amt. ng	DUPLICATE MATRIX Spike % Recov
*1,1-Dichloroethene	500	ND			ND						48.6	250	97.2	47.0	250	94.1
*Benzene	500	ND			ND						46.1	250	92.2	47.0	250	94.0
*Trichloroethene	500	ND			ND						48.5	250	97.0	47.7	250	95.4
Toluene	500	ND			ND						44.2	250	88.4	53.0	250	106.0
*Chlorobenzene	500	ND			ND						ND			ND		
*Vinyl Chloride	1000	ND			ND						ND			ND		
*2-Butanone (MEK)	1000	ND			ND						ND			ND		
*Chloroform	500	ND			ND						ND			ND		
*Carbon Tetrachloride	500	ND			ND						ND			ND		
*1,2-Dichloroethane	500	ND			ND						ND			ND		
*Tetrachloroethene	500	ND			ND						ND			ND		
Epichlorohydrin	500	ND			ND						ND			ND		
Acetylacetone	500	ND			ND						ND			ND		
Diethyl Ether	500	ND			ND						ND			ND		
Tetrahydrofuran	500	67.09			ND						ND			ND		
Propylene Oxide	500	ND			ND						ND			ND		
Ethylene Oxide	500	ND			ND						ND			ND		
Surrogates:																
1,2-Dichloroethane-d4		58.7	250	117.3	51.2	250	102.4				48.9	250	97.8	52.5	250	105.0
Toluene-d8		50.3	250	100.6	46.5	250	93.0				46.4	250	92.8	47.0	250	93.9
4-Bromofluorobenzene		45.0	250	90.0	48.3	250	96.5				46.9	250	93.7	45.4	250	90.8

* indicates TCLP compounds

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

ZEON
CHEMICALS
INCORPORATED
301 W. SEVENTH STREET
HATTIESBURG, MISSISSIPPI
39401-2800
PHONE 601/583-5020
FAX 601/583-6032

October 19, 1998

Mr. Steve Spangler
Mississippi Department of Environmental Quality
Environmental Permits Division, Timber Products
P.O. Box 10385
Jackson, Mississippi 39204

Re: Notification of Additional Wastewater Stream
From Zeon Chemical, Inc. to Hercules NPDES
Permitted Outfall, Permit No. MS0001830
Hattiesburg, Mississippi

Dear Mr. Spangler:

Zeon Chemicals Inc. in Hattiesburg, Mississippi currently sends process wastewater to an adjoining facility, Hercules, for treatment in their NPDES permitted outfall (permit number MS0001830). Presently Hercules is treating 166 to 201 gallons per minute (gpm) of flow from Zeon. We are in the process of initiating a project to remediate soil and shallow ground water at our site under the oversight of the Uncontrolled Sites Section of the MDEQ. The ground water remediation phase of work will entail recovering approximately 3 to 5 gallons per minute of affected ground water which we would like to send to Hercules for treatment. At your request, we are submitting a description of the additional stream for your review to determine if a modification to Hercules NPDES permit is necessary.

Existing Process Stream

Currently, Hercules is treating wastewater from Zeon generated primarily in the Drying Building. In this building, liquids are removed from the raw rubber product through a shaker screen and French press. A summary of the constituents in the wastewater is shown in Attachment 1. As shown, volatile organics including toluene, tetrahydrofuran, and propylene glycol are present from approximately 10 to 140 milligrams per liter (mg/L). The wastewater flows from the Drying Building into the Main Sump and then through an overhead pipeline to Hercules.

Additional Ground Water Stream

Recovery efforts at the site will include pumping four 4-inch recovery wells with pneumatic pumps to recover affected ground water. Based on pumping tests conducted at the site, each well may produce up to 1 gpm for a total of 4 gpm. Zeon recently completed a Comprehensive Ground Water Sampling event on September 3-4, 1998. A summary of the constituents detected in the ground water is shown in Tables 1 and 2 and in the laboratory reports in Attachment 2.

As shown, the constituents detected in the ground water are similar to those in the process wastewater, but at lower concentrations. Two volatile constituents were detected in the ground water (see Table 1), at a higher concentration than in the process wastewater and four semivolatile organics were detected in one well (See Table 2, S-4).

Based on an estimated flow of one gpm from each of these wells, the concentration data shown in Tables 1 and 2 and the combined flow rate of 170 to 205 gpm, the resulting concentrations of these six constituents in the combined flow (ground water and process water) is estimated to be:

benzene	0.011 mg/L to 0.013 mg/L
diethyl ether	0.011 mg/L to 0.013 mg/L
2-methylphenol	0.0007 mg/L to 0.0008 mg/L
4-methylphenol	0.0002 mg/L to 0.0002 mg/L
benzoic acid	0.0002 mg/L to 0.0002 mg/L
naphthalene	0.0001 mg/L to 0.0001 mg/L

The calculations for these concentrations are in Attachment 3.

Please review the data submitted in Table 1 and Table 2 for the ground water stream that we would like to combine with the process wastewater. As stated previously, the total flow of ground water that will be added to Zeon's process wastewater will be approximately 3-5 gpm. Please let us know if the addition of this ground water stream will require a NPDES permit modification prior to Hercules accepting the water for treatment. We anticipate that the ground water recovery efforts will begin around November/December 1998.

I look forward to receiving your response. If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

David J. McDonald

David J. McDonald
Process & Environmental Engineer

cc: Mr. Jonathan Beevers, ERM-Southwest, Inc.
Ms. Lisa Arceneaux, P.E., DEE
Mr. W.G. Miller, Zeon Chemicals

Zeon Chemicals Incorporated

Mississippi Plant
1301 West 7th Street
Hattiesburg, MS 39401

Facsimile Communication

Phone: (601)-583-7435
Fax: (601)-583-6032

To: Charlie Jordan **Fax#** 584-3226

From: David J. McDonald, Process & Environmental Engineer

There will be 4 page(s) to follow.

Comments: Charlie,

I don't remember if I sent you the tables and attachments for the October 19 letter to the state requesting permission to add recovered groundwater into our wastewater. They're attached minus the lab reports which are summarized in the tables. The state is requesting a letter from Hercules stating that "the addition of the recovered groundwater will not adversely affect Hercules' ability to meet its current permit limits". If you agree with this statement, would you please draft a letter to this effect addressed to Ms. Tracy Tomkins at MDEQ? It is the last thing holding us up from starting our remediation. We hope to start up by the middle of January. Thank you very much for your help.

David

Table 1
Summary of Ground Water Constituents of Concern
Zeon Chemicals, Inc.
Hattiesburg, Mississippi

Monitor Well I.D.	Sample Date	Toluene (mg/L)	Dichloro-methane (mg/L)	Tetrahy-drofuran (mg/L)	* Benzene (mg/L)	1,1-Dichlor-oethane (mg/L)	1,2-Dichlor-opropane (mg/L)	Diethyl ether (mg/L)	Propylene Oxide (mg/L)
Shallow Wells									
S-4	May-92	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	NA
	Sept 4, 98	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.879	[redacted]
(dup)	Sept 4, 98	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.647	[redacted]
S-5	May-92	<0.01	0.002	<0.01	0.005	[redacted]	[redacted]	0.005	NA
	Sept 4, 98	<0.005	<0.005	<0.005	0.001	0.003	<0.005	0.003	<0.005
S-6	May-92	0.0038	<0.005	<0.005	[redacted]	<0.005	<0.005	0.816	<0.005
	Sept 4, 98	<0.250	[redacted]	[redacted]	[redacted]	<0.250	[redacted]	1.3	[redacted]
S-7	May-92	0.038	<0.005	0.033	[redacted]	0.01	[redacted]	0.096	NA
	Sept 4, 98	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.035	<0.005
Cleanup Levels(b)		1	0.005	0.25	0.005	0.025	0.005	3	0.005

Notes:
NA=not analyzed
(a) MW-7 was originally a shallow well that was replaced with S-7
(b) See Table 2-2 of the Final Soil and Ground Water Remediation Plan dated June 3, 1998 and approved by MDEQ on June 16,1998
[redacted] = exceeds cleanup level

B1043ts.xls

Table 2
Summary of Ground Water Constituents of Concern
Semivolatile Organics
Zeon Chemicals, Inc.
Hattiesburg, Mississippi

Monitor Well I.D.	Sample Date	2-Methyl phenol (mg/L)	4-Methyl phenol (mg/L)	Benzoic Acid (mg/L)	Naphthalene (mg/L)	Notes
Shallow Wells						
S-4	May-92	NA	NA	NA	NA	
	Sept 4, 98	0.142	0.044	0.032	0.022	or benzoic acid was 0.05mg/L
(dup)	Sept 4, 98	0.112	0.032	0.022	0.021	or benzoic acid was 0.05mg/L
S-5	May-92	NA	NA	NA	NA	
	Sept 4, 98	<0.01	<0.01	<0.05	<0.01	
S-6	May-92	NA	NA	NA	NA	
	Sept 4, 98	<0.01	<0.01	<0.05	<0.01	
S-7	May-92	NA	NA	NA	NA	
	Sept 4, 98	<0.01	<0.01	<0.05	<0.01	
Cleanup Levels(b)		**1.8**	**0.18**	**150**	**1.5**	No drinking water standards for these compounds (per most recent Drinking Water Advisory dated 10/96)

Notes:
NA=not analyzed
(a) MW-7 was originally a shallow well that was replaced with S-7
(b) Ground water cleanup levels from EPA Region III Risk Based Concentration Table for residential use. The most recent values were obtained from the Region III web site on Sept. 28, 1998 (http://www.epa.gov/reg3hwmd/risk/riskmenu.htm) last updated April 1998.

sm067.xls

ATTACHMENT 1
Process Wastewater Analysis From Main Sump

Zeon Chemicals, Inc.
Hattiesburg, Mississippi

Zeon Chemicals, Inc. - Mississippi Plant
Hattiesburg, MS

Summary Typical Wastewater Characteristics

Parameter mg/l	Product "A" Campaign	Product "B" Campaign
BOD	1,200	400
COD	5,400	1,000
TOC	1,400	340
TSS	30	6
TDS	1,300	1,700
Toluene	110	NA
Tetrahydrofuran (THF)	140	NA
Acetone	ND	NA
Epichlorohydrin	2	NA
2-Butanone (MEK)	3	NA
* Benzene	0.019	NA
Ethylene Glycol	53	NA
Propylene Glycol	7	NA
Acetyl Acetone	170	NA
	1994 Flow Data: Average Monthly = 0.08 mgd; Peak monthly = 0.115 mgd	1998 Flow Data Avg. Monthly = 0.24 mgd; Peak Monthly = 0.29 mgd

Notes:
1) ND = Not Detected
2) NA = Not Available (Levels of organics in the Product "B" campaign are expected to be lower than those found in the Product "A" campaign)
3) Though metals analyses have not been conducted on the total plant wastewater stream, process area sampling and analysis indicates all metals would be well below Hattiesburg POTW limitations

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39403
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

May 9, 2001

CMRRR 7000 0520 0024 6195 1820

Mr. Bennie Sellers
Director of Public Services
P. O. Box 1898
Hattiesburg, MS 39403-1898

Dear Mr. Sellers:

The purpose of this letter is to document the current status of our wastewater facilities relative to our POTW permit.

As you are aware, we stopped receiving Zeon Chemical's wastewater at the end of calendar year 2000. Zeon is now a direct discharge to the city POTW with their own POTW discharge permit.

We estimate that the elimination of Zeon wastewater from our effluent has reduced our hydraulic loading by approximately 20% and our organic loading by approximately 50%. Our current pre-treatment system consists of sedimentation, skimming, neutralization, and equalization, as shown in the attachment.

If I can answer any questions or provide additional information, please call Charles Jordan at 601/545-3450, ext. 360.

Very truly yours,

HERCULES INCORPORATED

Walter D. Langhans
Plant Manager

Attachment

cc: CMRRR 7000 0520 0024 6195 1837
Mr. Toby Cook
Chief, Chemical Branch
MS Dept. of Environmental Quality
P. O. Box 10385
Jackson, MS 39289-0385

HERCULES

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 Sample Date/Time: 9/04/90 @ ?
Collected By: Client Date/Time Rec'd: 9/04/90 @ 1400
Date/Time Begun: 9/04/90 @ 1400

TCLP 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 ammendments.

MDL = Method Detection Limit.

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

ldb

BONNER ANALYTICAL TESTING COMPANY

QUANITITATIVE RESULTS AND QUALITY ASSURANCE DATA

VOLATILES - GC/MS ANALYSIS DATA

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

HER090490-19
BATCO File #

HERCULES COMPANY

SLUDGE
SAMPLE TYPE

SLUDGE
SAMPLE POINT

Collected: 090490
Analyzed: 091090 @ 0207
DATE TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L (ppb)	SAMPLE Spike Amt. ng	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ng	BLANK Spike % Recov	DUPLICATE Detected Concen. ug/L (ppb)	DUPLICATE Spike Amt. ng	DUPLICATE Spike % Recov	MATRIX Detected Concen. ng/ml	MATRIX Spike Amt. ng	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ml	DUPLICATE MATRIX Spike Amt. ng	DUPLICATE MATRIX Spike % Recov
-Dichloroethene	5	36.0			BMDL						45.2	250	90.4	47.3	250	94.6
zene	5	7.7			ND						52.7	250	105.4	53.5	250	107.1
chloroethene	5	ND			ND						50.9	250	101.9	52.4	250	104.9
orobenzene	5	ND			ND						50.1	250	100.2	51.0	250	102.1
yl Chloride	10	ND			ND						ND			ND		
utanone (MEK)	10	119.7			ND						ND			ND		
oroform	5	BMDL			ND						ND			ND		
bon Tetrachloride	5	ND			ND						ND			ND		
-Dichloroethane	5	ND			ND						ND			BMDL		
rachloroethene	5	ND			ND						ND			ND		
rogates:																
-Dichloroethane-d4		45.4	250	90.8	49.7	250	99.4				49.1	250	98.2	43.9	250	87.8
uene-d8		52.6	250	105.2	51.1	250	102.3				53.6	250	107.1	48.7	250	97.4
romofluorobenzene		51.2	250	102.5	52.7	250	105.5				59.2	250	118.4	51.7	250	103.4

Certified 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

Collected: 09/04/90
Analyzed: 09/21/90 2148

HERO90490-19 BATCO File #	HERCULES COMPANY	SLUDGE SAMPLE TYPE	SLUDGE SAMPLE POINT	DATE	TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ug	BLANK Spike % Recov	DUPLICATE Detected Concen. ug/L (ppb)	DUPLICATE Spike Amt. ug	DUPLICATE Spike % Recov	MATRIX Detected Concen. ng/ul	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ul	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
Chlorophenyl-phenyl ether	10	ND			ND						ND			ND		
Nitroaniline	50	ND			ND						ND			ND		
6-Dinitro-2-methyl phenol	50	ND			ND						ND			ND		
Nitrosodiphenylamine	10	ND			ND						ND			ND		
2-Diphenylhydrazine	10	ND			ND						ND			ND		
Bromophenylphenylether	10	ND			ND						ND			ND		
xachlorobenzene *	10	ND			ND						ND			ND		
ntachlorophenol *	50	ND			ND						19.6	200	9.8	35.6	200	17.8
enanthrene	10	ND			ND						ND			ND		
thracene	10	ND			ND						ND			ND		
-n-butylphthalate	10	ND			ND						ND			ND		
uoranthene	10	ND			ND						ND			ND		
rene	10	ND			ND						29.90	100	29.9	54.3	100	54.3
tylbenzlphthalate	10	ND			ND						ND			ND		
nzo(a)anthracene	10	ND			ND						ND			ND		
3'-Dichlorobenzidine	20	BMDL			ND						ND			ND		
rysene	10	ND			ND						ND			ND		
s(ethylhexyl)phthalate	10	BMDL			ND						ND			ND		
-n-octylphthalate	10	ND			ND						ND			ND		
nzo(b)fluoranthene	10	ND			ND						ND			ND		
nzo(k)fluoranthene	10	ND			ND						ND			ND		
nzo(a)pyrene	10	ND			ND						ND			ND		
deno(1,2,3-c,d)pyrene	10	ND			ND						ND			ND		
benzo(a,h)anthracene	10	ND			ND						ND			ND		
nzo(g,h,i)perylene	10	ND			ND						ND			ND		
RROGATES:																
uorophenol			200	47.2		200	89.1					200	63.8		200	44.9
enol-d6			200	21.6		200	62.9					200	34.1		200	28.9
trobenzene-d5			100	47.4		100	100.9					100	52.3		100	53.0
uorobiphenyl			100	43.8		100	90.9					100	47.8		100	47.8
4,6-Tribromophenol			200	87.9		200	104.6					200	93.5		200	55.6
rphenyl-d14			100	69.4		100	79.4					100	120.4		100	54.2

* TCLP BASE NEUTRALS AND ACIDS

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

BONNER ANALYTICAL TESTING COMPANY

QUANITITATIVE 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 BATCO File #	HERCULES COMPANY	SLUDGE SAMPLE TYPE	SLUDGE SAMPLE POINT	Collected: 09/04/90 Analyzed: 09/21/90 DATE	2148 TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L (ppb)	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ug	BLANK Spike % Recov	DUPLICATE Detected Concen. ug/L (ppb)	DUPLICATE Spike Amt. ug	DUPLICATE Spike % Recov	MATRIX Detected Concen. ng/ul in the extract	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ul in the extract	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
yridine *	10	ND			ND						ND			ND		
enol	10	ND			ND						43.4	200	21.8	83.9	200	41.9
s(2-chloroethyl)ether	10	ND			ND						ND			ND		
-Chlorophenol	10	ND			ND						48.2	200	24.1	106.7	200	53.4
,3-Dichlorobenzene	10	ND			ND						ND			ND		
,4-Dichlorobenzene *	10	ND			ND						37.3	100	37.3	42.7	100	42.7
nzyl alcohol	10	28.5			ND						ND			ND		
,2-Dichlorobenzene	10	ND			ND						ND			ND		
-Methylphenol *	10	406.5			ND						ND			ND		
s(2-chloroisopropyl) ether	10	ND			ND						ND			ND		
-Methylphenol *	10	ND			ND						ND			ND		
-Methylphenol *	10	ND			ND						ND			ND		
xachloroethane *	10	ND			ND						42.5	100	42.5	47.2	100	47.2
-Nitroso-di-N-propylamine	10	ND			ND						ND			ND		
trobenzene *	10	ND			ND						ND			ND		
ophorone	10	BMDL			ND						ND			ND		
,4-Dimethylphenol	10	BMDL			ND						ND			ND		
-Nitrophenol	10	ND			ND						ND			ND		
nzoic acid	50	BMDL			ND						ND			ND		
s(2-chloroethoxy) methane	10	ND			ND						ND			ND		
,4-Dichlorophenol	10	ND			ND						ND			ND		
,2,4-Trichlorobenzene	10	ND			ND						ND			ND		
phthalene	10	BMDL			ND						ND			ND		
-Chloroaniline	10	ND			ND						ND			ND		
xachlorobutadiene *	10	ND			ND						70.7	200	35.3	105.8	200	52.9
-Chloro-3-methylphenol	10	ND			ND						ND			ND		
-Methylnaphthalene	10	ND			ND						ND			ND		
xachloropentadiene	10	ND			ND						ND			ND		
,4,6-Trichlorophenol *	10	ND			ND						ND			ND		
,4,5-Trichlorophenol *	50	ND			ND						ND			ND		
-Chloronaphthalene	10	ND			ND						ND			ND		
-Nitroaniline	50	ND			ND						ND			ND		
methylphthalate	10	ND			ND						ND			ND		
enaphthylene	10	ND			ND						ND			ND		
,6-Dinitrotoluene	10	ND			ND						ND			ND		
-Nitroaniline	50	ND			ND						35.1	100	35.1	54.1	100	54.1
enaphthene	10	ND			ND						ND			ND		
,4-Dinitrophenol	50	ND			ND						39.4	200	19.7	66.1	200	33.1
-Nitrophenol	50	ND			ND						ND			ND		
benzofuran	10	ND			ND						32.8	100	32.8	55.8	100	55.8
,4 Dinitrotoluene *	10	ND			ND						ND			ND		
ethylphthalate	10	ND			ND						ND			ND		
uorene	10	ND			ND											

* TCLP BASE NEUTRALS AND ACIDS

BONNER ANALYTICAL TESTING COMPANY

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

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

HER090490-19 BATCO File #
HERCULES COMPANY
SLUDGE SAMPLE TYPE
SAMPLE POINT
Collected: 09/04/90
Analyzed: 09/13/90 DATE
1030 TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L (ppb)	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ug	BLANK Spike % Recov	MATRIX Detected Concen. ug/L (ppb)	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ug/L (ppb)	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
Lindane *	1.0	ND			ND			0.167	0.20	83.5	0.163	0.20	81.5
Heptachlor *	1.0	ND			ND			0.151	0.20	75.5	0.173	0.20	86.5
Aldrin	1.0	ND			ND			0.168	0.20	84.0	0.181	0.20	90.5
Dieldrin	1.0	10.4			ND			0.430	0.50	86.0	0.425	0.50	85.0
Endrin *	1.0	ND			ND			0.506	0.50	101.6	0.505	0.50	101.0
p,p-DDT	1.0	ND			ND			0.475	0.50	95.0	0.459	0.50	91.8
Alpha-BHC	1.0	ND			ND			ND			ND		
Beta-BHC	1.0	ND			ND			ND			ND		
Delta-BHC	1.0	ND			ND			ND			ND		
Heptachlor epoxide	1.0	ND			ND			ND			ND		
Endosulfan I	1.0	ND			ND			ND			ND		
4,4-DDE	1.0	ND			ND			ND			ND		
Methoxychlor *	1.0	ND			ND			ND			ND		
Chlordane *(alpha and gamma)	1.0	ND			ND			ND			ND		
Toxaphene *	1.0	ND			ND			ND			ND		
p,p-DDD	1.0	ND			ND			ND			ND		
Endosulfan sulfate	1.0	ND			ND			ND			ND		
Endrin ketone	1.0	ND			ND			ND			ND		
Endosulfan II	1.0	ND			ND			ND			ND		
2,4,5-TP (Silvex) *	1.0	ND			ND			ND			ND		
2,4-Dichlorophenoxy acetic acid *	1.0	ND			ND			ND			ND		
Surrogate:													
Dibutylchlorendate		0.0551	0.1	55.1	0.078	0.1	78.0	0.0915	0.1	91.5	0.077	0.1	77.0
Dichlorophenylacetic acid		0.300	0.5	60.0	0.465	0.5	93.0						

* TCLP PESTICIDES & HERBICIDES

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

LK 3766

From Leo

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

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
Sample Description: I.B Sludge
Sample collection date: 03/05/96
Lab submittal date: 03/05/96
Received by: JPH

Location Code: HERCULES
Sample collector: J HUSBANDS
Time: 11:30
Time: 16:21
Validated by: JPH

Parameter: TCLP Extraction (Leach)
Method reference: SW846-1311
Result: Completed
Date started: 03/06/96
Time started: 16:00

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

Parameter: TCLP Extraction for volatiles
Method reference: SW846-1311
Result: Completed
Date started: 03/06/96
Time started: 16:00

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

Parameter: Acid Digestion
Method reference: SW846-3010
Result: Completed
Date started: 03/11/96
Time started: 08:45

MDL or sensitivity:
Date finished: 03/11/96
Analyst: HPG

Parameter: Mercury water digestion
Method reference: SW846-7470
Result: Completed
Date started: 03/11/96
Time started: 09:45

MDL or sensitivity:
Date finished: 03/11/96
Analyst: HPG

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

Date finished: 03/11/96
Analyst: HPG

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	

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

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, Ph.D.
BONNER ANALYTICAL TESTING COMPANY

lr

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

lr

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

BT34003 BATCO File #	Hercules COMPANY	TCLP SAMPLE TYPE	Sediment Basin Sludge SAMPLE POINT	Collected: 082896 @ 1400 Analyzed: 091096 @ 1413 DATE TIME

Compound EPA HW NO.	MDL mg/L (ppm)	SAMPLE Detected Concen. mg/L (ppm)	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	REGULATORY LEVEL Concen. mg/L (ppm)	BLANK Detected Concen. mg/L (ppm)	BLANK Spike Amt. ug	BLANK Spike % Recov	MATRIX Detected Concen. ng/ul in the extract	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ul in the extract	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
D038 Pyridine*	.020	ND			5.0	ND			70.0	100	70.0	65.6	100	65.6
D027 1,4-Dichlorobenzene*	.020	ND			7.5	ND			86.9	100	86.9	76.1	100	76.1
D023 2-Methylphenol*	.020	0.328			200.0	ND			131.4	150	87.6	130.3	150	86.9
D024 3-Methylphenol*	.020	0.506			200.0	ND			140.1	150	93.4	136.5	150	91.0
D025 4-Methylphenol*	.020	0.478			200.0	ND			132.3	150	88.2	128.6	150	85.7
D034 Hexachloroethane*	.020	ND			3.0	ND			79.4	100	79.4	81.0	100	81.0
D036 Nitrobenzene*	.020	ND			2.0	ND			80.0	100	80.0	76.4	100	76.4
D033 Hexachlorobutadiene*	.020	ND			0.5	ND			92.8	100	92.8	82.9	100	82.9
D042 2,4,6-Trichlorophenol*	.020	ND			2.0	ND			135.6	150	90.4	133.6	150	89.1
D041 2,4,5-Trichlorophenol*	.100	ND			400.0	ND			139.1	150	92.7	138.2	150	92.1
D030 2,4 Dinitrotoluene*	.020	ND			0.13	ND			78.1	100	78.1	79.6	100	79.6
D032 Hexachlorobenzene*	.020	ND			0.13	ND			94.3	100	94.3	82.4	100	82.4
D037 Pentachlorophenol*	.100	ND			100.0	ND			140.8	150	93.9	141.1	150	94.1
SURROGATES:														
Fluorophenol		155.2	200	77.6		152.6	200	76.3	100.8	200	50.4	97.8	200	48.9
Phenol-d6		118.1	200	59.1		98.9	200	49.5	71.1	200	35.6	69.3	200	34.6
Nitrobenzene-d5		69.9	100	69.9		85.2	100	85.2	84.7	100	84.7	73.7	100	73.7
Fluorobiphenyl		82.5	100	82.5		81.7	100	81.7	97.8	100	97.8	83.9	100	83.9
2,4,6-Tribromophenol		180.6	200	90.3		201.1	200	100.6	172.4	200	86.2	159.4	200	79.7
Terphenyl-d14		99.4	100	99.4		100.3	100	100.3	78.5	100	78.5	73.4	100	73.4

* MATRIX SPIKING COMPOUNDS

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 - GC/MS ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
Analysis Method - SW-846 (8260)

BT34003 BATCO File #	HERCULES COMPANY	TCLP EXTRACTION SAMPLE TYPE	IMPOUNDMENT BASIN SLUDGE SAMPLE POINT	Collected: 08/28/96 @ 1400 Analyzed: 09/05/96 @ 1537 DATE TIME

Compound	MDL mg/L (ppm)	SAMPLE Detected Concen. mg/L (ppm)	SAMPLE Spike Amt. ng	SAMPLE Spike % Recov	BLANK Detected Concen. mg/L (ppm)	BLANK Spike Amt. ng	BLANK Spike % Recov	REGULATORY LEVEL Concen. mg/L (ppm)		MATRIX (BT34002) Detected Concen. mg/L	MATRIX Spike Amt. ng	MATRIX Spike % Recov	DUPLICATE MATRIX (BT34002) Detected Concen. mg/L	DUPLICATE MATRIX Spike Amt. ng	DUPLICATE MATRIX Spike % Recov
EPA HW NO.															
D029 1,1-Dichloroethene	0.05	ND			ND			0.7		0.051	250	101.2	0.053	250	106.0
* D018 Benzene	0.05	0.012 J			ND			0.5		0.052	250	104.8	0.051	250	103.0
D040 Trichloroethene	0.05	ND			ND			0.5		0.052	250	103.4	0.054	250	107.4
D021 Chlorobenzene	0.05	ND			ND			100.0		0.056	250	112.4	0.057	250	114.0
D043 Vinyl Chloride	0.1	ND			ND			0.2		0.061	250	122.4	0.051	250	102.6
D035 2-Butanone (MEK)	0.1	0.436			ND			200.0		0.167	250	107.4	0.195	250	162.8
D022 Chloroform	0.05	ND			ND			6.0		0.052	250	103.6	0.056	250	112.6
D019 Carbon Tetrachloride	0.05	ND			ND			0.5		0.054	250	107.6	0.054	250	107.6
D028 1,2-Dichloroethane	0.05	ND			ND			0.5		0.050	250	99.4	0.050	250	99.6
D039 Tetrachloroethene	0.05	ND			ND			0.7		0.056	250	112.6	0.060	250	120.8
		ug/L (ppb)			ug/L (ppb)					ug/L (ppb)			ug/L (ppb)		
Surrogates:															
Dibromofluoromethane		48.7	250	97.4	51.0	250	102.0			49.2	250	98.4	51.4	250	102.8
Toluene-d8		50.7	250	101.4	51.9	250	103.8			50.1	250	100.2	48.3	250	96.6
4-Bromofluorobenzene		55.6	250	111.2	48.0	250	96.0			48.3	250	96.6	51.7	250	103.4

J - results estimated or Below Method Detection Level.

Certified by: Michael S. Bonner
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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
PESTICIDE/POLYCHLORINATED BIPHENYLS - ECD ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
Analysis Method - SW-846;8080

BT34003T
BATCO File #

Hercules
COMPANY

TCLP
SAMPLE TYPE

Sediment
Basin Sludge
SAMPLE POINT

Collected: 08/28/96 1400
Analyzed: 09/23/96 2255
DATE TIME

Compound	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L (ppb)	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ug	BLANK Spike % Recov	MATRIX Detected Concen. ug/L (ppb)	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ug/L (ppb)	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
* Gamma-BHC (Lindane)	0.05	ND			ND			7.74	12.5	61.9	7.49	12.5	59.9
* Heptachlor	0.05	ND			ND			6.35	12.5	50.8	6.62	12.5	53.0
* Endrin	0.10	ND			ND			13.21	25.0	52.8	13.53	25.0	54.1
Heptachlor epoxide	0.05	ND			ND								
* Methoxychlor	0.50	ND			ND			9.63	12.5	77.0	9.00	12.5	72.0
Toxaphene	1.00	ND			ND								
Chlordane	0.50	ND			NO								
* 2,4-D	0.50	ND			ND			1.29	2.0	64.5	1.61	2.0	80.5
* 2,4,5-TP (Silvex)	0.50	ND			ND			1.57	2.0	78.5	0.91	2.0	45.5
Surrogate:													
Tetrachloro-m-xylene		0.182	0.20	91.0	0.075	0.20	37.5	0.100	0.20	50.0	0.064	0.20	32.0
Decachlorobiphenyl		0.116	0.20	58.0	0.059	0.20	29.5	0.111	0.20	55.5	0.107	0.20	53.5
Dichlorophenylacetic acid		1.604	2.00	80.2	2.200	2.00	110.0	1.160	2.00	58.0	0.951	2.00	47.6

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

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 #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/5/00

TCLP Metals

Parameter	Detection Limit (mg/l)	Results (mg/l)	Regulatory Level (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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595 East Tallmadge Avenue • Akron, Ohio 44310 • Phone: 330-253-8211 • Fax: 330-253-4489
Email: set3746@apk.net

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 #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/1/00

TCLP Volatiles

Parameter	Detection Limit (mg/L)	Results (mg/L)	Regulatory Level (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

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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 #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 8/31/00

TCLP BNA

Parameter	Detection Limit (mg/l)	Results (mg/l)	Regulatory Level (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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Email: set37460@apk.net

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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 #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/7/00

TCLP Herbicides

Parameter	Detection Limit (mg/l)	Results (mg/l)	Regulatory Level (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: set3746@apk.net

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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 #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 9/1/00

TCLP Pesticides

Parameter	Detection Limit (mg/l)	Results (mg/l)	Regulatory Level (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

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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 #: IB Sludge
Laboratory ID #: 003248-01
Matrix: Liquid
Analyst: TRS

Parameter	Method	Detection Limit (mg/l)	Results (mg/l)	Date of Analysis
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

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SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

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

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

Laboratory Manager: Bassam Youssef

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Email: set3746@apk.net

JORDAN,CHARLIE / HATT/MS - HPDesk print.

Hercules Hattiesburg
Electronic Message
Dated: 06/30/92 at 0903

Subject: EPA-SI VISIT
Sender: Charlie JORDAN / HATT/MS

Part 1.

FROM: Charlie JORDAN / HATT/MS

TO: Ncarlso0 CARLSON / MOSNET
Eclark0 CLARK / MOSNET
Jdoyle0 DOYLE / MOSNET
Aforste0 FORSTER / MOSNET
Dkeilma0 KEILMAN / MOSNET

Part 2.

Part 3.

ON JUNE 22 1992 US EPA REGION IV CONDUCTED A FOUR DAY SITE INVESTIGATION. CONTRACTOR ACTIVITIES INCLUDED INSPECT,SKETCH,PHOTOGRAPH,COLLECT SURFACE AND SUBSURFACE SOIL SAMPLES,GROUNDWATER AND SUBSURFACE WATER SAMPLES,SEDIMENT SAMPLES, AND AIR MONITORING. PRIOR TO 6/22/92 THE CONTRACTOR VISITED ON JUNE 1 1992 FOR A ONE-DAY RECONAISSANCE.

E ORIGIONAL FIELD STUDY PLAN WAS FOR 21 SOIL AND 13 WATER SAMPLES.

THE ACTUAL SAMPLING WAS 5 SURFACE SOIL .
2 SUBSURFACE SOIL . 11 SOIL SAMPLES
4 SEDIMENT .
2 SURFACE WATER .
2 TEMPORARY WELLS . 6 WATER SAMPLES
2 PERMANANT WELLS .

THEY SEEMED TO BE MAINLY INTERESTED IN TWO SPOTS (WHERE FORMER EMPLOYE(S) HAD TOLD THEM DRUMS WERE BURIED). SINCE SOME OF THE LANDMARKS WERE NOT CLEAR THEY SAID THEY HAD BEEN TALKING TO FORMER EMPLOYEES AND WANTED TO KNOW HOW I FELT ABOUT BRINGING FORMER EMPLOYEES ON-SITE. I DIDN'T ANSEWER BUT TOLD THEM I COULD SHOW THEM THE PLACES ON THERE SKETCHES. I DID AND THERE GEOPHYSICAL DATA CONFIRMED THE AREAS. LATER I TALKED TO N CARLSON AND E CLARK BUT THE SUBJECT NEVER CAME UP AGAIN. WITH THE GEOPHYSICAL DATA THEY SEEMED LIKE THEY WERE IN THE RIGHT SPOTS.

ONE WAS WHERE SOME DRUMS OR SOMETHING WAS SUPPOSEDLY BURIED AND THE OTHER WAS THE "OLD" PLANT TRASH PILE. ITS PROBABLY 20 TO 30 FT DEEP BUT THEY ONLY WENT A FEW FEET DEEP BECAUSE OF DIFFICULTY, OR BECAUSE OF WHAT THEY FOUND "ROSIN" WAS ENOUGH TO SATISFY THEM THAT IT WAS CAUSING THE GEOPHYSICAL READINGS.

THE CONTRACTOR SAID BASED ON WHAT HE HAD SEEN WE PROBABLY WOULD NOT SCORE ENOUGH, AND IT MAY BE 6 MONTHS TO A YEAR BEFORE WE GET ANY RESULTS BACK. WE IT ALL SAMPLES.

COMMENT: WE NEED A GOOD ANSEWER TO THE "IN THE FIELD QUESTION"...HOW DO YOU FEEL ABOUT US(THE CONTRACTOR) BRINGING PAST EMPLOYE(s) ONTO THE PLANT? IF I

UNDERSTOOD ETTA SHE SUGGESTED WE WOULD REQUEST TO INTERVIEW THE PERSON FIRST (I'M NOT SURE WHAT THE ANSEWER WOULD BE AFTER THE INTERVIEW OF AN UNHAPPY PERSON). IT SEEMS LIKE ALL A CONTRACTOR WOULD HAVE TO DO IS GO OUT AND HIRE THE PERSON(s) AND THEY COULD COME ONTO THE SITE (IS THIS THE WRONG ANSEWER)? I GUESS WE COULD ALWAYS USE THE STANDARD ANSEWER(STALL) BY SAYING WE WILL HAVE TO CHECK WITH CORPORATE FIRST. BUT WHATS NEEDED OR WHAT THEY ARE LOOKING FOR IN THIS SITUATION IS A PROMPT RESPONSE.

PLEASE ADVISE.

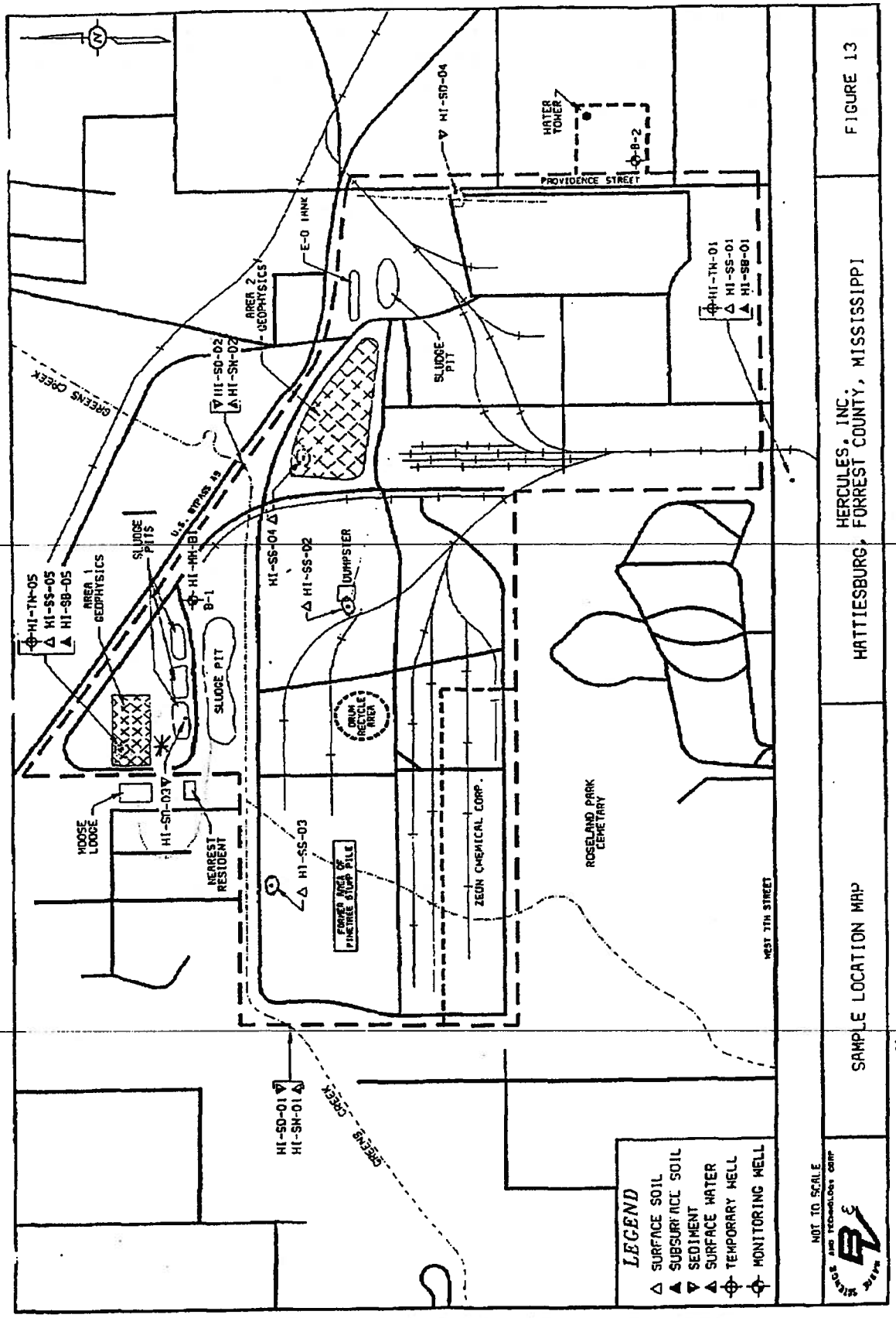
FIGURE 13
HATTIESBURG, HERCULES, INC. FORREST COUNTY, MISSISSIPPI
SAMPLE LOCATION MAP
NOT TO SCALE
LEGEND
SURFACE SOIL
SUBSURFACE SOIL
SEDIMENT
SURFACE WATER
TEMPORARY WELL
MONITORING WELL
PROVIDENCE STREET
WEST 7TH STREET
ROSELAND PARK CEMETARY
ZEON CHEMICAL CORP.
FORMER AREA OF PINETREE STUMP PILE
DRUM RECYCLE AREA
DUMPSTER
SLUDGE PIT
SLUDGE PITS
SLUDGE PIT
WATER TOWER
AREA 1 GEOPHYSICS
AREA 2 GEOPHYSICS
E-O TANK
MOOSE LODGE
NEAREST RESIDENT
GREENS CREEK
U.S. BYPASS 49
HI-TN-05
HI-SS-05
HI-SB-05
HI-MW-01
B-1
HI-SS-04
HI-SS-02
HI-SS-03
HI-SN-03
HI-SD-02
HI-SN-02
HI-SD-04
HI-SD-01
HI-SN-01
HI-TN-01
HI-SS-01
HI-SB-01
B-2

ASHLAND.

Ashland Hercules Water Technologies

613 West 7th Street
Hattiesburg, MS 39401
Tel (601) 584-3238
Fax (601)584-3226

FAX

DATE: December 9, 2008 FAX # : 202-637-5910

TO: Kenneth Kastner, Partner, HOGAN & HARTSON LLP

FROM: Charles Jordan

RE: Site Inspection Report, April 29, 1993

Ten pages of Site Inspection Report of April 29, 1993, Hattiesburg Plant, MS.

HERCULES

SITE INSPECTION REPORT

Hercules, Inc.

Hattiesburg, Forrest County, Mississippi
EPA ID № MSD008182081
WasteLAN № 02297

EPA Work Assignment № 11
EPA Contract № 68-W9-0055

Prepared for
WASTE MANAGEMENT DIVISION
U.S. Environmental Protection Agency

Prepared by
B&V Waste Science and Technology Corp
BVWST Project № 52011.040

April 29, 1993

Prepared by:	Reviewed by:	Approved by:
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Site Manager	Technical Reviewer	Project Manager

Executive Summary

The Hercules, Inc. facility is located on West Seventh Street in Hattiesburg, which is situated in the northern portion of Forrest County, Mississippi. Since 1923, this 200 acre facility has manufactured over 250 different products through a chemical operation which involves wood grinding, shredding extraction, fractionation, refining, rosin processing and distillation. A state preliminary assessment was completed in December 1989.

Two source areas were detected on Hercules property: 37.7 acres of contaminated soil and 895,600 cubic feet of surface impoundments. The contaminated soil includes such contaminates as cadmium, cobalt, lead, mercury, toluene, MEK, benzene, PCB's, and acetone. Contaminants present in the surface impoundment include arsenic, heavy metals, toluene, MEK, and benzene.

The Hercules plant is located within the Pine Hills physiographic district of the Coastal Plain physiographic province. Groundwater occurs in the alluvial and terrace deposits as well as the Hattiesburg formation. The nearest private well is located 0.3 miles north of the site. The nearest municipal well is 0.7 miles northwest of the facility. The groundwater pathway is a great concern due to the release of contaminants and the large nearby population which utilizes groundwater.

The surface water pathway is also a concern at Hercules, Inc.. A release of contaminants has been noted within Greens Creek which is attributable to source areas on Hercules property. The presence of endangered or threatened species plus recreational fishing and swimming render this site a concern and threat to populations and environments.

The soil and air pathways are also a concern at the Hercules site. A large population surrounds the facility and many endangered and threatened species are found in close proximity to the site.

Due to releases of contaminants into the environment and the many targets potentially affected, further action should be planned under CERCLA authority for Hercules, Inc.

Site Inspection
Hercules, Inc.
Hattiesburg, Forrest County, Mississippi
EPA ID Nº MSD008182081
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April 29, 1993
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Table 3

Summary of Inorganic Analytical Results
Surface Soil/Subsurface Soil Samples
Hercules, Inc.
Hattiesburg, Forrest County, Mississippi

	B'GROUND	Dunster Loading	Dozier	Hill	Moose Lodge	B'GROUND	Moose Lodge
	SS-01	SS-02	SS-03	SS-04	SS-05	SB-01	SB-05
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminium	3900 J 4233	1700 J 1773	4000 J	2300 J	4500 J	1800 J	6800 J
Arsenic	3.7	2.8	–	–	–	–	–
Barium	88 J 101	80 J 36.4	26J	41 J	27 J	9.1 J	26 J
Beryllium	0.39 .9	–	–	–	–	0.24U	0.26
Cadmium	.65 U 3	2.4 2.2	–	–	–	–	–
Calcium	990 49	3100 1170	1100	570	230	96	55
Chromium	5.1 J 9.2	12 J 11.2	5.1 J	14 J	4.5 J	4.6 J	5.1 J
Cobalt	1.5	260 273	–	–	2.3	1.2U	1.9 J
Copper	20 12.3	820 718	7.1	11	3.2	2.2U	3.1
Iron	9000 J 1794	9600 J 849	5100 J	3500 J	3900 J	1100 J	6200 J
Lead	39 J 38	370 J 138	22 J	20 J	14 J	2.5 J	21 J
Magnesium	180 133	1200 88	240	120	160	84	260
Manganese	230 J 55	170 J 104	92 J	74 J	300 J	3 UJ	80 J
Mercury	0.17	0.35 .08	–	–	–	–	–
Nickel	1.5 U 3.9	460 441	–	–	–	–	–
Potassium	140 81	240 221	130	150	120	87 J	190
Sodium	180 U 46	960 938	–	–	–	210U	1800 1489
Vanadium	15 33	5.2	10	6.3	8.9	4.1	10
Zinc	110 J 137	390J 398	16 J	11 J	11 J	3 UJ	8.7 J

Notes:

J–Estimated Value

U–Material was analyzed for but not detected. The number given is the sample quantitation limit (SQL).

mg/kg–milligrams per kilogram

Shading denotes those values that are three times the background, or greater than or equal to the SQL.

Table 4
Summary of Organic Analytical Results
Surface Soil/Subsurface Soil Samples
Hercules, Inc.
Hattiesburg, Forrest County, Mississippi

	SS-01	SS-02	SS-03	SS-04	SS-05	SB-01	SB-05
Purgeable Organics	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Acetone	50 U	3000 J	–	–	–	–	–
Methyl Ethyl Ketone	11 U	80	23	–	–	–	–
Toluene	11 U	2500 3600	46 145	6 J	–	–	–
Chlorobenzene	11 U	–	–	–	–	–	–
Methyl isobutyl ketone	11 U	830J	–	–	–	–	–
Benzene	11 U	4J	–	–	–	–	–
Ethyl benzene	11 U	4 J	–	–	–	–	–
Total Xylenes	11 U	21 34	–	–	–	12U	2 J
Misc. Purgeable Organics							
Tetrahydrofuran		30JN					
Methylpentanol		10JN					
Carene		30JN					
Dimethylmethylenebicycloheptane		30JN					
Trimethylbicycloheptane		20JN					
Unidentified Compounds/No.		90J/2					
Extractable Organics	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Fluoranthene	110J	–	–	–	–	–	–
Phenanthrene	55 J	–	–	48 J	–	–	–
Pyrene	100J	–	–	–	–	–	–
Misc. Extractable Organics							
Dimethylphenanthrene	200JN						
Tetramethylphenanthrene	700JN		20000JN				
Phenanthrene Carboxylic Acid	1000JN		10000JN				
Methyl (methylethenyl) cyclohexene		500000JN					
Methyl (methylethyl) benzene		500000JN					
Trimethylcyclohexanemethanol		600000JN					
Trimethylbicycloheptanone		500000JN					
Isoborneol		800000JN					
Trimethylcycloheenemethanol		10000000JN					
Propylphenol		700000JN					
Terpin Hydrate		20000000JN					
Oxybisbenzene		700000JN					
Phenanthrene Carboxylic Acid, Methyl Este		1000000JN	90000JN	2000JN	400JN		
Phenanthrene Carboxaldehyde			40000JN				
Unidentified Compounds/No.	2000J/4	9000000JN/10	500000J/16	10000J/18	4000J/4		
Pesticides	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Gamma-BHC (Lindane)	1.6 J	–	–	–	–	–	–
Aldrin	3.6 J	–	–	–	–	–	–
Heptachlor epoxide	9.2 U	–	4.6	–	–	–	–
Dieldrin	61	–	–	–	–	–	–
4,4'-DDE (P,P'-DDE)	130 C	–	–	–	–	–	–
4,4'-DDD (P,P'-DDD)	68	–	–	–	–	–	–
4,4'-DDT (P,P'-DDT)	31	–	–	–	–	–	–
Methoxychlor	92 U	–	–	–	–	–	–
Endrin ketone	18U	–	67	–	–	–	–
Endrin aldehyde	18U	340N	–	–	–	–	–
Endosulfan sulfate	18U	390N					
Gamma-chlordane	26 N	–	–	–	–	–	–
Alpha-chlordane	26	–	–	–	–	–	–
PCB's	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCB-1254 (Aroclor 1254)	180 U	–	–	810	–	–	–

Notes:

C—Confirmed by GCMS
J—Estimated Value
N—Presumptive evidence of presence of material
U—Material was analyzed for but not detected. The number given is the sample quantitation limit (SQL).
ug/kg—micrograms per kilogram
Shading denotes those values that are three times the background, or greater than or equal to the SQL.

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Table 5
Summary of Inorganic Analytical Results
Sediment Samples
Hercules, Inc.
Hattiesburg, Forrest County, Mississippi

	SD–01	SD–02	SD–03	SD–04
Metals	mg/kg	mg/kg	mg/kg	mg/kg
Aluminium	2500 J	1900 J	20000 J	2900 J
Arsenic	2.7	11	33	–
Barium	82 J	66 J	100 J	18 J
Beryllium	0.39	0.38	0.70	–
Cadmium	.78 U	–	1.4	–
Calcium	880	1900	4600	680
Chromium	83 J	4.7 J	110 J	7.4 J
Cobalt	6.8	–	27	–
Copper	3.6	3.8	95	27
Iron	10000 J	24000 J	17000 J	4300 J
Lead	350 J	11 J	100 J	30 J
Magnesium	380	320	190	120
Manganese	460 J	290 J	140 J	13 J
Mercury	.13 U	–	0.26	0.21
Nickel	1.8 U	–	350	16
Potassium	240	210	140	140
Sodium	220 U	230	–	–
Vanadium	5.6	11	14	9.5
Zinc	160 J	19 J	2400 J	110 J
Cyanide	mg/kg	mg/kg	mg/kg	mg/kg
	0.65U	–	2.1	–

Notes:

J – Estimated Value

U – Material was analyzed for but not detected. The number given is the sample quantitation limit (SQL).

mg/kg – milligrams per kilogram

Shading denotes those values that are three times the background, or greater than or equal to the SQL.

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Table 6
Summary of Organic Analytical Results
Sediment Samples
Hercules, Inc.
Hattiesburg, Forrest County, Mississippi

	SD–01	SD–02	SD–03	SD–04
Purgeable Organics	ug/kg	ug/kg	ug/kg	ug/kg
Toluene	13 U	–	31000	14000
Methyl ethyl ketone	13U	–	–	470
Benzene	13U	–	–	180
Styrene	13U	–	–	15J
Total Xylenes	13U	–	–	21J
Misc. Purgeable Organics				
Cyclohexane			50000JN	
Carene			30000JN	
Dimethylmethylenebicycloheptane			30000JN	
Trimethylbicycloheptane			30000JN	
Misc. Extractable Organics				
Nonylphenol		300JN		
Hexadecanoic Acid		500JN		
Methylanthracene		500JN		
Phenanthrene carboxaldehyde		500JN		
Methyl (methylethyl) cyclohexane			4000000JN	
Oxybisbenzene			3000000JN	
Petroleum Product				N
Hexahydrotetramethylmethanonaphthalene			4000000JN	
Unidentified Compounds/No.	6000J/3	3000J/6	1x10^8 JN/17	4000000J/20
Pesticides	ug/kg	ug/kg	ug/kg	ug/kg
4,4'-DDE (P,P'-DDE)	4.2 U	2.2 J	–	–
Methoxychlor	22 U	3.6 J	–	–
Alpha-chlordane	1.7J N	–	–	–
PCB's	ug/kg	ug/kg	ug/kg	ug/kg
PCB-1260 (Aroclor 1260)	39 J	–	–	–

Notes:

J – Estimated Value
N – Presumptive evidence of presence of material
U – Material was analyzed for but not detected. The number given is the sample quantitation limit (SQL).
ug/kg – micrograms per kilogram
Shading denotes those values that are three times the background, or greater than or equal to the SQL.

Dec 09 08 01:40p Hercules Inc. 6015843226 p.11

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

Client: HERCULES

File Number: BT26020
Collected By: Client

Sample 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/JNS
Reactivity			
Cyanides (mg/kg)/9010	ND	0.02	06-01-95/1320/JNS
Sulfides (mg/kg)/9030	25	1	05-10-95/1600/JNS
Ignitability °F/1010	>200	±1	06-22-95/1700/RW

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
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

BT26020 BATCO File #	Hercules COMPANY	TCLP SAMPLE TYPE	sample from back forty SAMPLE POINT	Collected: 051095 @ 0800 Analyzed: 051895 @ 1305 DATE TIME

Compound	EPA HW NO.	MDL mg/L (ppm)	SAMPLE Detected Concen. mg/L (ppm)	SAMPLE Spike Amt. ug	SAMPLE Spike % Recov	REGULATORY LEVEL Concen. mg/L (ppm)	BLANK Detected Concen. mg/L (ppm)	BLANK Spike Amt. ug	BLANK Spike % Recov	MATRIX Detected Concen. ng/ul in the extract	MATRIX Spike Amt. ug	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ng/ul in the extract	DUPLICATE MATRIX Spike Amt. ug	DUPLICATE MATRIX Spike % Recov
Pyridine	D038	.010	ND			5.0	ND			66.8	100	66.8	68.3	100	68.3
1,4-Dichlorobenzene*	D027	.010	ND			7.5	ND			83.0	100	83.0	79.1	100	79.1
2-Methylphenol*	D023	.010	0.208			200.0	ND			145.8	150	97.2	121.0	150	80.7
3-Methylphenol*	D024	.010	0.126			200.0	ND			127.0	150	84.7	104.6	150	69.7
4-Methylphenol*	D025	.010	0.335			200.0	ND			117.5	150	78.3	120.1	150	80.1
Hexachloroethane*	D034	.010	ND			3.0	ND			62.6	100	62.6	63.9	100	63.9
Nitrobenzene*	D036	.010	ND			2.0	ND			92.6	100	92.6	82.3	100	82.3
Hexachlorobutadiene*	D033	.010	ND			0.5	ND			41.1	100	41.1	48.2	100	48.2
2,4,6-Trichlorophenol*	D042	.010	ND			2.0	ND			120.5	150	80.3	102.8	150	68.5
2,4,5-Trichlorophenol*	D041	.050	ND			400.0	ND			125.6	150	83.7	104.5	150	69.7
2,4 Dinitrotoluene*	D030	.010	ND			0.13	ND			107.8	100	107.8	96.6	100	96.6
Hexachlorobenzene*	D032	.010	ND			0.13	ND			86.0	100	57.3	77.2	100	77.2
Pentachlorophenol*	D037	.050	ND			100.0	ND			149.4	150	99.6	138.4	150	92.3
SURROGATES:															
Fluorophenol			81.1	150	54.1		88.6	150	59.1	98.9	150	65.9	75.8	150	50.5
Phenol-d6			67.2	150	44.8		69.4	150	46.3	79.1	150	52.7	63.0	150	42.0
2-Chlorophenol-d4			139.3	150	92.9		150.9	150	100.6	159.0	150	106.0	130.8	150	87.2
1,2-Dichlorobenzene-d4			75.0	100	75.0		77.8	100	77.8	82.3	100	82.3	72.2	100	72.2
Nitrobenzene-d5			99.9	100	99.9		84.6	100	84.6	88.3	100	88.3	75.7	100	75.7
Fluorobiphenyl			91.3	100	91.3		81.7	100	81.7	71.6	100	71.6	69.5	100	69.5
2,4,6-Tribromophenol			153.9	150	102.6		138.9	150	92.6	144.3	150	96.2	124.0	150	82.6
Terphenyl-d14			120.3	100	120.3		119.4	100	119.4	113.5	100	113.5	105.1	100	105.1

* MATRIX SPIKING COMPOUNDS

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 - GC/MS ANALYSIS DATA

Chain of Custody Data Required for BATCO Data Management Summary Reports
Analysis Method ~~SW-846~~ (8260)

BT26020
BATCO File #

HERCULES COMPANY

TCLP EXTRACTION
SAMPLE TYPE

FROM BACK FORTY SW
SLUDGE PIT 6' FROM EDGE
SAMPLE POINT

Collected: 05/10/95 @ 0800
Analyzed: 05/12/95 @ 1556
DATE TIME

Compound EPA HW NO.	MDL mg/L (ppm)	SAMPLE Detected Concen. mg/L (ppm)	SAMPLE Spike Amt. ng	SAMPLE Spike % Recov	BLANK Detected Concen. mg/L (ppm)	BLANK Spike Amt. ng	BLANK Spike % Recov	REGULATORY LEVEL Concen. mg/L (ppm)		MATRIX (BT26020) Detected Concen. mg/L	MATRIX Spike Amt. ng	MATRIX Spike % Recov	DUPLICATE MATRIX (BT26020) Detected Concen. mg/L	DUPLICATE MATRIX Spike Amt. ng	DUPLICATE MATRIX Spike % 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	84.0J	0.032	250	64.0J
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
D043 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:															
Dibromofluoromethane		43.1	250	86.2	49.0	250	98.0			43.7	250	87.4	44.1	250	88.2
Toluene-d8		47.3	250	94.6	48.0	250	96.0			48.8	250	97.6	52.3	250	104.6
4-Bromofluorobenzene		44.8	250	89.6	50.4	250	100.8			49.2	250	98.4	49.8	250	99.6

J - results estimated or Below Method Detection Level.

Certified by: Michael W. Bonner
MICHAEL W. BONNER, Ph. D.
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.

BT26020 BATCO File #
Hercules Inc. COMPANY
TCLP EXTRACTION SAMPLE TYPE
Southwest sludge;Pit-6 SAMPLE POINT
Collected: 05/10/95 0800
Analyzed: 05/26/95 2234
DATE TIME

Compound EPA HW NO.	MDL ug/L (ppb)	SAMPLE Detected Concen. ug/L (ppb)	SAMPLE Spike Amt. ng	SAMPLE Spike % Recov	BLANK Detected Concen. ug/L (ppb)	BLANK Spike Amt. ng	BLANK Spike % Recov	REGULATORY LEVEL Concen. ug/L (ppb)	MATRIX Detected Concen. ug/ml	MATRIX Spike Amt. ng	MATRIX Spike % Recov	DUPLICATE MATRIX Detected Concen. ug/ml	DUPLICATE MATRIX Spike Amt. ng	DUPLICATE MATRIX Spike % Recov
D013 * Lindane	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	ND			ND		
D017 * 2,4,5-TP (Silvex)	0.28	ND			ND			1000.0	0.94	2.0	47.2	0.99	2.0	49.6
D016 * 2,4 -D	0.11	ND			ND			10000.0	0.85	2.0	42.5	0.917	2.0	45.9
Surrogates:														
Tetrachloro-m-xylene		0.106	0.2	53.0	0.11	0.2	56.8		0.032	0.2	15.9	0.04	0.2	20.0
Dichlorophenylacetic acid		5.670	5.0	113.5	4.35	5.0	87.1		2.40	5.0	48.0	2.37	5.0	47.4
Decachlorobiphenyl		0.220	0.2	110.0	0.29	0.2	148.3		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. Culbertson
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 Sample Date/Time: 05-13-98 @ 1345
Collected By: CMC 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: M. S. Bonner
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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: M. S. Bonner
Michael S. Bonner, Ph.D.
BONNER ANALYTICAL TESTING COMPANY

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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

VOLATILES - TCLP - GC/MS ANALYSIS DATA

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

Collected:	05/13/98	13:45	Client
Extracted:	05/20/98	17:00	CRR
Analyzed:	05/21/98	15:49	CRR

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

TCLP Compound Name	MDL mg/L (ppm)	Regulatory Level (ppm)	SAMPLE Detected Amount mg/L (ppm)	SAMPLE Spike Amount ng	SAMPLE Spike % Recovery	BLANK Detected Amount mg/L (ppm)	BLANK Spike Amount ng	BLANK Spike % Recovery	MATRIX Detected Amount ng/ml in the extract	MATRIX Spike Amount ng	MATRIX Spike % Recovery	MATRIX DUPLICATE Detected Amount ng/ml in the extract	MATRIX DUPLICATE Spike Amount ng	MATRIX DUPLICATE Spike % Recovery
D029 1,1-Dichloroethene	0.002	0.7	ND			ND			46.4	250.0	92.8	45.4	250.0	90.8
* D018 Benzene	0.002	0.5	ND			ND			47.1	250.0	94.2	48.4	250.0	96.8
D040 Trichloroethene	0.003	0.5	ND			ND			51.4	250.0	102.8	50.3	250.0	100.6
D021 Chlorobenzene	0.002	100.0	ND			ND			50.7	250.0	101.4	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	74.6
D035 2-Butanone (MEK)	0.01	200.0	0.012			ND			66.0	250.0	132.0	65.0	250.0	130.0
D022 Chloroform	0.002	6.0	ND			ND			45.5	250.0	91.0	47.2	250.0	94.4
D019 Carbon Tetrachloride	0.002	0.5	ND			ND			46.6	250.0	93.6	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	107.0
D039 Tetrachloroethene	0.002	0.7	ND			ND			51.1	250.0	102.2	48.4	250.0	96.8
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Dibromofluoromethane			48.1	250.0	96.2	50.0	250.0	100.0	47.6	250.0	95.2	50.8	250.0	101.6
Toluene-d8			46.9	250.0	93.8	48.0	250.0	96.0	51.0	250.0	102.0	51.7	250.0	103.4
4-Bromofluorobenzene			47.4	250.0	94.8	44.8	250.0	89.6	44.4	250.0	88.8	48.7	250.0	97.4

Certified 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

Client: Hercules
Location: TCLP
File #: BT45075

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

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

	Compound Name	CAS Number	MDL mg/L (ppm)	SAMPLE Detected Amount mg/L (ppm)	SAMPLE Spike Amount ug	SAMPLE Spike % Recovery	Regulatory Level Amount mg/L (ppm)	BLANK Detected Amount ug/L (ppb)	BLANK Spike Amount ug	BLANK Spike % Recovery	MATRIX Detected Amount ng/ul in the extract	MATRIX Spike Amount ug	MATRIX Spike % Recovery	Matrix Duplicate Detected Amount ng/ul in the extract	Matrix Duplicate Spike Amount ug	Matrix Duplicate Spike % Recovery
D038	Pyridine	110-86-1	0.0025	ND			5.00	ND			26.00	25.00	26.00	22.77	25.00	91.08
D027	1,4-Dichlorobenzene	106-46-7	0.0061	ND			7.50	ND			54.98	100.00	54.98	55.48	100.00	55.48
D023	2-Methylphenol	95-48-7	0.0056	ND			200.00	ND			26.64	150.00	17.76	27.59	150.00	18.39
D025	3/4-Methylphenol	106-44-5	0.0174	ND			200.00	ND			27.51	150.00	18.34	28.07	150.00	18.71
D034	Hexachloroethane	67-72-1	0.0080	ND			3.00	ND			33.45	100.00	33.45	35.31	100.00	35.31
D036	Nitrobenzene	98-95-3	0.0082	ND			2.00	ND			48.88	100.00	48.88	50.21	100.00	50.21
D033	Hexachlorobutadiene	87-68-3	0.0094	ND			0.50	ND			34.31	100.00	34.31	36.09	100.00	36.09
D042	2,4,6-Trichlorophenol	88-06-2	0.0091	ND			2.00	ND			46.66	150.00	31.12	46.07	150.00	30.71
D041	2,4,5-Trichlorophenol	95-95-4	0.0071	ND			400.00	ND			48.12	150.00	32.08	49.80	150.00	33.20
D030	2,4-Dinitrotoluene	121-14-2	0.0083	ND			0.13	ND			88.37	100.00	88.37	87.81	100.00	87.81
D032	Hexachlorobenzene	118-74-1	0.0080	ND			0.13	ND			40.93	100.00	40.93	39.08	100.00	39.08
D037	Pentachlorophenol	87-86-5	0.0125	ND			100.00	ND			147.87	150.00	98.58	129.90	150.00	86.60

Surrogate Compounds	SAMPLE Detected Amount	SAMPLE Spiked Amount	SAMPLE % Recovery	BLANK Detected Amount	BLANK Spiked Amount	BLANK % Recovery	MATRIX Detected Amount	MATRIX Spiked Amount	MATRIX % Recovery	Matrix Duplicate Detected Amount	Matrix Duplicate Spiked Amount	Matrix Duplicate % Recovery
2-Fluorophenol	85.64	200.00	32.82	154.88	200.00	77.34	40.64	200.00	20.32 *	35.46	200.00	17.73 *
Phenol-d6	41.56	200.00	20.78	155.97	200.00	77.99	23.30	200.00	11.85	22.42	200.00	11.21
Nitrobenzene-d5	73.10	100.00	73.10	65.70	100.00	65.70	38.38	100.00	38.38	36.12	100.00	36.12
2-Fluorobiphenyl	97.76	100.00	97.76	85.57	100.00	85.57	53.04	100.00	53.04	46.98	100.00	46.98
2,4,6-Tribromophenol	193.52	200.00	96.76	184.12	200.00	92.06	148.62	200.00	74.31	133.58	200.00	66.79
Terphenyl-d14	116.10	100.00	116.10	136.06	100.00	136.06	58.80	100.00	58.80	52.96	100.00	52.96

* = Results Outside of QA Limits

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

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

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

	Date	Time	Analyst
Collection:	5/13/98	13:45	CMC
Pesticide Extraction:	5/21/98	9:00	RML
Pesticide Analysis:	5/21/98	20:10	RML
Herbicide Extraction:	5/21/98	13:00	RML
Herbicide Analysis:	5/22/98	8:46	RML

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

EPA HW No.	COMPOUNDS	Regulatory Level ug/L (ppb)	MDL ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Spike Amount ug	SAMPLE Spike % Recovery	METHOD BLANK Detected Amount ug/L (ppb)	METHOD BLANK Spike Amount ug	METHOD BLANK Spike % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ug	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUPLICATE Detected Amount ug/L (ppb)	MATRIX SPIKE DUPLICATE Spike Amount ug	MATRIX SPIKE DUPLICATE Spike % 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								
	Herbicides														
D016	2,4-D *	10000	0.50	ND			ND			310.4	400	77.60	353.9	400	88.48
D017	2,4,5-TP (Silvex) *	1000	0.50	ND			ND			334.8	400	83.70	324.1	400	81.03
	SURROGATE COMPOUNDS			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
	Decachlorobiphenyl			16.08	20.00	80.40	16.40	20.00	82.00	15.60	20.00	78.00	18.13	20.00	90.65
	2,4-Dichlorophenylacetic acid			34.66	40.00	86.85	35.76	40.00	89.40	38.84	40.00	92.10	38.89	40.00	97.23

* = Matrix Spiking Compounds

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

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

Parameter	Detection Limit (mg/l)	Results (mg/l)	Regulatory Level (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

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

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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

Parameter	Detection Limit (mg/L)	Results (mg/L)	Regulatory Level (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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August 08, 2001

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

Parameter	Detection Limit (mg/l)	Results (mg/l)	Regulatory Level (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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