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FINAL REPORT OF SOUTHSIDE DRUM SAMPLING AND WASTE CHARACTERIZATION
MILLINGTON SUPPACT TN
3/29/1993
MEMPHIS ENVIRONMENTAL CENTER, INC.

**FINAL REPORT OF SOUTHSIDE
DRUM SAMPLING AND WASTE
CHARACTERIZATION
NAVAL AIR STATION MEMPHIS
Contract: N62467-92-D-4507
Delivery Order: 0003**

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**ETI Project No. 92077-00
March 29, 1993**

**REPORT OF
DRUM SAMPLING AND WASTE CHARACTERIZATION
NAVAL AIR STATION MEMPHIS
SOUTHSIDE
MILLINGTON, TENNESSEE**

MARCH 1993

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1.0 INTRODUCTION

1.1 Introduction

The Naval Air Station Memphis (NASMEM) is located in Millington, Shelby County, Tennessee (Facility), (see *Figure 1 - Location Diagram of Attachment A*). As a result of previous operations at the Facility, various spent materials were collected in drums at various locations on the southside of the base. During an inspection of these southside locations, NASMEM personnel identified 107 drums of unknown or undocumented content. As a first step to determine the proper disposition of these drums and their contents, NASMEM personnel preliminarily identified the contents of most of the drums based on previous use and/or visual observation.

In order to provide the additional data necessary to determine the appropriate management of these materials, NASMEM Public Works Environmental Division issued Delivery Order # 0003 to ETI Corporation (ETI) under contract number N62467-92-D4507. This order required ETI, in conjunction with its sub-consultant, Memphis Environmental Center, Inc. (MEC), to implement a sampling and analysis program in order to characterize the contents of the drums for subsequent management. This report, entitled *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, Millington, Tennessee, March 1993*, (Report) provides a summary of the sample collection, evaluation and analysis procedures, presents the analytical results from the samples, provides

recommended methods of management for the contents of each drum, and provides NASMEM Hazardous Waste Profile Sheets for the material classified as hazardous waste.

1.2 Scope of Work

The scope of work implemented to sample and characterize the previously described materials at the Facility is as provided below:

1. Develop a work plan;
2. Conduct a start-up meeting;
3. Collect samples from each of the drums;
4. Conduct compatibility analysis on each sample;
5. Composite the samples based on results of the compatibility analysis;
6. Submit the composite samples for characterization analysis as required;
7. Identify the appropriate method of management for the contents of each drum;
8. Complete NASMEM Hazardous Waste Profile Sheets for waste determined to be hazardous; and
9. Provide a summary report to document this work.

2.0 DRUM SAMPLING

On October 23, 1992, ETI submitted a draft work plan to NASMEM Public Works Environmental Division which stipulated the procedures which would be implemented for the sampling, analysis and characterization of the contents of the drums identified at seven locations on the southside of the base. NASMEM reviewed the work plan and ETI/MEC made the appropriate revisions. On October 27, 1992, the final work plan, entitled *Work Plan, Southside Drum Sampling, Naval Air Station Memphis, Millington, Tennessee, October 1992*, (Work Plan) was submitted to NASMEM Public Works Environmental Division. A copy of this Work Plan is included in **Attachment B**.

2.1 Sampling Methodology

On November 2, 1992, MEC personnel mobilized to the Facility to begin sample collection. Prior to beginning sampling activities, MEC provided NASMEM personnel with a schedule of work. In addition, personnel at each of the seven drum sites were notified prior to beginning work in their area. Samples were collected from 84 of the 107 drums originally identified at the southside of the Facility and from one additional drum discovered during the sampling event. Twenty-two drums were identified as not requiring sampling based on the rationale provided in **Table 1** of **Attachment C**. Photographs of each drum location are included in **Attachment D**.

Disposable PVC pipes were used to retrieve representative samples from the drums. Each drum had a dedicated PVC pipe that was used only for collecting samples from that specific drum. Some of the drums were found to contain multi-phased material, in which case samples of each phase were collected. If material could not be collected via a PVC pipe, other sampling methods (i.e. trowels, spoons, etc.) were employed. Samples were placed into one-liter, wide-mouthed jars. Before collection of each sample, a clean pair of latex gloves was donned. Field quality assurance/quality control measures were implemented as outlined in Section 3.1 of the Work Plan.

2.2 Compatibility Testing

Compatibility testing was performed to evaluate the requirements for sample compositing in order to minimize the number of samples submitted for hazardous waste characterization analysis. Appropriate evaluation of each sample necessitated that each phase of a multi-phased material be tested individually. If a sample contained multi-phases, for example water with an oil phase on top, an aliquot from each phase (water and oil) was collected and evaluated for compatibility. For example, drum numbers 17 and 18 (see *Table 2 of Attachment C*) were comprised of water with an oil phase on top. Aliquots of the water from each drum were collected and tested for compatibility. Similarly, a sample of each oil phase was collected and

tested. This resulted in two composite samples from these two drums, a water sample and an oil sample.

The samples were evaluated for compatibility using the parameters outlined in Section 2.3 of the Work Plan. Procedures for preliminary compatibility evaluation conducted prior to mixing included observation of the physical nature of the material, pH (if aqueous based sample), emission of organic vapors, presence of chlorinated solvents, water solubility and presence/absence of phased materials. The results of the compatibility evaluations are presented in *Table 2* of *Attachment C*. Based on these results, samples were grouped by similar characteristics and preliminary composite lots were identified. Subsequently, for each lot of liquid samples, a small aliquot was taken from two of the samples and mixed. The mixture was observed for miscibility, heat emission or physical changes. If the mixture proved compatible, an aliquot from a third sample was added and the same observations recorded. This procedure was repeated until all samples in each lot were mixed. If the samples in the lot were multi-phased, each phase was subjected to this evaluation. No heat emissions or physical changes were observed for any of the mixtures. However, some of the samples were deleted from their original lot due to immiscibility and were composited with other samples.

Based on the results of the compatibility testing, 14 final composite samples were developed. *Table 3* of *Attachment C* provides information on each of the final composite samples submitted for characterization analysis.

2.3 Composite Sample Analysis

Twelve of the fourteen composite samples were submitted to the laboratory for hazardous waste characterization analysis including toxicity characteristic leachate procedure (TCLP) and ignitability, reactivity and corrosivity (I,R,C) analysis in accordance with Section 3.2 of the Work Plan. Composite sample numbers 110992-DH-003, -004, -006, and -007 were each analyzed as two separate samples due to a TCLP requirement for samples to be filtered by the laboratory prior to analysis. If a minimum of 0.5% by weight of the sample is retained on the filter, the sample must be analyzed as two distinct samples, i.e., a solid and a liquid. Sample -003 is 5.8% solid, sample -004 is 9.7% solid, sample -006 is 4.5% solid and sample -007 is 6.2% solid. The percent solids is necessary for determining the concentration of constituents in the entire sample.

Two additional composite samples were collected from four drums containing soil reportedly contaminated with lube oil. As required by the State of Tennessee Department of Environment and Conservation (TDEC) for disposal, composite sample number 012993-TN-001 was submitted for analysis of TCLP metals, volatiles,

semi-volatiles, and composite sample number 110992-DH-009 was submitted for analysis of TCLP total petroleum hydrocarbon-California LUFT and TCLP benzene.

In addition to TCLP and IRC analyses, composite sample numbers 110992-DH-003, -004, -006, -007, and -010, which are all oil-based and potentially recoverable as substitute fuels, were analyzed for density, total solids, heating value, ash content, flash point, total halides, and polychlorinated biphenyls (PCBs). Also, composite sample numbers 110992-DH-001 and -002 are primarily aqueous-based fractions and were analyzed for total petroleum hydrocarbons (TPH) content to determine if disposal to the City of Millington Waste Water Treatment Plant via one of the Facility's oil/water separators is acceptable. Liquid samples which were determined to be hazardous due to ignitability were also submitted for total organic carbon (TOC) analysis as required to complete the NASMEM Hazardous Waste Profile Sheets.

Results of the TCLP and IRC analyses are provided in **Table 4** of **Attachment C**. Results of other analyses conducted on oil-based samples are provided in **Table 5** of **Attachment C**. **Table 6** of **Attachment C** gives the results of the analyses conducted on the soil reportedly contaminated with lube oil. Complete laboratory reports for all analyses are provided in **Attachment E**.

Due to the physical and/or chemical characteristics of some of the samples, matrix interference and sample dilutions prevented the achievement of the targeted detection limits in some cases. As a result, the detection limits for some constituents of some composite samples exceeded the regulatory limits for determining characteristic hazardous wastes. The regulatory characterization limit and the sample detection limit for each constituent of each sample are provided in **Table 4** of **Attachment C**. These inherent interferences and subsequent detection limits resulted in some of the samples being characterized as a hazardous waste even though their TCLP constituent concentrations are reported as non-detected (ND).

2.4 Analytical Results

Composite sample numbers 110992-DH-001 and 110992-DH-006 represent the aqueous and oil fractions, respectively, from the 53 drums indicated in **Table 3** of **Attachment C**. Sample -001 did not exhibit levels of any TCLP constituent in excess of the regulatory limits for characterization as a hazardous waste. Also, neither of these samples exhibited the characteristics of ignitability, corrosivity or reactivity. Results of the analysis of sample -001 allow the aqueous fractions of the 53 drums to be classified as non-hazardous waste. The detection limits for some of the constituents in sample -006, the oil-phase sample, exceed the regulatory limits. Therefore, the composite oil phase in these drums is classified as a hazardous waste.

The recommended method of management for these 53 drums is presented in Section 3.1.

Composite sample numbers 111092-DH-002 and 111092-DH-007 represent the aqueous and oil fractions, respectively, from the 16 drums indicated in **Table 3** of **Attachment C**. Sample -002 did not exhibit levels of any TCLP constituent in excess of the regulatory limits for characterization as a hazardous waste and did not exhibit characteristics of ignitability, corrosivity or reactivity. Based on these results, the aqueous fractions of these 16 drums can be classified as non-hazardous. The detection limits for some of the constituents in sample -007, the oil-phase sample, exceeded the regulatory limits. Also, number -007 contains lead in a concentration exceeding the regulatory limit and is classified as a hazardous waste. In addition, number -007 exhibited a flash point of 122°F which is less than the allowable minimum regulatory limit of 140°F. Subsequently, the oil phase is classified as an ignitable hazardous waste. The recommended method of management for these 16 drums is presented in Section 3.2.

Composite sample number 110992-DH-003 represents an oily waste from the five drums as indicated in **Table 3** of **Attachment C**. The sample did not exhibit detectable levels of any TCLP constituent in excess of the regulatory limits for characterization as a hazardous waste. However, the detection limits for some of the constituents in sample -003 exceeded the regulatory limits. In addition, the material

exhibited a flash point of 116°F and is also classified as an ignitable hazardous waste. The recommended method of management for these five drums is presented in Section 3.3.

Composite sample numbers 110992-DH-004 and 110992-DH-010 represent the oil and solid fractions, respectively, from three drums and a solid layer from a fourth drum as indicated in *Table 3 of Attachment C*. Neither sample exhibited detectable levels of any TCLP constituent in excess of the regulatory limits for characterization as a hazardous waste. However, the detection limits for some of the constituents in the oil sample exceeded the regulatory limits. In addition, both samples exhibited a flash point of 100°F. The liquid fraction represented by sample number -004 is classified as an ignitable hazardous waste. Since sample number -010 is a solid material, it is not considered an ignitable hazardous waste in accordance with the 40 CFR (Code of Federal Regulations) 261.21. The recommended method of management for these four drums is presented in Section 3.4.

Sample number 110992-DH-005 represents the liquid fraction from one drum of paint (drum number 2) as indicated in *Table 3 of Attachment C*. Sample number -005 exhibited concentrations of benzene at 0.806 parts per million (ppm), carbon tetrachloride at 0.833 ppm, and lead at 9.37 ppm. The regulatory limits of benzene, carbon tetrachloride, and lead are 0.5 ppm, 0.5 ppm, and 5.0 ppm, respectively. The recommended method of management for this drum is presented in Section 3.5.

Sample number 110992-DH-008 represents the solid contents of drum number 38. The sample exhibited a concentration of 2.59 ppm nitrobenzene, which exceeds the regulatory limit of 2.0 ppm for characterization as a hazardous waste. The recommended method of management for drum number 37 is provided in Section 3.6.

Sample numbers 012993-TN-001 and 110992-DH-009 represent the contents of four drums as indicated in *Table 3 of Attachment C* which contain a total of approximately one cubic yard of soil contaminated with lube oil. The samples were analyzed for TCLP metals, volatiles, semi-volatiles, and TCLP total petroleum hydrocarbons California LUFT as required by TDEC for disposal of this soil. Results of the analysis are tabulated in *Table 6 of Attachment C*. The requirements for management of the contents of these drums are provided in Section 3.7.

Sample numbers 110992-DH-011 and -012 represent the solids from the tar-like materials contained in drum numbers 69 and 536, respectively. Neither of these samples contained constituents in excess of the regulatory limits and are therefore not classified as a hazardous waste. The recommended method of management for these materials is presented in Section 3.1.

Sample number 110992-DH-013 represents the sludge fraction from drum number 2 composited with a paint sludge sample from drum number 3. The

analytical results from this sample do not indicate that any of the regulatory levels for characterization as a hazardous waste are exceeded. The recommended methods of management for the sludge materials in Drums 2 and 3 are presented in Sections 3.5 and 3.8, respectively.

3.0 MANAGEMENT METHODS

Two methods are available for determining if a spent material should be classified as a hazardous waste. The first method allows the generator to classify the waste based on user knowledge of the material. If the generator can accurately state that the waste does not contain the constituents in excess of the regulatory allowable limits, the material can be classified as non-hazardous. The second method is to subject the material to hazardous waste characterization analysis. If, based on this analysis, no constituents exceed the regulatory allowable limit, the waste can be classified as non-hazardous. If the analytical detection limits exceed the regulatory allowable limits, as was the case with some of the analyses for this project, the generator has two options: 1) classify the material as non-hazardous based on user knowledge, or 2) assume the detection limits are the constituent concentrations in the waste. Due to the nature of Facility operations and the frequency of NASMEM personnel rotations, the contents of the subject spent materials could not be definitely identified based on user knowledge. Therefore, the more conservative approach was necessary and the concentration of constituents is assumed to be equal to the detection limits. Accordingly, for those samples with constituents that are non-detectable at a

detection limit that exceeds the regulatory allowable limit, the material represented by the sample has been classified as a hazardous waste.

Listed below are nine recommended methods of management for the subject drummed materials. A summary of information for each drum including the recommended management method, location of drum, physical characteristics, and volume contained in each drum can be found in *Table 7* of *Attachment C*. *Table 8* of *Attachment C* groups the drum numbers by the appropriate management method. The management methods were chosen based on the following:

1. laboratory analytical results for hazardous waste characterization,
2. applicable Federal, state and local regulations,
3. discussions with TDEC, Fisher Phillips Arnold Engineers, Inc. (City of Millington engineers' office), and NASMEM personnel; and
4. standard practices for hazardous waste characterization and management.

The recommended methods of management are in compliance with the applicable requirements of the Resource Conservation and Recovery Act (RCRA) and the Tennessee Department of Health and Environment, Division of Solid Waste Management, Chapter 1200-1-11, Hazardous Waste Management.

3.1 Management Method #1

Management Method #1 applies to drum numbers 4, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 33, 34, 35, 36, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 50, 51, 53, 54, 57, 59, 60, 61, 62, 63, 65, 66, 67, 69, 71, 72, 208, 251, 500, 501, 534, 536, and 545. The approximate total volume is 1,555 gallons. Composite samples 110992-DH-001 (aqueous phase), 11092-DH-006 (oil phase), 11092-DH-011 (solid at bottom of drum 69), and 11099-DH-012 (solid at bottom of drum 536) are representative of the waste material contained in these drums and were analyzed to determine the proper methods for management. The oil phase classifies as a characteristic hazardous waste while the aqueous phase classifies as a non-hazardous waste. The solid material at the bottom of drums 69 and 536 classifies as a non-hazardous waste.

There are two options which are available for management of the material in these drums. One option is to discharge the contents of these drums through an oil/water separator at the Facility, allowing the aqueous phase to separate and discharge to the City of Millington's waste water treatment system. The oil phase could then be collected for management as a hazardous waste. This type of management is permissible under 40 CFR 261.4. The second option is to manage the entire contents of these drums as hazardous waste. Based on NASMEM Public Works - Environmental Division's comparison of these options, including associated

costs and other pertinent considerations, it was determined that the more prudent and cost effective method for management of these materials is to manage the entire waste stream as hazardous waste. Hazardous Waste Profile Sheet #1, *Attachment F*, provides the corresponding physical and chemical characteristics for the materials recommended for management via Method #1.

The applicable waste codes for the wastes listed under Management Method #1 are as follows: benzene, *D018*; carbon tetrachloride, *D019*; chloroform, *D022*; 1,4-dichlorobenzene, *D027*; 1,2-dichloroethane, *D028*; 1,1-dichloroethylene, *D029*; tetrachloroethylene, *D039*; trichloroethylene, *D040*; vinyl chloride, *D043*; cresols, *D026*; 2,4-dinitrotoluene *D030*; hexachlorobenzene, *D032*; hexachlorobutadiene, *D033*; hexachloroethane, *D034*; nitrobenzene, *D036*; pentachlorophenol *D037*; pyridine *D038*; 2,4,5-trichlorophenol, *D041*; 2,4,6-trichlorophenol, *D042*; arsenic, *D004*; barium, *D005*; cadmium, *D006*; chromium, *D007*; lead, *D008*; selenium, *D010*; silver, *D011*; BHC, gamma (lindane) *D013*; chlordane, *D020*; endrin, *D012*; heptachlor, *D031*; heptachlor epoxide, *D031*; and toxaphene, *D015*.

3.2 Management Method #2

Management Method #2 applies to drum numbers 1, 32, 41, 49, 52, 55, 58, 64, 70, 74, 206, 207, 528, 530, and 537. The approximate total volume is 365 gallons.

Composite samples 111092-DH-002 (aqueous phase) and 111092-DH-007 (oil phase) are representative of the waste material contained in these drums and were analyzed to determine the proper methods for management. The oil phase classifies as a characteristic hazardous waste while the aqueous phase classifies as a non-hazardous waste.

The same options were considered for management of these wastes as were considered under Management Method #1, with the same conclusions made. Hazardous Waste Profile Sheet #2, *Attachment F*, provides the corresponding physical and chemical characteristics for the materials recommended for management via Method #2.

The applicable waste codes for the wastes listed under Management Method #2 are: benzene, *D018*; carbon tetrachloride, *D019*; chloroform, *D022*; 1,4-dichlorobenzene, *D027*; 1,2-dichloroethane, *D028*; 1,1-dichloroethylene, *D029*; tetrachloroethylene, *D039*; trichloroethylene, *D040*; vinyl chloride, *D043*; cresols, *D026*; 2,4-dinitrotoluene *D030*; hexachlorobenzene, *D032*; hexachlorobutadiene, *D033*; hexachloroethane, *D034*; nitrobenzene, *D036*; pentachlorophenol *D037*; pyridine *D038*; 2,4,5-trichlorophenol, *D041*; 2,4,6-trichlorophenol, *D042*; arsenic, *D004*; barium, *D005*; cadmium, *D006*; chromium, *D007*; lead, *D008*; selenium, *D010*; silver, *D011*; BHC, gamma (lindane) *D013*; chlordane, *D020*; endrin, *D012*; heptachlor, *D031*; heptachlor epoxide, *D031*; toxaphene, *D015*; and ignitability, *D001*.

3.3 Management Method #3

Management Method #3 applies to drum numbers 9, 10, 13, 56, and 226. The approximate total volume is 160 gallons. Composite sample 111092-DH-003 is representative of the oily waste material contained in these drums and was analyzed to determine the proper method of management.

The contents of these drums should be managed as hazardous waste due to ignitability and the assumption that the concentration of non-detectable constituents is equal to the detection limit and subsequently above the regulatory allowable limit for these constituents. Hazardous Waste Profile Sheet #3, *Attachment F*, provides the corresponding physical and chemical characteristics for the materials recommended for management via Method #3.

The applicable waste codes for the wastes listed under Management Method #3 are: benzene, *D018*; carbon tetrachloride, *D019*; chloroform, *D022*; 1,4-dichlorobenzene, *D027*; 1,2-dichloroethane, *D028*; 1,1-dichloroethylene, *D029*; methylethyl ketone, *D035*; tetrachloroethylene, *D039*; trichloroethylene, *D040*; vinyl chloride, *D043*; cresols, *D026*; 2,4-dinitrotoluene *D030*; hexachlorobenzene, *D032*; hexachlorobutadiene, *D033*; hexachloroethane, *D034*; nitrobenzene, *D036*; pentachlorophenol *D037*; pyridine *D038*; 2,4,5-trichlorophenol, *D041*;

2,4,6-trichlorophenol, *D042*; arsenic, *D004*; barium, *D005*; cadmium, *D006*; chromium, *D007*; lead, *D008*; selenium, *D010*; silver, *D011*; BHC, gamma (lindane) *D013*; chlordane, *D020*; endrin, *D012*; heptachlor, *D031*; heptachlor epoxide, *D031*; toxaphene, *D015*; 2,4 D, *D016*; silvex, (2,4,5 - silvex), *D017*; and ignitability, *D001*.

3.4 Management Method #4

Management Method #4 applies to drum numbers 531, 532, 533, and 535. The approximate total volume is 125 gallons. Composite samples 111092-DH-004 (oil phase) and 111092-DH-010 (semi-solid phase) are representative of the waste material contained in these drums and were analyzed to determine the proper method of management.

The material in these drums should be managed as hazardous waste due to ignitability of the oil layer. It is assumed that the concentration of non-detectable constituents in the oil layer is equal to the detection limit and subsequently above the regulatory level for these constituents. Hazardous Waste Profile Sheet #4, *Attachment F*, provides the corresponding physical and chemical characteristics for the materials recommended for management via Method #4.

The applicable waste codes for the wastes listed under Management Method #4 are: vinyl chloride, *D043*; cresols, *D026*; 2,4-dinitrotoluene *D-030*;

hexachlorobenzene, *D032*; hexachlorobutadiene, *D033*; hexachloroethane, *D034*; nitrobenzene, *D036*; pentachlorophenol *D037*; pyridine *D038*; 2,4,5-trichlorophenol, *D041*; 2,4,6-trichlorophenol, *D042*; arsenic, *D004*; barium, *D005*; cadmium, *D006*; chromium, *D007*; lead, *D008*; selenium, *D010*; silver, *D011*; BHC, gamma (lindane) *D013*; chlordane, *D020*; endrin, *D012*; heptachlor, *D031*; heptachlor epoxide, *D031*; toxaphene, *D015*; 2,4 D, *D016*; silvex, (2,4,5 - Silvex), *D017*; and ignitability, *D001*.

3.5 Management Method #5

Management Method #5 applies to drum number 2. The approximate total volume is 5 gallons. Composite samples 111092-DH-005 (liquid) and 111092-DH-013 (sludge) are representative of the waste material contained in this drum and were analyzed to determine the proper method of management.

The liquid portion of this drum is classified as hazardous due to detected TCLP constituent concentrations above the regulatory levels. The sludge is non-hazardous based on analytical results. However, considering the small volume of material in drum number 2, it may be more economical to manage its entire contents as hazardous. Hazardous Waste Profile Sheet #5 in *Attachment F* provides the corresponding physical and chemical characteristics for the contents in drum number 2.

The applicable waste codes for the wastes in drum number 2 are: benzene, *D018*; carbon tetrachloride, *D019*; and lead, *D008*.

3.6 Management Method #6

Management Method #6 applies to drum number 37. The approximate total volume is 20 gallons. Composite sample 111092-DH-008 is representative of the waste material contained in this drum and was analyzed to determine the proper method of management.

The contents of this drum are classified as hazardous due to a concentration of nitrobenzene that exceeds the regulatory allowable limit. Hazardous Waste Profile Sheet #6 in *Attachment F* provides the corresponding physical and chemical characteristics for the contents of drum number 37.

The applicable waste code for the contents of drum number 37 is nitrobenzene, *D036*.

3.7 Management Method #7

Management Method #7 applies to drum numbers 252, 253, 254, and 255. These drums contain soil contaminated with lube oil. The approximate total volume

is one cubic yard. Composite samples 111092-DH-009 and 012993-TN-001 were each analyzed to determine the proper method of management for these four drums.

This material does not exceed the TDEC allowable limits for disposal as a special waste at a local municipal landfill, such as the Browning-Ferris Industries (BFI) North Shelby County Landfill. The requirements for disposal of these drums are as follows:

1. Submit a special waste permit and filing fee (\$250) for each waste stream to the TDEC Division of Solid Waste and obtain approval for disposal;
2. Submit a copy of the approved permit and a profile sheet to landfill and obtain approval for disposal;
3. Verify that drums are suitable for transport; and
4. Schedule disposal with landfill.

A completed special waste permit application for these materials is included in *Attachment G*.

3.8 Management Method #8

Management Method #8 applies to drum number 3. Drum number 3 is a 5-gallon container that contains approximately 2 gallons of material. Composite

sample 111092-DH-013 is representative of the waste material contained in this drum and was analyzed to determine the proper method of management.

The contents of drum number 3 are classified as a non-hazardous waste. Application can be made to TDEC and BFI for disposal of the material as a special waste. The same management procedure should be followed as was stipulated for the soil in Management Method #7 with the exception that a sample of the waste should be submitted to BFI with the profile sheet. A completed special waste permit application for this material is included in *Attachment G*.

3.9 Management Method #9

Management Method #9 applies to drum numbers 73, 68, 232, and 542. These drums are RCRA empty in accordance with the regulations of 40 CFR 261.7 which states that drums are empty if "all wastes have been removed that can be removed using practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and no more than 2.5 centimeters (one inch) of residue remains on the bottom of the container or inner liner." RCRA empty drums should be managed as empty hazardous containers as required by NASMEM standard operating procedures.

4.0 HAZARDOUS WASTE PROFILE SHEETS

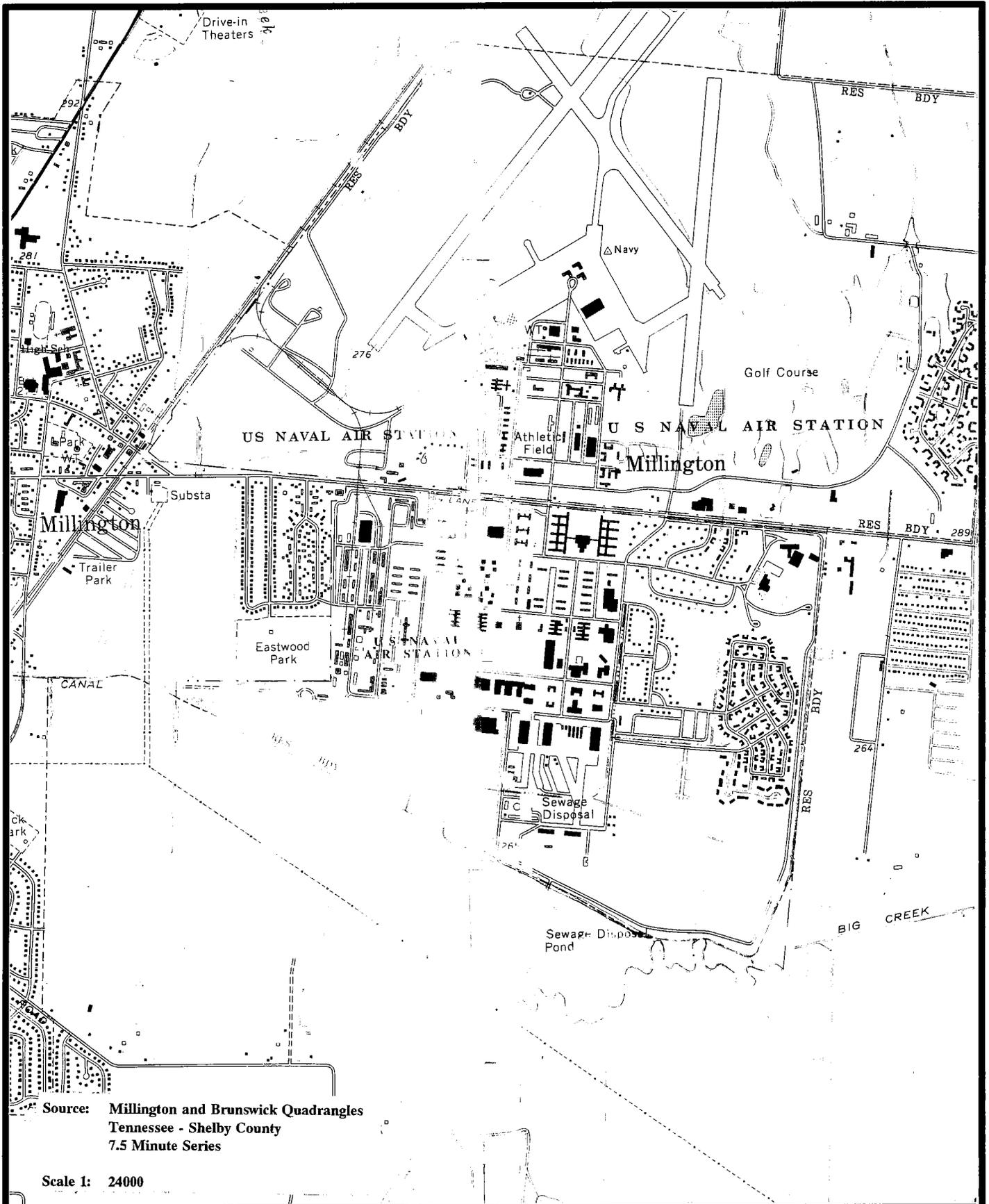
NASMEM Hazardous Waste Profile Sheets (DRMS Form 1930) have been completed for each group of drum contents classified by the representative samples as a hazardous waste. Laboratory results from the hazardous waste characterization analyses have been transferred to NASMEM's Hazardous Waste Profile Sheets. As previously discussed, if the analytical detection limits exceed the regulatory allowable limits, as was the case for some of the analyses, the assumption was made that the detection limits are equal to the constituent concentrations in the waste. Therefore, the detection limit for that constituent is recorded as the constituent concentration on the profile sheet.

The concentrations of the analytes from the composite samples that were split into solid and liquid samples in the laboratory due to the TCLP requirement described in Section 2.3, have been calculated based on the percent of solid retained on the filter. The constituent concentration reported on the profile sheet is the weighted average of the solid and liquid constituent concentrations. For example, sample -006 was analyzed by the laboratory as a liquid sample (95.5%) and a solid sample (4.5%). The concentration of cresols, for example, in the liquid portion is non-detect (ND) at 2,500 ppm and the concentration of cresols in the solid portion is ND at 1 ppm. The maximum weighted concentration of cresols in the total sample is calculated as follows:

$$\text{Total Cresols} = \frac{(95.5\% \times <2,500 \text{ ppm})}{\text{Liquid Sample}} + \frac{(4.5\% \times <1 \text{ ppm})}{\text{Solid Sample}} = <2,390 \text{ ppm}$$

The total weighted concentration of cresols calculated (<2,390 ppm in this example) exceeds the regulatory level of cresols for characterization as a hazardous waste (200 ppm). Therefore, the cresol concentration reported on the profile sheet is <2,390 ppm. Copies of the NASMEM Hazardous Waste Profile Sheets are included in *Attachment F*.

ATTACHMENT A
SITE LOCATION DIAGRAM



Source: Millington and Brunswick Quadrangles
 Tennessee - Shelby County
 7.5 Minute Series

Scale 1: 24000

MEMPHIS ENVIRONMENTAL CENTER, INC.



| | |
|----------|------------------|
| DWG. NO. | BP\BORDER |
| DRAWN: | DKD |
| DATE: | JANUARY 12, 1993 |

2803 Corporate Avenue, Suite 100
 Memphis, Tennessee 38132

FIGURE 1
 SITE LOCATION DIAGRAM
 NAVAL AIR STATION MEMPHIS
 MILLINGTON, TENNESSEE

ATTACHMENT B

WORK PLAN

WORK PLAN

**SOUTHSIDE DRUM SAMPLING
NAVAL AIR STATION MEMPHIS
MILLINGTON, TENNESSEE**

OCTOBER 1992

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1.0 INTRODUCTION

1.1 Introduction

The Naval Air Station - Memphis (NASMEM) is located in Millington, Shelby County, Tennessee (see *Figure 1 - Site Vicinity Map*). Due to previous and ongoing operations at the facility, various materials were collected in drums on the southside of the base. An inspection of the southside by NASMEM personnel resulted in the discovery of 107 drums of unknown or undocumented content. NASMEM personnel preliminarily identified the contents of most of the drums based on previous use and/or visual inspection. In order to insure the proper disposition of these drums, analytical testing must be performed to characterize their contents. NASMEM issued delivery order # 0003 to ETI Corporation (ETI) under contract #N62467-92-D4507. As a subconsultant to ETI, Memphis Environmental Center, Inc. (MEC) has prepared this work plan, entitled *Work Plan, Southside Drum Sampling, Naval Air Station Memphis, Millington, Tennessee, October, 1992* ("Work Plan") to provide the procedures to be used to collect samples, conduct compatibility tests, develop composite samples, and analyze the composite samples for hazardous waste characterization in preparation for disposal.

1.2 Site Description

NASMEM personnel located 107 drums at seven different locations on the southside of NASMEM (see *Figure 2 - Drum Location Map*). Navy personnel have tentatively identified the contents of most of the drums based on user knowledge and/or visual observation. The site number and location, number of drums at each location, suspected contents of each drum, and drum identification numbers are listed in *Appendix A, Table 1 - Drum Site Information*.

2.0 SAMPLING PROCEDURES

2.1 Scope of Work

The scope of work for this project includes the following:

- Develop a work plan that includes sampling procedures, a health and safety plan, and a quality assurance/quality control plan;
- Conduct a start-up meeting between ETI, MEC, and NASMEM personnel;
- Collect samples from 107 drums on the Southside;
- Conduct compatibility testing and composite samples. As samples are composited, test for pH (if water based sample), organic vapor release with photo-ionization detector (PID), presence of chlorinated solvents using flame test, temperature change, and change in physical appearance.

- Submit composite samples (26 samples) for hazardous waste characterization (TCLP) and reactivity, corrosivity, and ignitability. Aqueous-based composite samples will be analyzed for total petroleum hydrocarbons (TPH) in lieu of reactivity, corrosivity, and ignitability. Oil-based composite samples (15 of the 26 samples) will also be analyzed for density, total solids, heating value, ash content, flash point, total organic halogens (TOX), and polychlorinated biphenyls (PCBs);
- Prepare hazardous waste profile sheets based on analytical results;
- Develop a summary report to include profile sheets, analytical data and disposal recommendations; and
- General project management.

2.2 Drum Sampling

2.2.1 Site Security and Preparation

Prior to sampling, each drum sampling location ("Site") will be prepared to improve the safety and efficiency of drum sampling. Field monitoring will be implemented by employing an explosion meter, photoionization detector or an organic vapor analyzer (OVA).

2.2.2 Sampling Methodology

Disposable PVC pipes will be used to retrieve representative samples from each drum. Each drum will have a dedicated PVC pipe to be used only

for collecting samples from that specific drum. If the sample is found to be stratified, a sample will be taken of each strata. If material cannot be collected via a PVC pipe, other sampling methods (i.e. trowels, spoons, etc.) may be employed. Samples will be placed into two one-liter, wide-mouthed jars and placed in coolers. Based on observation of the material in each drum, an additional sample may be collected. Each sample will be identified with a unique number which will correspond to that particular drum. Both the sample and the drum will be labeled with this code and this will be recorded in a bound logbook. Before collection of each sample, clean latex gloves will be donned. If it is necessary to use a trowel, spoon, etc., they will be decontaminated before each use with a detergent wash followed by a tap water rinse. Decontamination water will be collected and disposed in the NASMEM sanitary sewer system.

NASMEM Public Works Environmental Division personnel will be notified of drums that are leaking, severely corroded or have questionable structural integrity.

2.3 Compatibility Testing

Samples will be tested for compatibility by mixing portions of the samples and checking for changes in physical appearance, pH (if water based sample), heat,

emission of organic vapors, and presence of chlorinated solvents. Once compatibility is determined, composite samples will be forwarded to the MEC laboratory and analyzed in accordance with *Section 3.2* of this *Work Plan*. Some analyses may be conducted by another laboratory under the direction of MEC personnel.

2.4 Sample Composition and Submission for Analysis

Composite samples will be submitted to the laboratory for hazardous waste characterization analysis including TCLP and Ignitability, Reactivity and Corrosivity (I,R,C) as indicated in *Part II.2 of DRMS Form 1930* (see *Appendix A - Hazardous Waste Profile Sheet*). In addition, composite samples that are oil-based and amenable for fuel recovery will be analyzed for density, total solids, heating value, ash content, flash point, total organic halides (TOXs), and polychlorinated biphenyls (PCBs). If samples appear to be primarily aqueous-based with minor contaminants, then total petroleum hydrocarbons (TPH) analysis will be conducted in lieu of I,R,C analysis. This TPH analysis is designed to determine if disposal to the City of Millington Sewage Treatment Plant via an onsite oil/water separator is acceptable.

2.5 Report

At the completion of field sampling, sample composition, and laboratory analysis a report will be prepared. This report will document field activities,

compatibility testing, provide summaries of chemical analyses as well as actual laboratory reports, include complete hazardous waste profile sheets for the wastes determined to meet the definition of a characteristic hazardous waste, and provide recommendations for the disposal of each waste stream.

2.6 Preparation of Profile Sheets

Data developed from the analytical testing of the sample composites will be incorporated into hazardous waste profile sheets supplied by NASMEM Public Works Environmental Division (see *Appendix B*).

3.0 QUALITY ASSURANCE AND QUALITY CONTROL

Verifiable sample custody is an integral part of field and laboratory operations. Several steps will be taken in the field to document that samples collected have been properly acquired, preserved and identified. The following sections describe these steps in detail.

3.1 Field Sampling Documentation

3.1.1 Documentation of Sample Acquisition

A key piece of information that will be documented is the data on the sample acquisition. Information pertinent to field observations and sampling will be recorded in a bound logbook and a photolog will be taken during actual sampling activities. Entries in the logbook will include at least the following information:

- Site location of sampling activity;
- Type of material (solid, liquid, etc.);
- Approximate volume of sample collected from each drum;
- Approximate volume of material contained in each drum;
- Drum identification number;
- Date and time of collection;
- Sample identification number(s);
- Field observations;
- Weather conditions; and
- Sampler's name.

3.1.2 Documentation of Composite Samples

Pertinent information will be collected when conducting compatibility tests and compositing the samples. This information will be entered into the logbook and will include the following:

- Composite sample identification number;
- Drum sample numbers comprising each composite sample;
- Date sample was composited;
- Sample technician's name;
- Results of compatibility testing; and
- Types of analyses to be conducted on each sample composite.

3.1.3 **Chain-of-Custody**

In addition to the field logbook, each sample collected and submitted for compatibility analysis will be recorded on a chain-of-custody record. An identifying code will be assigned to each sample and this code will be used on the chain-of-custody and in the logbook.

After samples have been composited, a new chain-of-custody will be developed for these samples. An identifying code will be assigned to each composite sample and this code will be used on the chain-of-custody and in the logbook. Chain-of-custody forms will become the permanent records of sample handling and shipment. A sample chain-of-custody form is provided in *Appendix C*.

A sample is considered to be in custody if it is:

1. In the field personnel's or transferee's actual possession;
2. In the field personnel's or transferee's view, after being in actual possession;
3. Secured to prevent tampering after being in physical possession;
or
4. Placed in a designated secure area.

The person collecting a sample will initiate the document(s) at the source of the sample and start the chain-of-custody procedure. Chain-of-custody documentation for samples collected from each drum will include the following applicable data:

- Field sample number and site name;
- Date sample taken;
- Date sample submitted for compatibility testing;
- Sample taken by (signature);
- Number and type of shipping containers;
- Sample containers (number, type, etc.); and
- Signature of persons relinquishing and obtaining custody of samples.

The person compositing the samples will start a new chain-of-custody procedure for each composite sample. Chain-of-custody documentation for the composite samples will include the following applicable data:

- Site name;
- Composite sample number;
- Date sample was composited;
- Date composite sample submitted for analysis;
- Sample composited by (signature);
- Number and type of shipping containers;
- Sample containers (number, type, etc.);
- Type of analyses to be conducted; and
- Signature of persons relinquishing and obtaining custody of composite samples.

The samples will be kept in sealed coolers or locked storage until custody is relinquished and formal documentation of the transfer is completed.

The ETI/MEC Site Manager will be responsible for sample security, storage, shipment, and completing the sample accountability records. Upon each transfer of custody, the person involved will verify sample numbers and condition and will document the sample acquisition and transfer. The ETI/MEC Site Manager or his designee will properly package the samples and document the shipping method. Documentation for the shipment such as a certified mail receipt or bill of lading number and copies of the chain of custody will be maintained by field personnel.

3.1.4 Labels

Samples will be labeled immediately after collection. The label will carry information such as:

- Project name;
- Date and time of sampling;
- Collector's sample number (this number must be identical with the number on the chain-of-custody); and
- Drum identifier number from which sample was collected.

A clean jar and new label will be used for the composite sample.

Information on the label of the composite sample will include:

- Project name;
- Type of analyses;
- Date of sample composition;
- Composite sample identification number; and
- Drum numbers comprising composite sample.

3.1.5 Laboratory Receipt of Samples

Upon receipt of composite samples by the laboratory, sample containers will be checked for signs of tampering. The custody seals will be verified, and the samples checked for breakage. The person involved with the transfer of custody must be in agreement with the corresponding chain-of-custody form. The chain-of-custody form shall accompany the samples throughout the analysis program until final disposition has been approved.

3.2 Analytical Protocol

Each composite sample submitted to the laboratory will be analyzed for hazardous waste characterization (TCLP), *method SW846-1311*; ignitability, *method SW846-1010*; corrosivity, *method SW846-9040 (liquid) or method SW846-9045 (solid)*; and reactivity, *method 846-Section 7.3.3.2 and method 846-Section 7.3.4.2*. Total petroleum hydrocarbons (TPH) analysis, *method SM-503-B-D-E*, will be conducted in lieu of I,R,C analysis if sample is primarily aqueous-based. In addition to TCLP with I,R,C analysis, oil-based samples will be analyzed for density, *method AOAC 920-212*; total solids, *method EPA 160.2*; heating value, *method ASTM D3286-73*; ash content, *method AOAC 942.05*; flash point, *method SW846-1010 (solid) and method ASTM D93 (liquid)*; total organic halides (TOX), *method SW846-9020*; total organic carbon (TOC), *method SW846-9060*; and polychlorinated biphenyls (PCBs), *method 846-8080*.

4.0 HEALTH AND SAFETY

This section establishes guidelines and requirements for the safety of personnel involved with sampling of drums and conductance of compatibility tests associated with this project. Employees of ETI, MEC, and other personnel associated with the work are required to abide by the provisions set forth in this section.

The health and safety guidelines and requirements presented are based on review of available information and an evaluation of potential hazards and have been developed to minimize the potential for exposure of field personnel to potentially hazardous materials. Modifications may be made as additional information is obtained.

4.1 Potential Hazards

4.1.1 Chemical Exposure

Preventing exposure to potentially toxic chemicals is a primary concern. The constituents of concern for this project are unknown and care should be taken when handling the material. In general, all potentially contaminated materials should be considered toxic by ingestion, inhalation, skin absorption or eye contact. Contact with bare skin and eyes should be avoided. Contact should be immediately followed with thorough decontamination. Contaminated clothing, gloves, boots, disposables and other apparel should be disposed in an environmentally safe manner.

4.1.2 Physical Safety Hazards

Physical safety hazards common to this site could include limited work spaces and slippery surfaces. In addition, inherent hazards are associated with

drum sampling including removal of lids, moving drums, working with hand tools, etc. Personnel on site will be required to wear steel-toed boots. Workers must be cognizant of these conditions to avoid falling, smashing fingers between drums, etc.

4.1.3 Heat Stress

Heat stress can be a major health hazard. Workers in protective clothing are at the highest risk. Activities will be planned to minimize work in temperature extremes. In its early stages, heat stress can cause rashes, cramps, discomfort, and drowsiness, resulting in impaired functional ability that threatens the safety of both the individual and co-workers. Continued heat stress can lead to heat stroke and death. Signs of heat stress will be monitored.

4.1.4 Cold Exposure

Cold injury (frostbite and hypothermia) and impaired ability to work are dangers at low temperatures and when the wind-chill factor is low. Activities will be planned to minimize work in temperature extremes. Signs of cold injury include shivering, dizziness, impaired vision, and drowsiness. To

guard against cold injury, workers will be required to wear appropriate clothing. A warm shelter will be available as required.

4.1.5 Fire/Explosion Hazards

Workers should be aware that some of the contents of these vessels may be pressurized and could pose an explosion threat. The drums should be observed for signs of pressure including bulging sides, tops, etc. The work area, and individual drums as required, will be checked with an explosion meter and photo-ionization meter before sampling. One person shall always be responsible for monitoring for vapors and gases.

4.2 Notification

Before any work is conducted at the Site, ETI will notify the NASMEM Health and Fire Departments as a precautionary measure. Information regarding the work to be conducted and schedule of activities will be communicated to NASMEM Public Works Environmental Division personnel.

4.3 Employee Training

Personnel on site will be trained in accordance with "29 CFR 1910.120 Hazardous Waste Operations and Emergency Responses," in accordance with "(e) Training". Specifically, all workers will have successfully attended and completed a minimum of 40 hours of off site training and a minimum of three days of actual field experience under the direct supervision of a trained, experienced supervisor. Workers who may be exposed to unique or special hazards shall be provided with additional training. The level of training provided shall be consistent with the employee's job function and responsibilities. On-site management and supervisors directly responsible for, or who supervise employees engaged in hazardous waste operations, shall receive at least eight additional hours of training. Workers, managers, and supervisors must also successfully complete an annual refresher course on the items covered in the worker training and the supervisor training. Site personnel will be trained on site-specific hazards, site conditions, emergency operating procedures as well as other pertinent topics prior to job initiation. In addition, field personnel will be trained in multimedia first aid and CPR.

4.4 Medical Surveillance

Personnel involved in the sampling event will be enrolled in a medical surveillance program in compliance with *29 CFR 1910.120(f)*. Medical surveillance is required prior to conducting work as required by this Plan. As a minimum, there will be a baseline physical, annual physical and termination physical. The baseline, annual, and termination physical will be administered by a licensed physician and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

The employer shall obtain and furnish the employee with a copy of a written opinion from the examining physician containing: a) the results of the medical examination and tests if requested by the employee; b) the physician's opinion as to whether the employee has any detected medical condition which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations for which respiratory protection is required; c) the physician's recommended limitations upon the employee's assigned work, and d) a statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment. The written opinion obtained by the employer shall not

reveal specific findings or diagnoses unrelated to occupational exposure. Records of the medical surveillance shall be kept by the employer for at least 30 years.

4.5 Personal Protective Equipment

The following personal protective equipment (PPE) will be used for the sampling event at the Site.

LEVEL C

- Air-purifying, full face respirator with organic vapor particulate matter cartridges
- Tyvek suit
- Work gloves
- Steel-toed boots
- Disposable booties
- Hardhat

4.6 Decontamination

Decontamination is the process of removing or neutralizing possible constituents that may have accumulated on personnel and equipment. Decontamination protects workers from hazardous substances that may contaminate and eventually permeate the personal protective equipment (PPE), tools, vehicles and other equipment used on site. It protects personnel by minimizing the transfer of

harmful materials into clean areas and it helps to prevent mixing of incompatible chemicals.

Workers will leave the work area through a designated decontamination area. Used PPE will be placed in plastic bags to be transported to the local municipal landfill for disposal. Personnel should wash their hands and face with an Alconox soap/water mixture and rinse with tap water before leaving the Site. Personnel should shower as soon as practical after leaving NASMEM.

4.7 Emergency Response Plan

Emergency equipment will be maintained by sampling personnel including a first-aid kit and a fire extinguisher. In addition, the route to the nearest hospital and the NASMEM infirmary will be shown on a diagram and kept by the sampling personnel. Emergency containment equipment will be maintained by the sampling personnel including adsorbent material, a shovel, storage drum, absorbent pads and booms.

APPENDIX A

TABLE 1 - DRUM SITE INFORMATION

TABLE 1

Drum Site Information

| SITE | LOCATION | # OF DRUMS | DESCRIPTION | DRUM ID |
|------|--|------------|---|--|
| S-1 | Building S-9 Near Bus Bay | 13 | 3 1010/10wt/10W-30 lube oil 1 gasoline, paint, thinner 1 latex paint and water 1 AFFF 1 degreasing compound 1 heavy duty cleaning compound 1 paint tinting powder 2 empty 2 batteries - full | 1.00, 10.00, 251.00 2.00 3.00 4.00 9.00 11.00 12.00 73.00,74.00 75.00, 76.00 |
| S-2 | Building S-9 Middle Vehicle Park | 13 | 1 held lube oil - approx 3 gal 1 no information available - approx 2 gal 1 held Dextron II-approx 2 gal 4 oil/water mix-2 half, 1 10-gal, 1 3/4 full 4 oil/10 wt oil/30 wt oil/possible engine oil 1 unknown - 1/2 full 1 lubricating coolant | 13.00 17.00 18.00 19.00,24.00,28.00,29.00 20.00,22.00,26.00,27.00 23.00 25.00 |
| S-3 | Building S-9 Del-Jen | 19 | 1 water/gaskets - 1/2 full 8 oil/water mix - 1 5-gal, 6 full, 1 half full 1 unmarked, possible AFFF - 1/2 full 4 unknowns-3 full, 1 half full 3 30 wt lube oil - 2 full, 1 10-gal 1 speedy dry - 1/2 full 1 possible OWS sludge - full | 30.00 31.00,35.00,36.00,39.00,45.00-48.00 32.00 33.00,40.00,43.00,44.00 34.00,41.00,42.00 37.00 38.00 |
| S-4 | Building S-9 Extreme North End | 25 | 1 unknown, possible AFFF - full 9 oil/water mix 2 30 wt oil - 1 half full, 1 5-gal 1 oil - 5-gal 1 possible hydraulic fluid/water - full 7 unknown - 5 full, 2 3/4 full 1 suspected lube oil - empty 2 unknown/water mix-full punctured AFFF drum 1 water - 1/2 full | 49.00 50.00,52.00-55.00,57.00,58.00,70.00,71.00 51.00,226.00 56.00 59.00 60.00-63.00,65.00,69.00,72.00 64.00 66.00-67.00 68.00 |
| S-6 | Buildings S-75, S-202, S-183, S-235, S-1645, S-1238, S-75, S-70, and S-1684 | 23 | 1 water/90 wt oil mix - full 1 degreasing detergent - full 1 lube oil - full 5 gal can 1 rainwater 1 held Hydrofluoric acid - empty 2 held algaecide - empty 4 contaminated dirt from UST -former NaOH drum 3 unknown 7 aesbestos/water mix 1 waste oil 1 empty | 206.00 207.00 208.00 209.00 232.00 238.00,239.00 252.00-255.00 536.00,537.00,545.00 538.00-544.00 7728.00 9999.00 |
| S-7 | CBU-404 Compound and S-232 | 11 | 2 dry cleaning solvent - 1 full, 1 3/4 full 1 antifreeze/oil 1 unknown 4 sealing compound 1 sealing compound/water 1 black roofing tar 1 portable toilet sludge | 228.00,229.00 528.00 529.00 530.00-533.00 534.00 535.00 549.00 |
| S-8 | Commissary Store and Armory | 3 | 2 wax 1 empty, held wax | 500.00,501.00 503.00 |

APPENDIX B

HAZARDOUS WASTE PROFILE SHEETS

TOXICITY CHARACTERISTIC LIST

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|---|------------|--------|--|------------|--------|
| <input type="checkbox"/> ARSENIC | D004 | _____ | <input type="checkbox"/> HEXACHLORO-1,3,-BUTADIENE | D033 | _____ |
| <input type="checkbox"/> BARIUM | D005 | _____ | <input type="checkbox"/> HEXACHLOROETHANE | D034 | _____ |
| <input type="checkbox"/> BENZENE | D018 | _____ | <input type="checkbox"/> LEAD | D008 | _____ |
| <input type="checkbox"/> CADMIUM | D006 | _____ | <input type="checkbox"/> LINDANE | D013 | _____ |
| <input type="checkbox"/> CARBON TETRACHLORIDE | D019 | _____ | <input type="checkbox"/> MERCURY | D009 | _____ |
| <input type="checkbox"/> CHLORDANE | D020 | _____ | <input type="checkbox"/> METHOXYCHLOR | D014 | _____ |
| <input type="checkbox"/> CHLOROBENZENE | D021 | _____ | <input type="checkbox"/> METHYL ETHYL KETONE | D035 | _____ |
| <input type="checkbox"/> CHLOROFORM | D022 | _____ | <input type="checkbox"/> NITROBENZENE | D036 | _____ |
| <input type="checkbox"/> CHROMIUM | D007 | _____ | <input type="checkbox"/> PENTACHLOROPHENOL | D037 | _____ |
| <input type="checkbox"/> O-CRESOL | D023 | _____ | <input type="checkbox"/> PYRIDINE | D038 | _____ |
| <input type="checkbox"/> M-CRESOL | D024 | _____ | <input type="checkbox"/> SELENIUM | D010 | _____ |
| <input type="checkbox"/> P-CRESOL | D025 | _____ | <input type="checkbox"/> SILVER | D011 | _____ |
| <input type="checkbox"/> CRESOL | D026 | _____ | <input type="checkbox"/> TETRACHLOROETHYLENE | D039 | _____ |
| <input type="checkbox"/> 2,4-D | D016 | _____ | <input type="checkbox"/> TOXOPHENE | D015 | _____ |
| <input type="checkbox"/> 1,4-DICHLOROBENZENE | D027 | _____ | <input type="checkbox"/> TRICHLOROETHYLENE | D040 | _____ |
| <input type="checkbox"/> 1,2-DICHLOROETHANE | D028 | _____ | <input type="checkbox"/> 2,4,5-TRICHLOROPHENOL | D041 | _____ |
| <input type="checkbox"/> 1,1-DICHLOROETHYLENE | D029 | _____ | <input type="checkbox"/> 2,4,6-TRICHLOROPHENOL | D042 | _____ |
| <input type="checkbox"/> 2,4-DINITROTOLUENE | D030 | _____ | <input type="checkbox"/> 2,45-TP (SILVEX) | D017 | _____ |
| <input type="checkbox"/> ENDRIN | D012 | _____ | <input type="checkbox"/> VINYL CHLORIDE | D043 | _____ |
| <input type="checkbox"/> HEPTACHLOR (AND ITS HYDROXIDE) | D031 | _____ | | | |
| <input type="checkbox"/> HEXACHLOROBENZENE | D032 | _____ | | | |

PART III

FOR DRMO USE ONLY

DRMO VERIFICATION

1. DATE VERIFIED _____

2. RESULTS ATTACHED

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

APPENDIX C

SAMPLE CHAIN OF CUSTODY FORM

ATTACHMENT C
TABLES 1 THROUGH 8

TABLE 1
SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
DRUMS NOT SAMPLED

Naval Air Station - Memphis
Millington, Tennessee

| Site | Drum ID No. | Reason Not Sampled |
|------|-------------|---|
| S-1 | 12 | Usable material, oil-dry |
| S-1 | 75 | Contained batteries |
| S-1 | 76 | Contained batteries |
| S-4 | 68 | RCRA Empty |
| S-6 | 209 | Previously Removed by NASMEM Personnel |
| S-6 | 232 | RCRA Empty |
| S-6 | 238 | Previously Removed by NASMEM Personnel |
| S-6 | 239 | Previously Removed by NASMEM Personnel |
| S-6 | 538 | Previously Removed by NASMEM Personnel |
| S-6 | 539 | Previously Removed by NASMEM Personnel |
| S-6 | 540 | Previously Removed by NASMEM Personnel |
| S-6 | 541 | Previously Removed by NASMEM Personnel |
| S-6 | 542 | RCRA Empty |
| S-6 | 543 | Previously Removed by NASMEM Personnel |
| S-6 | 544 | Previously Removed by NASMEM Personnel |
| S-6 | 7728 | Previously Removed by NASMEM Personnel |
| S-6 | 9999 | Previously Removed by NASMEM Personnel |
| S-7 | 228 | Usable material, PD680 dry-cleaning solvent |
| S-7 | 229 | Usable material, PD680 dry-cleaning solvent |
| S-7 | 529 | Previously Removed by NASMEM Personnel |
| S-7 | 549 | Previously Removed by NASMEM Personnel |
| S-8 | 503 | Previously Removed by NASMEM Personnel |

TABLE 2 - Page 1

**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

Naval Air Station - Memphis
Millington, Tennessee

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|--|---|------------------|---------------------------------|-----|-------------------------------|
| 11-06-92 | 9 | 110592-DH-082 | Dark brown oily liquid | 150 | 1 | No | NA | Negative |
| 11-06-92 | 10 | 110592-DH-083 | Dark brown oily liquid | 8 | 1 | No | NA | Negative |
| 11-06-92 | 13 | 110592-DH-077 | Dark purple liquid | 16 | 1 | No | NA | Negative |
| 11-06-92 | 17 | 110592-DH-076 | Light brown floating material Clear water on bottom | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-06-92 | 18 | 110592-DH-081 | Red floating oil on top of water material | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-06-92 | 19 | 110592-DH-075 | Brown floating material atop water material | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 6.5 | |
| 11-06-92 | 20 | 110592-DH-079 | Water with brown oily sheen | <1 | 1 | Yes | 6.5 | Negative |
| 11-06-92 | 21 | 110592-DH-084 | Light brown water | <1 | 1 | Yes | 6.4 | Negative |
| 11-06-92 | 22 | 110592-DH-072 | Water with brown floating foam | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 6.6 | |
| 11-16-92 | 23 | 110592-DH-074 | Water with cream floating foam | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-06-92 | 24 | 110592-DH-071 | Water with orange oil floating on top | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-06-92 | 24 | 110592-DH-071 | Water with red oil floating on top | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |

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**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

Naval Air Station - Memphis
Millington, Tennessee

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|---|---|------------------|---------------------------------|-----|-------------------------------|
| 11-06-92 | 25 | 110592-DH-073 | Water with red oil floating on top | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-06-92 | 26 | 110592-DH-070 | Water with brown solids on bottom | <1 | 1 | Yes | 7.5 | Negative |
| 11-06-92 | 27 | 110592-DH-078 | Water with brown foam and oil on top, red particles on bottom | <1 | 3 | Top Phase - No | NA | Negative |
| | | | | | | Middle Phase - No | | |
| | | | | | | Bottom Phase - Yes | 6.5 | |
| 11-06-92 | 28 | 110592-DH-080 | Water with red oil on top, brown solids on bottom | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-06-92 | 29 | 110592-DH-069 | Water with brown oil on top | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 6.5 | |
| 11-06-92 | 31 | 110592-DH-066 | Water with brown oil on top | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 8.5 | |
| 11-06-92 | 32 | 110592-DH-054 | Brown oil | 5 | 1 | Yes | NA | Negative |
| 11-06-92 | 33 | 110592-DH-053 | Water, brown (solids) on top, suspended or shaking | <1 | 1 | Yes | 6.5 | Negative |
| 11-06-92 | 34 | 110592-DH-051 | Water, dark brown oil top | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 6.5 | |
| 11-06-92 | 35 | 110592-DH-055 | Brown watery suspension | <1 | 1 | Yes | 6.5 | Negative |
| 11-06-92 | 36 | 110592-DH-059 | Clear, watery, light brown suspension when shaken | <1 | 1 | Yes | 6.5 | Negative |

TABLE 2 - Page 3

**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

**Naval Air Station - Memphis
Millington, Tennessee**

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|---|---|------------------|---------------------------------|-----|-------------------------------|
| 11-06-92 | 37 | 110592-DH-058 | Gray solid | <1 | 1 | No | NA | Negative |
| 11-06-92 | 38 | 110592-DH-057 | Brown watery suspension | <1 | 1 | Yes | 6.5 | Negative |
| 11-09-92 | 39 | 110592-DH-061 | Water with dirt settling on bottom | <1 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 40 | 110592-DH-062 | Water with rust settling on bottom | <1 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 41 | 110592-DH-063 | Water with rust-like particles, orange color | 1.5 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 42 | 110592-DH-067 | Light yellow water with floating pink solids | <1 | 1 | Yes | 7.2 | Negative |
| 11-09-92 | 43 | 110592-DH-060 | Clear water with floating pink emulsion | <1 | 2 | Top Phase - Semi-soluble | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-09-92 | 44 | 110592-DH-056 | Orange, rusted water with pink emulsion on top | <1 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 45 | 110592-DH-052 | Clear water with gray floating solids | <1 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 46 | 110592-DH-068 | Clear water with floating orange particles | <1 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 47 | 110592-DH-064 | Clear water with floating gray/pink solids | <1 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.2 | |
| 11-09-92 | 48 | 110592-DH-065 | Rusty, brown water | 20 | 1 | Yes | 8.0 | Negative |
| 11-09-92 | 49 | 110492-DH-026 | Dark black water with dissolved black material, oily sheen - diesel fuel odor | <1 | 1 | Yes | 8.0 | Negative |

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**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

Naval Air Station - Memphis
Millington, Tennessee

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|---|---|------------------|---------------------------------|-----|-------------------------------|
| 11-09-92 | 50 | 110492-DH-028 | Rusty water with floating brown emulsion on top | <1 | 2 | Top Phase - Semi-soluble | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.5 | |
| 11-09-92 | 51 | 110492-DH-029 | Clear water with brown floating emulsion | <1 | 2 | Top Phase - Semi-soluble | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-09-92 | 52 | 110492-DH-046 | Rusty water with red-orange suspended solids which settle out | 2 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 53 | 110492-DH-047 | Light brown water with floating black/gray solids | <1 | 2 | Yes | 5.4 | Negative |
| 11-09-92 | 54 | 110492-DH-032 | Clear water with floating brown emulsion | <1 | 2 | Top Phase - Semi-soluble | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.9 | |
| 11-09-92 | 55 | 110492-DH-033 | Rusty water with floating brown emulsion | 11 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 56 | 110492-DH-046 | Dark black oil | 55 | 1 | No | NA | Negative |
| 11-09-92 | 57 | 110492-DH-034 | Water with floating yellow emulsion | <1 | 2 | Top Phase - Semi-soluble | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.2 | |
| 11-09-92 | 58 | 110492-DH-044 | Rusty water with floating oily brown emulsion and oil slick | 15 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 6.3 | |
| 11-09-92 | 54 | 110492-DH-041 | Rusty water with suspended particles | <1 | 1 | Yes | 8.0 | Negative |
| 11-09-92 | 60 | 110492-DH-043 | Clear water with orange particles | <1 | 1 | Yes | 8.0 | Negative |
| 11-09-92 | 61 | 110492-DH-036 | Light brown soapy water, suds | <1 | 1 | Yes | 6.2 | Negative |

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**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

Naval Air Station - Memphis
Millington, Tennessee

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|---|---|------------------|---------------------------------|-----|-------------------------------|
| 11-09-92 | 62 | 110492-DH-031 | Clear water with brown solids, small amount of soap suds | <1 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 63 | 110492-DH-024 | Clear water with brown sinking solids | <1 | 1 | Yes | 7.6 | Negative |
| 11-09-92 | 64 | 110492-DH-040 | Clear water with brown floating oil/emulsion | 8 | 2 | Top Phase - No | NA | Negative-organics,burns |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-09-92 | 65 | 110492-DH-042 | Appears to be water, clear slight bubbles are entrained in sample, however. | <1 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 66 | 110492-DH-035 | Clear water, some brown and red sinking solids | <1 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 67 | 110492-DH-037 | Clear water, some brown sinking and suspended solids | <1 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 69 | 110492-DH-038 | Clear water with black tar-like floating and sinking chunks | <1 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 69-B | 110492-DH-039 | Black dry granular solid | 1 | 1 | No | NA | Negative |
| 11-09-92 | 70 | 110492-DH-027 | Black oil floating on clear water | 60 | 2 | Top Phase - No | NA | Negative-burns |
| | | | | | | Bottom Phase - Yes | | |
| 11-09-92 | 71 | 110492-DH-048 | Yellow water with brown floating emulsion | <1 | 2 | Top Phase - Semi-soluble | NA | Negative-burns |
| | | | | | | Bottom Phase - Yes | 7.2 | |
| 11-09-92 | 72 | 110492-DH-030 | Clear water with brown solids sinking | <1 | 1 | Yes | 7.0 | Negative |

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**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

Naval Air Station - Memphis
Millington, Tennessee

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|--|---|------------------|---------------------------------|-----|---|
| 11-09-92 | 73 | 110492-DH-049 | Clear water with floating brown oil/emulsion | 14 | 2 | Top Phase - No | NA | Negative-burns well |
| | | | | | | Bottom Phase - Yes | 6.2 | |
| 11-09-92 | 74 | 110492-DH-050 | Clear water with floating black oil material | 1.5 | 2 | Top Phase - No | NA | Negative - burns well |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-09-92 | 501 | 110292-DH-002 | Light yellow water with brown floating solids, has soap-like suds | <1 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 530 | 110292-DH-003 | Light brown oily phase on top and white solid clumps on bottom, rest appears to be water | 350 | 2 | Top Phase - No | NA | Negative - high carbon contact when burning |
| | | | | | | Bottom Phase - yes | 6.7 | |
| 11-09-92 | 531-B | 110392-DH-011 | Dark black oily liquid | 300 | 1 | No | NA | Negative |
| 11-09-92 | 531 | 110292-DH-006 | Dark black oily liquid | 300 | 1 | No | NA | Negative |
| 11-09-92 | 532 | 110292-DH-005 | Dark black oily liquid | 300 | 1 | No | NA | Negative |
| 11-09-92 | 532-B | 110392-DH-012 | Black oily liquid | 250 | 1 | No | NA | Negative |
| 11-09-92 | 533 | 110292-DH-004 | Gray-silver waxy solid | 200 | 1 | No | NA | Negative |
| 11-09-92 | 534 | 110292-DH-009 | Light yellow water with brown sinking solids | 1.0 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 535 | 110292-DH-008 | Dark black oil with silver streaks | 300 | 1 | No | NA | Negative |
| 11-09-92 | 535-B | 110292-DH-007 | Dark black oil with silver streaks | 300 | 1 | No | NA | Negative |
| 11-09-92 | 536-B | 110392-DH-014 | Dark black thick tar | 2 | 1 | No | NA | Negative |
| 11-09-92 | 536 | 110392-DH-013 | Light yellow water with brown floating and sinking particles | <1 | 1 | Yes | 7.0 | Negative |

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**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

Naval Air Station - Memphis
Millington, Tennessee

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|---|---|------------------|---------------------------------|-----|-------------------------------|
| 11-09-92 | 537 | 110392-DH-015 | Clear water-like material with brown floating and sinking solids | 6.5 | 1 | Yes | 7.0 | Negative |
| 11-09-92 | 545 | 110392-DH-017 | Clear water with brown sinking particles | <1 | 1 | Yes | 7.7 | Negative |
| 11-09-92 | 206 | 110392-DH-023 | Brown to red floating oil on top with clear water on bottom | 7 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 5.2 | |
| 11-09-92 | 207 | 110392-DH-022 | Clear soap water with brown suspended solids and brown sinking solids | 20 | 1 | Yes | 6.5 | Negative |
| 11-09-92 | 208 | 110392-DH-016 | Dark brown oil floating on top of clear water | 1.5 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-09-92 | 226 | 110492-DH-025 | Dark black liquid with yellow tinge | <1 | 1 | No | NA | Negative |
| 11-09-92 | 252 | 110392-DH-018 | Gray-brown silty clay with rocks and gravel (solid) | <1 | 1 | No | NA | Negative |
| 11-09-92 | 253 | 110392-DH-019 | Gray-brown silty clay with rocks and gravel (solid) | <1 | 1 | No | NA | Negative - burns red |
| 11-09-92 | 254 | 110392-DH-020 | Brown-gray clay silt with rocks and gravel (solid) | <1 | 1 | No | NA | Negative - burns red |
| 11-09-92 | 255 | 110392-DH-021 | Brown-gray clay silt with rocks | <1 | 1 | No | NA | Negative |
| 11-09-92 | 500 | 110292-DH-001 | Clear water | <1 | 1 | Yes | 7.5 | Negative |

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**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
PRELIMINARY EVALUATION**

Naval Air Station - Memphis
Millington, Tennessee

| EVALUATION DATE | DRUM ID NO. | SAMPLE ID NO. | PHYSICAL DESCRIPTION | HEADSPACE ORGANIC VAPOR CONCENTRATION (ppm) | NUMBER OF PHASES | WATER SOLUBLE? (For Each Phase) | pH | BEILSTEIN Method for Chlorine |
|-----------------|-------------|---------------|---|---|------------------|---------------------------------|------|-------------------------------|
| 11-09-92 | 528 | 110292-DH-010 | Light blue to green liquid | 6 | 1 | Yes | NA | Positive |
| 11-09-92 | 1 | 110692-DH-085 | Dark black oil floating on water | 300 | 2 | Top Phase - No | NA | Negative |
| | | | | | | Bottom Phase - Yes | 7.0 | |
| 11-09-92 | 2 | 110692-DH-086 | Thick bright yellow paint | 300 | 1 | No | NA | Negative |
| 11-09-92 | 251 | 110692-DH-090 | Clear water with sinking red particles | 3 | 1 | Yes | 7.5 | Negative |
| 11-09-92 | 12 | 110692-DH-089 | Gray granular solid | 9 | 1 | No | NA | Negative |
| 11-09-92 | 11 | 110692-DH-088 | Clear water-like liquid, slightly white chalky appearance | 5 | 1 | Yes | 13.0 | Negative |
| 11-09-92 | 4 | 110692-DH-091 | Light yellow soap liquid | 9 | 1 | Yes | 9.2 | Negative |
| 11-09-92 | 3 | 110692-DH-092 | Sticky brown and white granular solid | 20 | 1 | Semi-soluble | NA | Negative |
| 11-09-92 | 2-B | 110692-DH-087 | Waxy white and yellow solid | 16 | 1 | No | NA | Negative |

TABLE 3
SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
COMPOSITE SAMPLES

Naval Air Station - Memphis
 Millington, Tennessee

| Composite Sample No. | Drums Comprising Sample | Type of Matrix |
|----------------------|--|--|
| 110992-DH-001 | 4, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 33, 34, 35, 36, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 50, 51, 53, 54, 57, 59, 60, 61, 62, 63, 65, 66, 67, 69, 71, 72, 208, 251, 500, 501, 534, 536, 545 | Water |
| 111092-DH-002 | 1, 32, 41, 49, 52, 55, 58, 64, 70, 73*, 74, 206, 207, 528, 530, 537 | Water |
| 111092-DH-003 | 9, 10, 13, 56, 226 | Oil |
| 111092-DH-004 | 531, 532, 535 | Oil |
| 111092-DH-005 | 2 | Paint |
| 111092-DH-006 | Solids associated with drums comprising Sample Number 110992-DH-001 | Oil phase from Sample Number 110992-DH-001 |
| 111092-DH-007 | Solids associated with drums comprising Sample Number 111092-DH-002 | Oil phase from Sample Number 111092-DH-002 |
| 111092-DH-008 | 37 | Solid |
| 111092-DH-009 | 252, 253, 254, 255 | Soil |
| 111092-DH-010 | 531-B, 532-B, 533-B, 535-B | Roofing material, solid from Sample Number 111092-DH-004 |
| 111092-DH-011 | 69-B | Solid - tar material |
| 110992-DH-012 | 536-B | Solid - tar material |
| 110992-DH-013 | 2-B, 3 | Paint sludge |

* Sampling rendered drum RCRA Empty

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SOUTHSIDE HAZARDOUS WASTE CHARACTERIZATION ANALYTICAL RESULTS (ppm)

| TCLP CONSTITUENT | REGULATORY LEVEL | SAMPLE ID NO. 110992-DH-001 | | SAMPLE ID NO. 111092-DH-002 | | SAMPLE ID #111092-DH-003-LIQUID | |
|-------------------------------|---------------------|-----------------------------|--------------------|-----------------------------|--------------------|---------------------------------|--------------------|
| | | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT |
| Benzene | 0.5 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| Carbon Tetrachloride | 0.5 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| Chlorobenzene | 100.0 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| Chloroform | 6.0 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| 1,4-Dichlorobenzene | 7.5 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| 1,2-Dichloroethane | 0.5 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| 1,1-Dichloroethylene | 0.7 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| Methylethyl Ketone | 200.0 ppm | ND | 0.5 | ND | 0.5 | NA | NA |
| Tetrachloroethylene | 0.7 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| Trichloroethylene | 0.5 ppm | ND | 0.05 | ND | 0.05 | NA | NA |
| Vinyl Chloride | 0.2 ppm | ND | 0.1 | ND | 0.1 | NA | NA |
| Cresols | 200.0 ppm | ND | 1.0 | ND | 1.0 | ND | 2,500 |
| 2,4-Dinitrotoluene | 0.13 ppm ◊ | ND | 0.5 | ND | 0.5 | ND | 1,250 |
| Hexachlorobenzene | 0.13 ppm ◊ | ND | 0.5 | ND | 0.5 | ND | 1,250 |
| Hexachlorobutadiene | 0.5 ppm | ND | 0.5 | ND | 0.5 | ND | 1,250 |
| Hexachloroethane | 3.0 ppm | ND | 0.5 | ND | 0.5 | ND | 1,250 |
| Nitrobenzene | 2.0 ppm | ND | 1.0 | ND | 1.0 | ND | 1,250 |
| Pentachlorophenol | 100.0 ppm | ND | 1.0 | ND | 1.0 | ND | 2,500 |
| Pyridine | 5.0 ppm ◊ | ND | 0.5 | ND | 0.5 | ND | 2,500 |
| 2,4,5-Trichlorophenol | 400.0 ppm | ND | 1.0 | ND | 1.0 | ND | 2,500 |
| 2,4,6-Trichlorophenol | 2.0 ppm | ND | 1.0 | ND | 1.0 | ND | 2,500 |
| Arsenic | 5.0 ppm | ND | 0.01 | ND | 0.01 | ND | 10 |
| Barium | 100.0 ppm | ND | 1.0 | ND | 1.0 | ND | 200 |
| Cadmium | 1.0 ppm | ND | 0.005 | ND | 0.05 | ND | 5 |
| Chromium | 5.0 ppm | ND | 0.01 | ND | 0.01 | ND | 10 |
| Lead | 5.0 ppm | ND | 0.05 | ND | 0.05 | ND | 50 |
| Mercury | 0.2 ppm | ND | 0.02 | ND | 0.02 | ND | 0.2 |
| Selenium | 1.0 ppm | ND | 0.05 | ND | 0.005 | ND | 5 |
| Silver | 5.0 ppm | ND | 0.2 | ND | 0.2 | ND | 20 |
| BHC, gamma (Lindane) | 0.4 ppm | ND | 0.0002 | ND | 0.0002 | ND | 2.5 |
| Chlordane | 0.03 ppm | ND | 0.004 | ND | 0.004 | ND | 25 |
| Endrin | 0.02 ppm | ND | 0.0002 | ND | 0.0002 | ND | 2.5 |
| Heptachlor | 0.008 ppm | ND | 0.0002 | ND | 0.0002 | ND | 2.5 |
| Heptachlor Epoxide | 0.008 ppm | ND | 0.0002 | ND | 0.0002 | ND | 2.5 |
| Methoxychlor | 10.0 ppm | ND | 0.002 | ND | 0.002 | ND | 5 |
| Toxaphene | 0.5 ppm | ND | 0.02 | ND | 0.02 | ND | 312.5 |
| 2,4 D | 10.0 ppm | ND | 0.025 | ND | 0.025 | 1.28 | 0.25 |
| Silvex (2,4,5-Silvex) | 1.0 ppm | ND | 0.005 | ND | 0.005 | 0.529 | 0.05 |
| Ignitability | < 140° F | > 140° F | NA | > 140° F | NA | 116° F | NA |
| Corrosivity (pH units) | < 2.0 / > 12.5 | 11.88 | NA | 8.42 | NA | 9.31 | NA |
| Reactivity-Cyanide (reactive) | > 250 ppm | ND | 1.2 | ND | 1.2 | ND | 1 |
| Reactivity-Sulfide (reactive) | > 500 ppm | ND | 1.0 | ND | 1.0 | ND | 1 |

TABLE 4 - Page 2
 SOUTHSIDE HAZARDOUS WASTE CHARACTERIZATION ANALYTICAL RESULTS (ppm)

| TCLP CONSTITUENT | REGULATORY LEVEL | SAMPLE ID #111092-DH-003-SOLID | | SAMPLE ID #111092-DH-004-LIQUID | | SAMPLE ID #111092-DH-004-SOLID | |
|-------------------------------|---------------------|--------------------------------|--------------------|---------------------------------|--------------------|--------------------------------|--------------------|
| | | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT |
| Benzene | 0.5 ppm | ND | 25 | NA | NA | ND | 0.5 |
| Carbon Tetrachloride | 0.5 ppm | ND | 25 | NA | NA | ND | 0.5 |
| Chlorobenzene | 100.0 ppm | ND | 25 | NA | NA | ND | 0.5 |
| Chloroform | 6.0 ppm | ND | 25 | NA | NA | ND | 0.5 |
| 1,4-Dichlorobenzene | 7.5 ppm | ND | 25 | NA | NA | ND | 0.5 |
| 1,2-Dichloroethane | 0.5 ppm | ND | 25 | NA | NA | ND | 0.5 |
| 1,1-Dichloroethylene | 0.7 ppm | ND | 25 | NA | NA | ND | 0.5 |
| Methylethyl Ketone | 200.0 ppm | ND | 250 | NA | NA | ND | 5 |
| Tetrachloroethylene | 0.7 ppm | ND | 25 | NA | NA | ND | 0.5 |
| Trichloroethylene | 0.5 ppm | ND | 25 | NA | NA | ND | 0.5 |
| Vinyl Chloride | 0.2 ppm | ND | 50 | NA | NA | ND | 1 |
| Cresols | 200.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| 2,4-Dinitrotoluene | 0.13 ppm ◊ | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Hexachlorobenzene | 0.13 ppm ◊ | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Hexachlorobutadiene | 0.5 ppm | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Hexachloroethane | 3.0 ppm | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Nitrobenzene | 2.0 ppm | ND | 1 | ND | 1,250 | ND | 1 |
| Pentachlorophenol | 100.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| Pyridine | 5.0 ppm ◊ | ND | 0.5 | ND | 2,500 | ND | 0.5 |
| 2,4,5-Trichlorophenol | 400.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| 2,4,6-Trichlorophenol | 2.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| Arsenic | 5.0 ppm | ND | 0.1 | ND | 10 | ND | 0.1 |
| Barium | 100.0 ppm | ND | 10 | ND | 200 | ND | 10 |
| Cadmium | 1.0 ppm | ND | 0.05 | ND | 5 | 0.06 | 0.05 |
| Chromium | 5.0 ppm | ND | 0.1 | ND | 10 | ND | 0.1 |
| Lead | 5.0 ppm | ND | 0.5 | ND | 50 | ND | 0.5 |
| Mercury | 0.2 ppm | ND | 0.002 | ND | 0.2 | ND | 0.002 |
| Selenium | 1.0 ppm | ND | 0.05 | ND | 5 | ND | 0.05 |
| Silver | 5.0 ppm | ND | 2 | ND | 20 | ND | 2 |
| BHC, gamma (Lindane) | 0.4 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Chlordane | 0.03 ppm | ND | 0.004 | ND | 25 | ND | 0.004 |
| Endrin | 0.02 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Heptachlor | 0.008 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Heptachlor Epoxide | 0.008 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Methoxychlor | 10.0 ppm | ND | 0.002 | ND | 5 | ND | 0.002 |
| Toxaphene | 0.5 ppm | ND | 0.02 | ND | 125 | ND | 0.02 |
| 2,4 D | 10.0 ppm | ND | 0.025 | ND | 25 | ND | 0.025 |
| Silvex (2,4,5-Silvex) | 1.0 ppm | ND | 0.005 | ND | 5 | ND | 0.005 |
| Ignitability | < 140° F | NA | NA | 100° F | NA | NA | NA |
| Corrosivity (pH Units) | < 2.0 / > 12.5 | NA | NA | 9.54 | NA | NA | NA |
| Reactivity-Cyanide (reactive) | > 250 ppm | NA | NA | ND | 1 | NA | NA |
| Reactivity-Sulfide (reactive) | > 500 ppm | NA | NA | ND | 1 | NA | NA |

TABLE 4 - Page 3
SOUTHSIDE HAZARDOUS WASTE CHARACTERIZATION ANALYTICAL RESULTS (ppm)

| TCLP CONSTITUENT | REGULATORY LEVEL | SAMPLE ID NO. 111092-DH-005 | | SAMPLE ID #111092-DH-006-LIQUID | | SAMPLE ID #111092-DH-006-SOLID | |
|-------------------------------|---------------------|-----------------------------|--------------------|---------------------------------|--------------------|--------------------------------|--------------------|
| | | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT |
| Benzene | 0.5 ppm | 0.806 | 0.05 | NA | NA | ND | 10 |
| Carbon Tetrachloride | 0.5 ppm | 0.833 | 0.05 | NA | NA | ND | 10 |
| Chlorobenzene | 100.0 ppm | ND | 0.05 | NA | NA | ND | 10 |
| Chloroform | 6.0 ppm | ND | 0.05 | NA | NA | ND | 10 |
| 1,4-Dichlorobenzene | 7.5 ppm | ND | 0.05 | NA | NA | ND | 10 |
| 1,2-Dichloroethane | 0.5 ppm | ND | 0.05 | NA | NA | ND | 10 |
| 1,1-Dichloroethylene | 0.7 ppm | ND | 0.05 | NA | NA | ND | 10 |
| Methylethyl Ketone | 200.0 ppm | 3.95 | 0.5 | NA | NA | ND | 10 |
| Tetrachloroethylene | 0.7 ppm | ND | 0.05 | NA | NA | ND | 10 |
| Trichloroethylene | 0.5 ppm | ND | 0.05 | NA | NA | ND | 10 |
| Vinyl Chloride | 0.2 ppm | ND | 0.1 | NA | NA | ND | 20 |
| Cresols | 200.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| 2,4-Dinitrotoluene | 0.13 ppm ◊ | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Hexachlorobenzene | 0.13 ppm ◊ | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Hexachlorobutadiene | 0.5 ppm | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Hexachloroethane | 3.0 ppm | ND | 0.5 | ND | 1,250 | ND | 0.5 |
| Nitrobenzene | 2.0 ppm | ND | 1 | ND | 1,250 | ND | 1 |
| Pentachlorophenol | 100.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| Pyridine | 5.0 ppm ◊ | ND | 0.5 | ND | 2,500 | ND | 0.5 |
| 2,4,5-Trichlorophenol | 400.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| 2,4,6-Trichlorophenol | 2.0 ppm | ND | 1 | ND | 2,500 | ND | 1 |
| Arsenic | 5.0 ppm | ND | 0.01 | ND | 10 | ND | 0.1 |
| Barium | 100.0 ppm | ND | 1 | ND | 200 | ND | 10 |
| Cadmium | 1.0 ppm | ND | 0.005 | ND | 5 | ND | 0.05 |
| Chromium | 5.0 ppm | 2.96 | 0.01 | ND | 10 | ND | 0.1 |
| Lead | 5.0 ppm | 9.37 | 0.05 | ND | 50 | ND | 0.5 |
| Mercury | 0.2 ppm | ND | 0.0002 | ND | 0.2 | ND | 0.002 |
| Selenium | 1.0 ppm | ND | 0.005 | ND | 5 | ND | 0.05 |
| Silver | 5.0 ppm | ND | 0.2 | ND | 20 | ND | 2 |
| BHC, gamma (Lindane) | 0.4 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Chlordane | 0.03 ppm | ND | 0.004 | ND | 25 | ND | 0.004 |
| Endrin | 0.02 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Heptachlor | 0.008 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Heptachlor Epoxide | 0.008 ppm | ND | 0.0002 | ND | 2.5 | ND | 0.0002 |
| Methoxychlor | 10.0 ppm | ND | 0.002 | ND | 5 | ND | 0.002 |
| Toxaphene | 0.5 ppm | ND | 0.02 | ND | 312.5 | ND | 0.02 |
| 2,4 D | 10.0 ppm | ND | 0.25 | 0.363 | 0.25 | 0.0755 | 0.025 |
| Silvex (2,4,5-Silvex) | 1.0 ppm | ND | 0.05 | ND | 0.05 | ND | 0.005 |
| Ignitability | < 140° F | > 140° F | NA | > 190° F | NA | NA | NA |
| Corrosivity (pH units) | < 2.0 / > 12.5 | 9.80 | NA | 9.96 | NA | NA | NA |
| Reactivity-Cyanide (reactive) | > 250 ppm | ND | 1 | NA | NA | ND | 1 |
| Reactivity-Sulfide (reactive) | > 500 ppm | ND | 1 | NA | NA | ND | 1 |

TABLE 4 - Page 4
 SOUTHSIDE HAZARDOUS WASTE CHARACTERIZATION ANALYTICAL RESULTS (ppm)

| TCLP CONSTITUENT | REGULATORY LEVEL | SAMPLE ID #111092-DH-007-LIQUID | | SAMPLE ID #111092-DH-007-SOLID | | SAMPLE ID #111092-DH-008 | |
|-------------------------------|---------------------|---------------------------------|--------------------|--------------------------------|--------------------|--------------------------|--------------------|
| | | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT |
| Benzene | 0.5 ppm | NA | NA | ND | 50 | ND | 0.05 |
| Carbon Tetrachloride | 0.5 ppm | NA | NA | ND | 50 | ND | 0.05 |
| Chlorobenzene | 100.0 ppm | NA | NA | ND | 50 | ND | 0.05 |
| Chloroform | 6.0 ppm | NA | NA | ND | 50 | ND | 0.05 |
| 1,4-Dichlorobenzene | 7.5 ppm | NA | NA | ND | 50 | ND | 0.05 |
| 1,2-Dichloroethane | 0.5 ppm | NA | NA | ND | 50 | ND | 0.05 |
| 1,1-Dichloroethylene | 0.7 ppm | NA | NA | ND | 50 | ND | 0.05 |
| Methylethyl Ketone | 200.0 ppm | NA | NA | ND | 50 | ND | 0.05 |
| Tetrachloroethylene | 0.7 ppm | NA | NA | ND | 50 | ND | 0.05 |
| Trichloroethylene | 0.5 ppm | NA | NA | ND | 50 | ND | 0.05 |
| Vinyl Chloride | 0.2 ppm | NA | NA | ND | 100 | ND | 0.1 |
| Cresols | 200.0 ppm | ND | 2,500 | ND | 1 | 9.41 | 1 |
| 2,4-Dinitrotoluene | 0.13 ppm ◊ | ND | 1,250 | ND | 0.5 | ND | 0.5 |
| Hexachlorobenzene | 0.13 ppm ◊ | ND | 1,250 | ND | 0.5 | ND | 0.5 |
| Hexachlorobutadiene | 0.5 ppm | ND | 1,250 | ND | 0.5 | ND | 0.5 |
| Hexachloroethane | 3.0 ppm | ND | 1,250 | ND | 0.5 | ND | 0.5 |
| Nitrobenzene | 2.0 ppm | ND | 1,250 | ND | 1 | 2.59 | 1 |
| Pentachlorophenol | 100.0 ppm | ND | 2,500 | ND | 1 | ND | 1 |
| Pyridine | 5.0 ppm ◊ | ND | 2,500 | ND | 0.5 | ND | 0.5 |
| 2,4,5-Trichlorophenol | 400.0 ppm | ND | 2,500 | ND | 1 | ND | 1 |
| 2,4,6-Trichlorophenol | 2.0 ppm | ND | 2,500 | ND | 1 | ND | 1 |
| Arsenic | 5.0 ppm | ND | 10 | ND | 0.1 | ND | 0.01 |
| Barium | 100.0 ppm | ND | 200 | ND | 10 | ND | 1 |
| Cadmium | 1.0 ppm | ND | 5 | ND | 0.05 | ND | 0.005 |
| Chromium | 5.0 ppm | ND | 10 | ND | 0.1 | ND | 0.01 |
| Lead | 5.0 ppm | ND | 50 | 16.8 | 0.5 | ND | 0.05 |
| Mercury | 0.2 ppm | ND | 0.2 | ND | 0.002 | ND | 0.0002 |
| Selenium | 1.0 ppm | ND | 5 | ND | 0.05 | ND | 0.005 |
| Silver | 5.0 ppm | ND | 20 | ND | 2 | ND | 0.2 |
| BHC, gamma (Lindane) | 0.4 ppm | ND | 2.5 | ND | 0.0002 | ND | 0.0002 |
| Chlordane | 0.03 ppm | ND | 25 | ND | 0.004 | ND | 0.004 |
| Endrin | 0.02 ppm | ND | 2.5 | ND | 0.0002 | ND | 0.0002 |
| Heptachlor | 0.008 ppm | ND | 2.5 | ND | 0.0002 | ND | 0.0002 |
| Heptachlor Epoxide | 0.008 ppm | ND | 2.5 | ND | 0.0002 | ND | 0.0002 |
| Methoxychlor | 10.0 ppm | ND | 5 | ND | 0.002 | ND | 0.002 |
| Toxaphene | 0.5 ppm | ND | 125 | ND | 0.02 | ND | 0.02 |
| 2,4 D | 10.0 ppm | ND | 0.25 | ND | 0.025 | ND | 1.25 |
| Silvex (2,4,5-Silvex) | 1.0 ppm | ND | 0.05 | ND | 0.005 | ND | 0.25 |
| Ignitability | < 140° F | 122° F | NA | NA | NA | > 140° F | NA |
| Corrosivity (pH units) | < 2.0 / > 12.5 | 8.31 | NA | NA | NA | 8.36 | NA |
| Reactivity-Cyanide (reactive) | > 250 ppm | NA | NA | ND | 1 | ND | 1 |
| Reactivity-Sulfide (reactive) | > 500 ppm | NA | NA | ND | 1 | ND | 1 |

TABLE 4 - Page 5
 SOUTHSIDE HAZARDOUS WASTE CHARACTERIZATION ANALYTICAL RESULTS (ppm)

| TCLP CONSTITUENT | REGULATORY LEVEL | SAMPLE ID NO. 111092-DH-010 | | SAMPLE ID NO. 111092-DH-011 | | SAMPLE ID NO. 111092-DH-012 | |
|-------------------------------|---------------------|-----------------------------|--------------------|-----------------------------|--------------------|-----------------------------|--------------------|
| | | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT |
| Benzene | 0.5 ppm | ND | 0.5 | ND | 0.05 | ND | 0.05 |
| Carbon Tetrachloride | 0.5 ppm | ND | 0.5 | ND | 0.05 | ND | 0.05 |
| Chlorobenzene | 100.0 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| Chloroform | 6.0 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| 1,4-Dichlorobenzene | 7.5 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| 1,2-Dichloroethane | 0.5 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| 1,1-Dichloroethylene | 0.7 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| Methylethyl Ketone | 200.0 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| Tetrachloroethylene | 0.7 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| Trichloroethylene | 0.5 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| Vinyl Chloride | 0.2 ppm | ND | 0.1 | ND | 0.1 | ND | 0.1 |
| Cresols | 200.0 ppm | ND | 1 | ND | 1 | ND | 1 |
| 2,4-Dinitrotoluene | 0.13 ppm ◊ | ND | 0.5 | ND | 0.5 | ND | 0.5 |
| Hexachlorobenzene | 0.13 ppm ◊ | ND | 0.5 | ND | 0.5 | ND | 0.5 |
| Hexachlorobutadiene | 0.5 ppm | ND | 0.5 | ND | 0.5 | ND | 0.5 |
| Hexachloroethane | 3.0 ppm | ND | 0.5 | ND | 0.5 | ND | 0.5 |
| Nitrobenzene | 2.0 ppm | ND | 1 | ND | 1 | ND | 1 |
| Pentachlorophenol | 100.0 ppm | ND | 1 | ND | 1 | ND | 1 |
| Pyridine | 5.0 ppm ◊ | ND | 0.5 | ND | 0.5 | ND | 0.5 |
| 2,4,5-Trichlorophenol | 400.0 ppm | ND | 1 | ND | 1 | ND | 1 |
| 2,4,6-Trichlorophenol | 2.0 ppm | ND | 1 | ND | 1 | ND | 1 |
| Arsenic | 5.0 ppm | ND | 0.01 | ND | 0.01 | ND | 0.01 |
| Barium | 100.0 ppm | ND | 1 | 1.07 | 1 | ND | 1 |
| Cadmium | 1.0 ppm | ND | 0.005 | ND | 0.005 | ND | 0.005 |
| Chromium | 5.0 ppm | ND | 0.01 | ND | 0.01 | ND | 0.01 |
| Lead | 5.0 ppm | ND | 0.05 | ND | 0.05 | ND | 0.05 |
| Mercury | 0.2 ppm | ND | 0.0002 | ND | 0.0002 | ND | 0.0002 |
| Selenium | 1.0 ppm | ND | 0.005 | ND | 0.005 | ND | 0.005 |
| Silver | 5.0 ppm | ND | 0.2 | ND | 0.2 | ND | 0.2 |
| BHC, gamma (Lindane) | 0.4 ppm | ND | 0.0002 | ND | 0.0002 | ND | 0.0002 |
| Chlordane | 0.03 ppm | ND | 0.004 | ND | 0.004 | ND | 0.004 |
| Endrin | 0.02 ppm | ND | 0.0002 | ND | 0.0002 | ND | 0.0002 |
| Heptachlor | 0.008 ppm | ND | 0.0002 | ND | 0.0002 | ND | 0.0002 |
| Heptachlor Epoxide | 0.008 ppm | ND | 0.0002 | ND | 0.0002 | ND | 0.0002 |
| Methoxychlor | 10.0 ppm | ND | 0.002 | ND | 0.002 | ND | 0.002 |
| Toxaphene | 0.5 ppm | ND | 0.02 | ND | 0.02 | ND | 0.02 |
| 2,4 D | 10.0 ppm | ND | 0.025 | ND | 0.025 | ND | 0.025 |
| Silvex (2,4,5-Silvex) | 1.0 ppm | ND | 0.005 | ND | 0.005 | ND | 0.005 |
| Ignitability | < 140° F | 100° F | NA | > 140° F | NA | > 140° F | NA |
| Corrosivity (pH units) | < 2.0 / > 12.5 | 8.04 | NA | 7.72 | NA | 7.16 | NA |
| Reactivity-Cyanide (reactive) | > 250 ppm | ND | 1 | ND | 1 | ND | 1 |
| Reactivity-Sulfide (reactive) | > 500 ppm | ND | 1 | ND | 1 | ND | 1 |

TABLE 4 - Page 6
 SOUTHSIDE HAZARDOUS WASTE CHARACTERIZATION ANALYTICAL RESULTS (ppm)

| TCLP CONSTITUENT | REGULATORY LEVEL | SAMPLE ID NO. 111092-DH-013 | | SAMPLE ID NO. | | SAMPLE ID NO. 110992-DH-00 | |
|-------------------------------|---------------------|-----------------------------|--------------------|-----------------------|--------------------|----------------------------|--------------------|
| | | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT | TCLP CONCENTRATION | DETECTION LIMIT |
| Benzene | 0.5 ppm | ND | 0.05 | | | | |
| Carbon Tetrachloride | 0.5 ppm | ND | 0.05 | | | | |
| Chlorobenzene | 100.0 ppm | ND | 0.05 | | | | |
| Chloroform | 6.0 ppm | ND | 0.05 | | | | |
| 1,4-Dichlorobenzene | 7.5 ppm | ND | 0.05 | | | | |
| 1,2-Dichloroethane | 0.5 ppm | ND | 0.05 | | | | |
| 1,1-Dichloroethylene | 0.7 ppm | ND | 0.05 | | | | |
| Methylethyl Ketone | 200.0 ppm | ND | 0.05 | | | | |
| Tetrachloroethylene | 0.7 ppm | ND | 0.05 | | | | |
| Trichloroethylene | 0.5 ppm | ND | 0.05 | | | | |
| Vinyl Chloride | 0.2 ppm | ND | 0.1 | | | | |
| Cresols | 200.0 ppm | ND | 1 | | | | |
| 2,4-Dinitrotoluene | 0.13 ppm ☉ | ND | 0.5 | | | | |
| Hexachlorobenzene | 0.13 ppm ☉ | ND | 0.5 | | | | |
| Hexachlorobutadiene | 0.5 ppm | ND | 0.5 | | | | |
| Hexachloroethane | 3.0 ppm | ND | 0.5 | | | | |
| Nitrobenzene | 2.0 ppm | ND | 1 | | | | |
| Pentachlorophenol | 100.0 ppm | ND | 1 | | | | |
| Pyridine | 5.0 ppm ☉ | ND | 0.5 | | | | |
| 2,4,5-Trichlorophenol | 400.0 ppm | ND | 1 | | | | |
| 2,4,6-Trichlorophenol | 2.0 ppm | ND | 1 | | | | |
| Arsenic | 5.0 ppm | ND | 0.01 | | | | |
| Barium | 100.0 ppm | ND | 1 | | | | |
| Cadmium | 1.0 ppm | ND | 0.005 | | | | |
| Chromium | 5.0 ppm | .05 | 0.01 | | | | |
| Lead | 5.0 ppm | .15 | 0.05 | | | | |
| Mercury | 0.2 ppm | .029 | 0.002 | | | | |
| Selenium | 1.0 ppm | ND | 0.005 | | | | |
| Silver | 5.0 ppm | ND | 0.2 | | | | |
| BHC, gamma (Lindane) | 0.4 ppm | ND | 0.0002 | | | | |
| Chlordane | 0.03 ppm | ND | 0.004 | | | | |
| Endrin | 0.02 ppm | ND | 0.0002 | | | | |
| Heptachlor | 0.008 ppm | ND | 0.0002 | | | | |
| Heptachlor Epoxide | 0.008 ppm | ND | 0.0002 | | | | |
| Methoxychlor | 10.0 ppm | ND | 0.002 | | | | |
| Toxaphene | 0.5 ppm | ND | 0.02 | | | | |
| 2,4 D | 10.0 ppm | ND | 0.025 | | | | |
| Silvex (2,4,5-Silvex) | 1.0 ppm | ND | 0.005 | | | | |
| Ignitability | < 140° F | > 140° F | NA | | | | |
| Corrosivity (pH units) | < 2.0 / > 12.5 | 7.31 | NA | | | | |
| Reactivity-Cyanide (reactive) | 250 ppm | ND | 1 | | | | |
| Reactivity-Sulfide (reactive) | 500 ppm | ND | 1 | | | | |

NOTES FOR TABLE 4

- ⊗ Quantitation limit is greater than the calculated regulatory level.
The Quantitation limit therefore becomes the regulatory level per *40 CFR 261.24*.

ppm = parts per million

ND = Non-detectable

NA = Not applicable

TABLE 5

**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
ADDITIONAL ANALYTICAL RESULTS FOR POTENTIAL SUBSTITUTE FUELS**

Naval Air Station - Memphis
Millington, Tennessee

| | SAMPLE ID NO. 111092-DH-003 | | SAMPLE ID NO. 111092-DH-004 | | SAMPLE ID NO. 111092-DH-006 | | SAMPLE ID NO. 111092-DH-007 | | SAMPLE ID NO. 111092-DH-010 | |
|---------------------------|--------------------------------|--------------------|--------------------------------|--------------------|--------------------------------|--------------------|--------------------------------|--------------------|--------------------------------|--------------------|
| CONSTITUENT | Concentration | Detection Limit |
| Ash Content (%) | ND | 1 | ND | 1 | ND | 1 | NA | NA | 37.3 | 1 |
| Heating Value (btu/lb) | 18,900 | 900 | 18,100 | 900 | 13,100 | 900 | 18,600 | 900 | 13,900 | 900 |
| Density | 0.8884 | NA | 0.8611 | NA | 0.9087 | NA | 0.9444 | NA | NA | NA |
| Solids-total (ppm) | 4,592 | NA | 32,850 | NA | 5,620 | NA | 103,450 | NA | NA | NA |
| Bromine (ppm) | ND | 20 |
| Chlorine (ppm) | 99 | 10 | ND | 10 | 70 | 10 | 99 | 10 | 43 | 10 |
| Fluorine (ppm) | 74 | 25 | 49 | 25 | 45 | 25 | ND | 25 | ND | 25 |
| Iodine (ppm) | 39 | 5 | ND | 5 | ND | 5 | ND | 5 | 476 | 5 |
| PCB-aroclor (ppm) | ND | 50 | ND | 25 | ND | 25 | ND | 25 | ND | 25 |
| TOC (%) | >10 | NA | >10 | NA | NA | NA | >10 | NA | >10 | NA |

TABLE 6
SOUTHSIDE DRUMMED WASTE CHARACTERISTICS
SOIL/LUBE OIL ANALYTICAL RESULTS (PPM)
(Composite Samples 111092-DH-009 and 012993-TN-001)

Naval Air Station - Memphis
 Millington, Tennessee

| TCLP Constituent | Regulatory Level | TCLP Concentration | Detection Limit |
|-----------------------|------------------|--------------------|-----------------|
| Benzene | 0.5* | ND | 0.005 |
| Carbon Tetrachloride | 0.5 | ND | 0.005 |
| Chlorobenzene | 100.0 | ND | 0.005 |
| Chloroform | 6.0 | ND | 0.005 |
| 1,2-Dichloroethane | 0.5 | ND | 0.005 |
| 1,1-Dichloroethene | 0.7 | ND | 0.005 |
| Methyl ethyl ketone | 200.0 | ND | 0.100 |
| Tetrachloroethene | 0.7 | 0.003 | 0.005 |
| Trichloroethene | 0.5 | ND | 0.005 |
| Vinyl Chloride | 0.2 | ND | 0.010 |
| 1,4-Dichlorobenzene | 7.5 | ND | 0.010 |
| 2-Methylphenol | 200 | ND | 0.010 |
| 3-Methylphenol | 200 | ND | 0.010 |
| 4-Methylphenol | 200 | ND | 0.010 |
| Total-Methylphenol | 200 | ND | 0.010 |
| Hexachloroethane | 3.0 | ND | 0.010 |
| Nitrobenzene | 2.0 | ND | 0.010 |
| Hexachlorobutadiene | 0.5 | ND | 0.010 |
| 2,4,6-Trichlorophenol | 2.0 | ND | 0.010 |
| 2,4,5-Trichlorophenol | 400 | ND | 0.050 |
| 2,4-Dinitrotoluene | 0.13 | ND | 0.010 |
| Hexachlorobenzene | 0.13 | ND | 0.010 |
| Pentachlorophenol | 100 | ND | 0.050 |
| Pyridine | 5.0 | ND | 0.010 |
| Arsenic | 5 | ND | 0.014 |
| Barium | 100 | 0.31 | 0.0010 |
| Cadmium | 1 | 0.0054 | 0.0030 |
| Chromium | 5 | ND | 0.0030 |
| Lead | 5 | 1.9 | 0.018 |
| Mercury | 0.2 | ND | 0.00050 |
| Selenium | 1 | ND | 0.030 |
| Silver | 5 | ND | 0.0030 |
| Total TPH - CA/LUFT | 10* | ND | 0.4 |

* TDEC Division of Solid Waste policy dated March 23, 1990 allows for disposal of non-hazardous soils in a sanitary landfill if the extract from TCLP does not contain more than 0.5 ppm benzene and 10 ppm TPH.

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**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
RECOMMENDED METHODS OF MANAGEMENT**

Naval Air Station - Memphis
Millington, Tennessee

| Site | Location | Drum ID. No. | Physical Characterization | Vol (gal) | Recommended Method of Management |
|------|--|--------------|---------------------------|-----------|---|
| S-1 | Bldg. S-9, near bus bay | 1 | L | 40 | Method 2 |
| S-1 | Same as 1.00 | 2 | L/SS | 5 | Method 5 |
| S-1 | Bldg. S-9, south side of bus bay | 3 | S | 2 | Method 8 |
| S-1 | Bldg. S-9, inside bus bay | 4 | L | 45 | Method 1 |
| S-1 | Located at S-2, bldg. S-9, middle vehicle park, middle parking row | 9 | L | 30 | Method 3 |
| S-1 | Same as 9.00 | 10 | L | 55 | Method 3 |
| S-1 | S-9 compound, in S-252 | 11 | L | 50 | Method 1 |
| S-1 | Same as 11.00 | 12 | S | 25 | Usable material, oil-dry |
| S-1 | Located at S-4, extreme northern end of S-9 compound, south of military working dog area | 73 | L | < 1 | Method 9 |
| S-1 | Same as 73.00 | 74 | L | 5 | Method 2 |
| S-1 | Middle of S-9 compound | 75 | NA | NA | Contained batteries, disposed by NASMEM |
| S-1 | Same as 75.00 | 76 | NA | NA | Contained batteries, disposed by NASMEM |
| S-1 | Middle of S-9 compound | 251 | L | 55 | Method 1 |
| S-2 | Bldg. S-9, middle vehicle park, middle parking row | 13 | L | 10 | Method 3 |
| S-2 | Same as 13.00 | 17 | L | 40 | Method 1 |
| S-2 | Same as 13.00 | 18 | L | 10 | Method 1 |
| S-2 | Same as 13.00 | 19 | L | 25 | Method 1 |
| S-2 | Same as 13.00 | 20 | L | 10 | Method 1 |
| S-2 | Same as 13.00 | 22 | L | 30 | Method 1 |
| S-2 | Same as 13.00 | 23 | L | 20 | Method 1 |
| S-2 | Same as 13.00 | 24 | L | 24 | Method 1 |
| S-2 | Same as 13.00 | 25 | L | 25 | Method 1 |
| S-2 | Same as 13.00 | 26 | L | 30 | Method 1 |
| S-2 | Same as 13.00 | 27 | L | 30 | Method 1 |
| S-2 | Same as 13.00 | 28 | L | 10 | Method 1 |
| S-2 | Same as 13.00 | 29 | L | 30 | Method 1 |
| S-2 | Same as 13.00 | 21 | L | 20 | Method 1 |

TABLE 7 - PAGE 2

**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
RECOMMENDED METHODS OF MANAGEMENT**

Naval Air Station - Memphis
Millington, Tennessee

| Site | Location | Drum ID. No. | Physical Characterization | Vol (gal) | Recommended Method of Management |
|------|---|--------------|---------------------------|-----------|----------------------------------|
| S-3 | Previously Removed | 30 | NA | NA | NA |
| S-3 | Northwest corner of S-9 compound, east of Del-Jen project managers office | 31 | L | 5 | Method 1 |
| S-3 | Same as 31.00 | 32 | L | 10 | Method 2 |
| S-3 | Same as 31.00 | 33 | L | 50 | Method 1 |
| S-3 | Same as 31.00 | 34 | L | 20 | Method 1 |
| S-3 | Same as 31.00 | 35 | L | 55 | Method 1 |
| S-3 | Same as 31.00 | 36 | L | 55 | Method 1 |
| S-3 | Same as 31.00 | 37 | S | 20 | Method 6 |
| S-3 | Same as 31.00 | 38 | L | 55 | Method 1 |
| S-3 | Same as 31.00 | 39 | L | 20 | Method 1 |
| S-3 | Same as 31.00 | 40 | L | 40 | Method 1 |
| S-3 | Same as 31.00 | 41 | L | 30 | Method 2 |
| S-3 | Same as 31.00 | 42 | L | 10 | Method 1 |
| S-3 | Same as 31.00 | 43 | L | 20 | Method 1 |
| S-3 | Same as 31.00 | 44 | L | 55 | Method 1 |
| S-3 | Same as 31.00 | 45 | L | 25 | Method 1 |
| S-3 | Same as 31.00 | 46 | L | 20 | Method 1 |
| S-3 | Same as 31.00 | 47 | L | 45 | Method 1 |
| S-3 | Same as 31.00 | 48 | L | 40 | Method 1 |
| S-4 | Extreme northern end of S-9 compound, south of military working dog area | 49 | L | 40 | Method 2 |
| S-4 | Same as 49.00 | 50 | L | 5 | Method 1 |
| S-4 | Same as 49.00 | 51 | L | 10 | Method 1 |
| S-4 | Same as 49.00 | 52 | L | 15 | Method 2 |
| S-4 | Same as 49.00 | 53 | L | 15 | Method 1 |
| S-4 | Same as 49.00 | 54 | L | 5 | Method 1 |
| S-4 | Same as 49.00 | 55 | L | 1 | Method 2 |
| S-4 | Same as 49.00 | 56 | L | 15 | Method 3 |

TABLE 7 - PAGE 3

**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
RECOMMENDED METHODS OF MANAGEMENT**

Naval Air Station - Memphis
Millington, Tennessee

| Site | Location | Drum ID. No. | Physical Characterization | Vol (gal) | Recommended Method of Management |
|------|-------------------------|--------------|---------------------------|-----------|----------------------------------|
| S-4 | Same as 49.00 | 57 | L | 10 | Method 1 |
| S-4 | Same as 49.00 | 58 | L | 15 | Method 2 |
| S-4 | Same as 49.00 | 59 | L | 50 | Method 1 |
| S-4 | Same as 49.00 | 60 | L | 55 | Method 1 |
| S-4 | Same as 49.00 | 61 | L | 10 | Method 1 |
| S-4 | Same as 49.00 | 62 | L | 40 | Method 1 |
| S-4 | Same as 49.00 | 63 | L | 20 | Method 1 |
| S-4 | Same as 49.00 | 64 | L | 20 | Method 2 |
| S-4 | Same as 49.00 | 65 | L | 55 | Method 1 |
| S-4 | Same as 49.00 | 66 | L | 55 | Method 1 |
| S-4 | Same as 49.00 | 67 | L | 50 | Method 1 |
| S-4 | Same as 49.00 | 68 | NA | 0 | Method 9 |
| S-4 | Same as 49.00 | 69 | L/SS | 15 | Method 1 |
| S-4 | Same as 49.00 | 70 | L | 20 | Method 2 |
| S-4 | Same as 49.00 | 71 | L | 20 | Method 1 |
| S-4 | Same as 49.00 | 72 | L | 45 | Method 1 |
| S-4 | Same as 49.00 | 226 | L | 50 | Method 3 |
| S-6 | West side of Bldg. S-75 | 206 | L | 45 | Method 2 |
| S-6 | Same as 206.00 | 207 | L | 55 | Method 2 |
| S-6 | West of Bldg. S-202 | 208 | L | 5 | Method 1 |
| S-6 | Previously Removed | 209 | NA | NA | NA |
| S-6 | Same as 208.00 | 232 | NA | 0 | Method 9 |
| S-6 | Previously Removed | 238 | NA | NA | NA |
| S-6 | Previously Removed | 239 | NA | NA | NA |
| S-6 | West of Bldg. S-75 | 252 | S | 55 | Method 7 |
| S-6 | Same as 252.00 | 253 | S | 55 | Method 7 |
| S-6 | Same as 252.00 | 254 | S | 55 | Method 7 |
| S-6 | Same as 252.00 | 255 | S | 55 | Method 7 |
| S-6 | South of Bldg. S-235 | 536 | L/SS | 5 | Method 1 |

TABLE 7 - PAGE 4

SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
RECOMMENDED METHODS OF MANAGEMENT

Naval Air Station - Memphis
Millington, Tennessee

| Site | Location | Drum ID. No. | Physical Characterization | Vol (gal) | Recommended Method of Management |
|------|-----------------------------|--------------|---------------------------|-----------|---|
| S-6 | Same as 536.00 | 537 | L | 50 | Method 2 |
| S-6 | Previously Removed | 538 | NA | NA | NA |
| S-6 | Previously Removed | 539 | NA | NA | NA |
| S-6 | Previously Removed | 540 | NA | NA | NA |
| S-6 | Previously Removed | 541 | NA | NA | NA |
| S-6 | 20 ft north of Bldg. S-1645 | 542 | NA | 0 | Method 9 |
| S-6 | Previously Removed | 543 | NA | NA | NA |
| S-6 | Previously Removed | 544 | NA | NA | NA |
| S-6 | Same as 208.00 | 545 | L | 20 | Method 1 |
| S-6 | Previously Removed | 7728 | NA | NA | NA |
| S-6 | Previously Removed | 9999 | NA | NA | NA |
| S-7 | Marked off list | 228 | NA | NA | Usable material, PD680 dry-cleaning solvent |
| S-7 | Marked off list | 229 | NA | NA | Usable material, PD680 dry-cleaning solvent |
| S-7 | CBU-404 compound | 528 | L | 5 | Method 2 |
| S-7 | Previously Removed | 529 | NA | NA | NA |
| S-7 | Same as 528.00 | 530 | L | 15 | Method 2 |
| S-7 | Same as 528.00 | 531 | L/SS | 40 | Method 4 |
| S-7 | Same as 528.00 | 532 | L/SS | 50 | Method 4 |
| S-7 | Same as 528.00 | 533 | S | 5 | Method 4 |
| S-7 | Same as 528.00 | 534 | L | 20 | Method 1 |
| S-7 | Same as 528.00 | 535 | L/SS | 30 | Method 4 |
| S-7 | Previously Removed | 549 | NA | NA | NA |
| S-8 | Commissary | 500 | L/SS | 40 | Method 1 |
| S-8 | Commissary | 501 | L | 30 | Method 1 |
| S-8 | Previously Removed | 503 | NA | NA | NA |

NA = Not Applicable
L = Liquid
S = Solid
SS = Semi-solid

NOTES FOR TABLE 7

Recommended Methods of Management:

1. Refer to Section 3.1 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
2. Refer to Section 3.2 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
3. Refer to Section 3.3 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
4. Refer to Section 3.4 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
5. Refer to Section 3.5 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
6. Refer to Section 3.6 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
7. Refer to Section 3.7 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
8. Refer to Section 3.8 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*
9. Refer to Section 3.9 of *Report of Drum Sampling and Waste Characterization, Naval Air Station Memphis, Southside, March 1993.*

TABLE 8**SOUTHSIDE DRUMMED WASTE CHARACTERIZATIONS
SUMMARY OF MANAGEMENT METHODS****Naval Air Station - Memphis
Millington, Tennessee**

| Drum Identification Numbers | Recommended Method of Management |
|--|---|
| 4, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 33, 34, 35, 36, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 50, 51, 53, 54, 57, 59, 60, 61, 62, 63, 65, 66, 67, 69, 71, 72, 208, 251, 500, 501, 534, 536, 545 | Management Method #1 - Manage as hazardous waste (<i>Hazardous Waste Profile Sheet #1</i>). |
| 1, 32, 41, 49, 52, 55, 58, 64, 70, 73, 74, 206, 207, 528, 530, 537 | Management Method #2 - Manage as hazardous waste (<i>Hazardous Waste Profile Sheet #2</i>). |
| 9, 10, 13, 56, 226 | Management Method #3 - Manage as hazardous waste (<i>Hazardous Waste Profile Sheet #3</i>). |
| 531, 532, 533, 535 | Management Method #4 - Manage as hazardous waste (<i>Hazardous Waste Profile Sheet #4</i>). |
| 2 | Management Method #5 - Manage as hazardous waste (<i>Hazardous Waste Profile Sheet #5</i>). |
| 37 | Management Method #6 - Manage as hazardous waste (<i>Hazardous Waste Profile Sheet #6</i>). |
| 252, 253, 254, 255 | Management Method #7 - Manage as special waste. (<i>See Attachment F</i>). |
| 3 | Management Method #8 - Manage as special waste. (<i>See Attachment F</i>). |
| 68, 73, 232, 542 | Management Method #9 - RCRA empty drums - Manage per NASMEM standard operating procedures for hazardous containers. |

ATTACHMENT D

PHOTOLOG

SOUTHSIDE DRUM SAMPLING
NAVAL AIR STATION - MEMPHIS
MILLINGTON, TENNESSEE

PHOTOLOG

Photographer: Karla Jenkins, Memphis Environmental Center, Inc.

November 2 - 6, 1992



Photo #1 - 11/6/92 - Site #S-1, Building #S-9, Drum Identification Numbers 1.00 and 2.00



Photo #2 - 11/6/92 - Site #S-1, Building #S-9, Drum Identification Number 3.00



Photo #3 - 11/6/92 - Site #S-1, Building #S-9, Drum Identification Numbers 11.00 and 12.00



Photo #4 - 11/6/92 - Site #S-1 - Building #S-9, Drum Identification Number 251.00



Photo #5 - 11/5/92 - Site #S-2 - Building #S-9 - Drum Identification Numbers 9.00, 10.00, 13.00, 17.00, 18.00, 19.00, 20.00, 21.00, 22.00, 23.00, 24.00, 25.00, 26.00, 27.00, 28.00, 29.00



Photo #6 - Site #S-3 - Building #S-9 - Drum Identification Numbers 30.00, 31.00, 32.00, 33.00, 34.00, 35.00, 36.00, 37.00, 38.00, 39.00, 40.00, 41.00, 42.00, 43.00, 44.00, 45.00, 46.00, 47.00, and 48.00

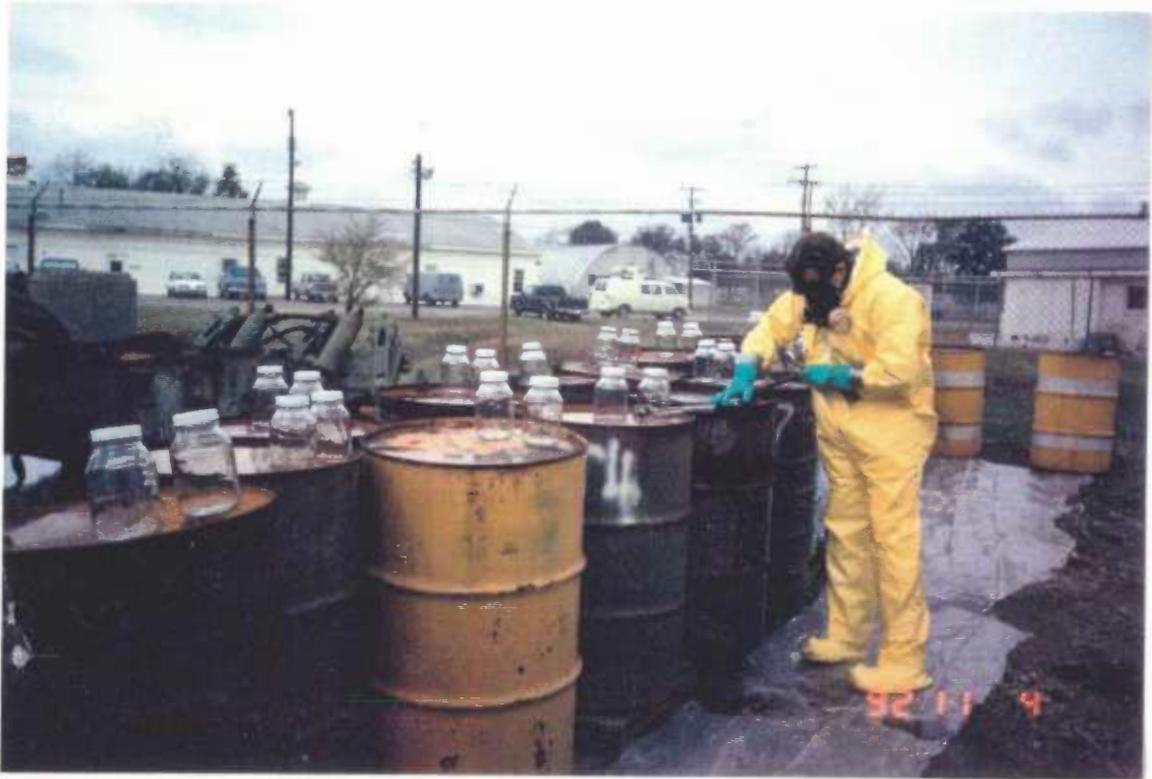


Photo #7 - 11/4/92 - Site #S-4, Building #S-9, Drum Identification Numbers 49.00, 50.00, 51.00, 52.00, 53.00, 54.00, 55.00, 56.00, 57.00, 58.00, 59.00, 60.00, 61.00, 62.00, 63.00, 64.00, 65.00, 66.00, 67.00, 68.00, 69.00, 70.00, 71.00, 72.00 and 226.00



Photo #8 - 11/4/92 - Site #S-4, Building #S-9



Photo #9 - 11/4/92 - Site #S-4, Building #S-9



Photo #10 - 11/3/92 - Site #S-6, Building #S-75, Drum Identification Numbers 206.00 and 207.00



**Photo #11 - 11/3/92 - Site #S-6, Building #S-202,
Drum Identification Numbers 208.00, 232.00 and 545.00**



**Photo #12 - 11/3/92 - Site #S-6, Building #S-75,
Drum Identification Numbers 252.00, 253.00, 254.00 and 255.00**



Photo #13 - 11/3/92 - Site #S-6, Building #S-235, Drum Identification Number 536.00



Photo #14 - 11/3/92 - Site #S-6, Building #S-235, Drum Identification Numbers 536.00 and 537.00



Photo #15 - 11/3/92 - Site #S-6, Building #S-235, Drum Identification Numbers 536.00 and 537.00



Photo #16 - 11/2/92 - Site #S-7, Building #CBU-404 Compound, Drum Identification Numbers 528.00, 530.00, 531.00, 532.00, 533.00, 534.00 and 535.00



Photo #17 - 11/3/92 - Site #S-7, Building #CBU-404 Compound, Drum Identification Numbers 528.00, 530.00, 531.00, 532.00, 533.00, 534.00 and 535.00



Photo #18 - 11/2/92 - Site #S-7, Building #CBU-404 Compound, Drum Identification Numbers 528.00, 530.00, 531.00, 532.00, 533.00, 534.00 and 535.00



**Photo #19 - 11/2/92 - Site #S-8, Commissary Building,
Drum Identification Numbers 500.00 and 501.00**

ATTACHMENT E
COMPLETE LABORATORY REPORTS

MEMPHIS ENVIRONMENTAL CENTER, INC.

ENVIRONMENTAL ANALYTICAL LABORATORY

2603 Corporate Avenue, East Suite 100

Memphis, Tennessee 38132

(901)-345-1788

Client Contact: Bobby Allen
Project: E T I - NAS
Southside
Sample(s) Type: Water

Report No: R-921399
Report Date: 12/17/92
Facility ID#:

Quality Assurance Summary:

| <u>Type of Analysis</u> | <u>Method</u> | <u>Holding Time</u> | <u>Surrogate Recovery</u> | <u>Matrix Spike Recoveries</u> | <u>Blanks</u> | <u>Overall Summary</u> |
|-------------------------|-------------------------|---------------------|---------------------------|--------------------------------|---------------|------------------------|
| TPH | EPA- 418.1 | A | NA | N-1 | A | A (See N-1) |
| IGNITABILITY | SW846- 1010 | A | NA | NA | NA | A |
| TCLP | SW846- 1311 | A | | | | |
| VOC | SW846- 8240 | A | A | A | A | A |
| BNA | SW846- 3510/ 8270 | A | A(N-2) | A(N-3) | A | A (See N-2 and N-3) |
| PESTICIDES | SW846- 3510/ 8080 | A | N-4 | A | A | A (See N-4) |
| HERBICIDES | SW846- 8150 | A | A | A | A | A |
| METALS | SW846- 6010/ 7000 | A | NA | A(N-5) | A | A (See N-5) |

A = Requirements set by method were met

NA = Not applicable

N-1 = See NOTE 1 on page 2

N-4 = See NOTE 4 on page 2

N-2 = See NOTE 2 on page 2

N-5 = See NOTE 5 on page 2

N-3 = See NOTE 3 on page 2

Terri Gray
QA Officer

Terri Gray
Laboratory Manager

E T I - NAS
Southside

Water Samples

R-921399

Page 2

- NOTE 1: Due to the level of contamination that was present in the sample that was spiked, no valid recoveries could be determined.
- NOTE 2: The recovery for the surrogate nitrobenzene, d-5, was above the accepted limit in sample #9207332.
- NOTE 3: As noted in the report, several analytes and surrogates had unacceptable recoveries. The blank spike recoveries were acceptable.
- NOTE 4: The surrogate recovery in the samples was low due to matrix interferences.
- NOTE 5: The matrix spike recoveries of arsenic and selenium were unacceptable due to matrix interferences.

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - WATER

Memphis Environmental Center
Analytical Report
Total Petroleum Hydrocarbons By EPA-418.1
Results given in: mg/L

Report Date: 11-17-92 15:42
Prepared By *RJH*
QA/QC Check *TS*
Lab Manager *TS*

| | | |
|------------------------------|---------------|---------------|
| Sample Number | 110992-DH-001 | 111092-DH-002 |
| Lab ID Number | 9207332 | 9207333 |
| Matrix | WATER | WATER |
| Type | SAMPLE | SAMPLE |
| Date of Collection | 11-09-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-15-92 | 11-15-92 |
| Date of Analysis | 11-16-92 | 11-16-92 |
| Total Petroleum Hydrocarbons | 23.8 | 362 |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00

Memphis Environmental Center
QA/QC Report - Spikes

Report Date: 11-17-92 15:42

Description: E T I/NAS - SOUTHSIDE - WATER

Total Petroleum Hydrocarbons By EPA-418.1
Results given in: mg/L

Prepared By *KH*
QA/QC Check *TS*
Lab Manager *TS*

| | | |
|------------------------------|-----------------|-----------------|
| Sample Number | 110992-DH-001 | 110992-DH-001 |
| Lab ID Number | 9207332-SPIKE-1 | 9207332-SPIKE-1 |
| Matrix | WATER | WATER |
| Type | ADDED LEVEL | % RECOVERED 1** |
| Date of Collection | 11-09-92 | 11-09-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-15-92 | 11-15-92 |
| Date of Analysis | 11-16-92 | 11-16-92 |
| Total Petroleum Hydrocarbons | 5.67 | - |

** NOTES :
9207332*SPK1RCV1 - INVALID SPIKE DATA DUE TO LEVEL OF CONTAMINATION IN SAMPLE.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - WATER

Memphis Environmental Center
 QA/QC Report - Blanks
 Total Petroleum Hydrocarbons By EPA-418.1
 Results given in: mg/L

Report Date: 11-17-92 15:42
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|------------------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-15 SPK ADD | 11-15 SPK RCV% | 11-15-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-15-92 | 11-15-92 | 11-15-92 | | |
| Date of Analysis | 11-16-92 | 11-16-92 | 11-16-92 | | |
| Total Petroleum Hydrocarbons | 4.77 | 92.7 | ND | 0.10 | - |

** NOTES :

| Sample Number | SURROGATE |
|------------------------------|-----------|
| Lab ID Number | SPIKE |
| Matrix | LEVELS |
| Type | |
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | |
| Date of Analysis | |
| Total Petroleum Hydrocarbons | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - WATER

Memphis Environmental Center
Analytical Report
General Chemistry
Results given in:

Report Date: 11-23-92 10:15
Prepared By KA
QA/QC Check LS
Lab Manager LS

| Sample Number | 110992-DH-001 | 111092-DH-002 | LIMIT | LIMIT | SURROGATE |
|------------------------|---------------|---------------|-----------|--------------|-----------|
| Lab ID Number | 9207332 | 9207333 | OF | OF | SPIKE |
| Matrix | WATER | WATER | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE** | SAMPLE** | | | |
| Date of Collection | 11-09-92 | 11-10-92 | | | |
| Date of Receipt | 11-11-92 | 11-11-92 | | | |
| Date of Extraction | - | - | | | |
| Date of Analysis | 11-14-92 | 11-14-92 | | | |
| Ignitability (degrees) | 140 | 140 | | - | - |

** NOTES :

9207332*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.
9207333*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 12:14
 Prepared By: K Yu
 QA/QC Check: Ty
 Lab Manager: Ty

| Sample Number | 110992-DH-001 | 111092-DH-002 |
|--------------------|---------------|---------------|
| Lab ID Number | 9207332 | 9207333 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE | SAMPLE |
| Date of Collection | 11-09-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-10-92 | 11-10-92 |
| Date of Analysis | 11-17-92 | 11-20-92 |

| Compound | 110992-DH-001 | 111092-DH-002 |
|--------------------------------|---------------|---------------|
| Benzene | ND | ND |
| Carbon tetrachloride | ND | ND |
| Chlorobenzene | ND | ND |
| Chloroform | ND | ND |
| Dichlorobenzene, 1,4- | ND | ND |
| Dichloroethane, 1,2- | ND | ND |
| Dichloroethane, 1,1- | ND | ND |
| Methylethyl ketone | ND | ND |
| SURR.(Bromofluorobenzene, 4-)% | 90 | 86 |
| SURR.(Toluene-d8) % | 109 | 104 |
| SURR.(d-4,1,2-Dichloroethane)% | 111 | 101 |
| Tetrachloroethene | ND | ND |
| Trichloroethene | ND | ND |
| Vinyl chloride | ND | ND |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 12:14
 Prepared By *R.Mc*
 QA/QC Check *Jo*
 Lab Manager *lg*

| Sample Number | 110992-DH-001 | 110992-DH-001 | 110992-DH-001 |
|--------------------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207332-SPIKE-1 | 9207332-SPIKE-1 | 9207332-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-09-92 | 11-09-92 | 11-09-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Analysis | 11-20-92 | 11-20-92 | 11-20-92 |
| Benzene | 500 | 86 | 85 |
| Carbon tetrachloride | 500 | 97 | 102 |
| Chlorobenzene | 500 | 88 | 89 |
| Chloroform | 500 | 85 | 89 |
| Dichlorobenzene, 1,4- | 500 | 86 | 83 |
| Dichloroethane, 1,2- | 500 | 83 | 85 |
| Dichloroethene, 1,1- | 500 | 72 | 77 |
| Methylethyl ketone | 1000 | 87 | 85 |
| SURR.(Bromofluorobenzene, 4-)% | 415 | 101 | 101 |
| SURR.(Toluene-d8) % | 440 | 109 | 103 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 103 | 96 |
| Tetrachloroethene | 500 | 103 | 104 |
| Trichloroethene | 500 | 96 | 93 |
| Vinyl chloride | 500 | 75 | 72 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 12:14
 Prepared By: *SMC*
 QA/QC Check: *ty*
 Lab Manager: *ty*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------------------|---------------|----------------|------------|------------|---------------|
| Lab ID Number | 11-12 SPK ADD | 11-12 SPK RCV% | 11-12-92-1 | 11-12-92-2 | 11-17 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-12-92 | 11-12-92 | 11-12-92 | 11-12-92 | 11-17-92 |
| Date of Analysis | 11-16-92 | 11-16-92 | 11-16-92 | 11-17-92 | 11-17-92 |
| Benzene | 500 | 90 | ND | ND | 500 |
| Carbon tetrachloride | 500 | 91 | ND | ND | - |
| Chlorobenzene | 500 | 93 | ND | ND | 500 |
| Chloroform | 500 | 89 | ND | ND | - |
| Dichlorobenzene, 1,4- | 500 | 47 | ND | ND | - |
| Dichloroethane, 1,2- | 500 | 83 | ND | ND | - |
| Dichloroethene, 1,1- | 500 | 94 | ND | ND | 500 |
| Methylethyl ketone | 1000 | 86 | ND | ND | - |
| SURR.(Bromofluorobenzene, 4-)% | 415 | 93 | 98 | 94 | 415 |
| SURR.(Toluene-d8) % | 440 | 103 | 103 | 103 | 440 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 99 | 108 | 108 | 464 |
| Tetrachloroethene | 500 | 95 | ND | ND | - |
| Trichloroethene | 500 | 92 | ND | ND | 500 |
| Vinyl chloride | 500 | 69 | ND | ND | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 12:14
 Prepared By *LM*
 QA/QC Check *tg*
 Lab Manager *tg*

| Sample Number | BLANK | BLANK | BLANK | BLANK | METHOD |
|--------------------------------|----------------|---------------|----------------|----------|-----------|
| Lab ID Number | 11-17 SPK RCV% | 11-20 SPK ADD | 11-20 SPK RCV% | 11-20-92 | DETECTION |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | LIMIT |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-17-92 | 11-20-92 | 11-20-92 | 11-20-92 | |
| Date of Analysis | 11-17-92 | 11-20-92 | 11-20-92 | 11-20-92 | |
| Benzene | 90 | 100 | 86 | ND | |
| Carbon tetrachloride | - | 100 | 89 | ND | |
| Chlorobenzene | 90 | 100 | 89 | ND | |
| Chloroform | - | 100 | 84 | ND | |
| Dichlorobenzene, 1,4- | - | 100 | 91 | ND | |
| Dichloroethane, 1,2- | - | 100 | 89 | ND | |
| Dichloroethene, 1,1- | 79 | 100 | 82 | ND | |
| Methylethyl ketone | - | 200 | 119 | ND | |
| SURR.(Bromofluorobenzene, 4-)% | 94 | 41.5 | 107 | 95 | |
| SURR.(Toluene-d8) % | 104 | 44 | 93 | 101 | |
| SURR.(d-4,1,2-Dichloroethane)% | 107 | 46.4 | 95 | 103 | |
| Tetrachloroethene | - | 100 | 96 | ND | |
| Trichloroethene | 90 | 100 | 101 | ND | |
| Vinyl chloride | - | 200 | 82 | ND | |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 12:14
 Prepared By MM
 QA/QC Check JS
 Lab Manager JS

| Sample Number | PRACTICAL | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | QUANTITATION | SPIKE |
| Matrix | LIMIT | LEVELS |
| Type | | |

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

| | | |
|--------------------------------|-----|------|
| Benzene | 50 | - |
| Carbon tetrachloride | 50 | - |
| Chlorobenzene | 50 | - |
| Chloroform | 50 | - |
| Dichlorobenzene, 1,4- | 50 | - |
| Dichloroethane, 1,2- | 50 | - |
| Dichloroethene, 1,1- | 50 | - |
| Methylethyl ketone | 500 | - |
| SURR.(Bromofluorobenzene, 4-)% | - | 41.5 |
| SURR.(Toluene-d8) % | - | 44 |
| SURR.(d-4,1,2-Dichloroethane)% | - | 46.4 |
| Tetrachloroethene | 50 | - |
| Trichloroethene | 50 | - |
| Vinyl chloride | 100 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00

Memphis Environmental Center
Analytical Report

Report Date: 12-16-92 12:11

Description: E T I/WAS - SOUTHSIDE - TCLP

Base/Neutral/Acid Extractables By SW846-1311/3510/8270

Prepared By 

QA/QC Check 

Lab Manager 

Results given in: ug/L

| | | |
|--------------------|---------------|---------------|
| Sample Number | 110992-DH-001 | 111092-DH-002 |
| Lab ID Number | 9207332 | 9207333 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-09-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-24-92 | 11-24-92 |
| Date of Analysis | 12-09-92 | 12-09-92 |

| | | |
|---------------------------------|------|------|
| Cresols | ND | ND |
| Dinitrotoluene, 2,4- | ND | ND |
| Hexachlorobenzene | ND | ND |
| Hexachlorobutadiene | ND | ND |
| Hexachloroethane | ND | ND |
| Nitrobenzene | ND | ND |
| Pentachlorophenol | ND | ND |
| Pyridine | ND | ND |
| SURR.(Fluorobiphenyl, 2-) % | 85.9 | 80.2 |
| SURR.(Fluorophenol, 2-) % | 28.1 | 56.2 |
| SURR.(Nitrobenzene, d-5) % | 300 | 85.5 |
| SURR.(Phenol, d-6) % | 10.7 | 41.8 |
| SURR.(Terphenyl, d-14-p-) % | 90.5 | 88.3 |
| SURR.(Tribromophenol, 2,4,6-) % | 105 | 88.7 |
| Trichlorophenol, 2,4,5- | ND | ND |
| Trichlorophenol, 2,4,6- | ND | ND |

** NOTES :

- 9207332*SAMPLE - TCLP EXTRACTION DATE - 11/19/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. RECOVERY FOR SURR.(Nitrobenzene,d-5) ABOVE ACCEPTED LIMIT OF 114%.
- 9207333*SAMPLE - LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00

Memphis Environmental Center
 QA/QC Report - Spikes
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-16-92 12:11
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 110992-DH-001 | 110992-DH-001 |
|---------------------------------|-----------------|-----------------|
| Lab ID Number | 9207332-SPIKE-1 | 9207332-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1** |
| Date of Collection | 11-09-92 | 11-09-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-24-92 | 11-24-92 |
| Date of Analysis | 12-09-92 | 12-09-92 |
| Cresols | 2400 | 0 |
| Dinitrotoluene, 2,4- | 800 | 102 |
| Hexachlorobenzene | 800 | 74.4 |
| Hexachlorobutadiene | 800 | 153 |
| Hexachloroethane | 800 | 50.1 |
| Nitrobenzene | 800 | 305 |
| Pentachlorophenol | 800 | 75.4 |
| Pyridine | 800 | 40.8 |
| SURR.(Fluorobiphenyl, 2-) % | 400 | 93.4 |
| SURR.(Fluorophenol, 2-) % | 800 | 3.0 |
| SURR.(Nitrobenzene, d-5) % | 400 | 360 |
| SURR.(Phenol, d-6) % | 800 | 1.1 |
| SURR.(Terphenyl, d-14-p-) % | 400 | 85.8 |
| SURR.(Tribromophenol, 2,4,6-) % | 800 | 124 |
| Trichlorophenol, 2,4,5- | 800 | 90.4 |
| Trichlorophenol, 2,4,6- | 800 | 95.8 |

** NOTES :

9207332*SPK1RCV1 - RECOVERIES OUTSIDE ACCEPTED LIMITS: Hexachlorobutadiene/116%, Nitrobenzene/180%, SURR.(Fluorophenol,2-)/21%, SURR.(Nitrobenzene,d-5)/114%, SURR.(Phenol,d-6)/10% & SURR.(Tribromophenol,2,4,6-)/123%.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00

Memphis Environmental Center

Report Date: 12-16-92 12:12

Description: E T I/NAS - SOUTHSIDE - TCLP

QA/QC Report - Blanks

Prepared By: *[Signature]*

Base/Neutral/Acid Extractables By SW846-1311/3510/8270

QA/QC Check: *[Signature]*

Results given in: ug/L

Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|---------------------------------|-----------------|------------------|------------|-----------|--------------|
| Lab ID Number | 11-24-2 SPK ADD | 11-24-2 SPK RCV% | 11-24-92-2 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-24-92 | 11-24-92 | 11-24-92 | | |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | | |
| Cresols | 240 | 61.5 | ND | | 100 |
| Dinitrotoluene, 2,4- | 80 | 92.4 | ND | | 50 |
| Hexachlorobenzene | 80 | 76.2 | ND | | 50 |
| Hexachlorobutadiene | 80 | 59.2 | ND | | 50 |
| Hexachloroethane | 80 | 56.4 | ND | | 50 |
| Nitrobenzene | 80 | 67.6 | ND | | 100 |
| Pentachlorophenol | 80 | 82.8 | ND | | 100 |
| Pyridine | 80 | 45.1 | ND | | 50 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 83.9 | 71.7 | | - |
| SURR.(Fluorophenol, 2-) % | 80 | 52.2 | 45.8 | | - |
| SURR.(Nitrobenzene, d-5) % | 40 | 83.0 | 70.6 | | - |
| SURR.(Phenol, d-6) % | 80 | 37.0 | 31.8 | | - |
| SURR.(Terphenyl, d-14-p) % | 40 | 87.6 | 72.9 | | - |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 105 | 86.3 | | - |
| Trichlorophenol, 2,4,5- | 80 | 79.4 | ND | | 100 |
| Trichlorophenol, 2,4,6- | 80 | 84.6 | ND | | 100 |

** NOTES :

- BLANK 11-24-2 SPK ADD - TCLP BLANK SPIKE.
- BLANK 11-24-2 SPK RCV% - TCLP BLANK SPIKE.
- BLANK 11-24-92-2 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Blanks
Base/Neutral/Acid Extractables By SW846-1311/3510/8270
Results given in: ug/L

Report Date: 12-16-92 12:12
Prepared By [Signature]
QA/QC Check [Signature]
Lab Manager [Signature]

Sample Number SURROGATE
Lab ID Number SPIKE
Matrix LEVELS
Type

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | |
|--------------------------------|-----|
| Cresols | - |
| Dinitrotoluene, 2,4- | - |
| Hexachlorobenzene | - |
| Hexachlorobutadiene | - |
| Hexachloroethane | - |
| Nitrobenzene | - |
| Pentachlorophenol | - |
| Pyridine | - |
| SURR.(Fluorobiphenyl, 2-) % | 400 |
| SURR.(Fluorophenol, 2-) % | 800 |
| SURR.(Nitrobenzene, d-5) % | 400 |
| SURR.(Phenol, d-6) % | 800 |
| SURR.(Terphenyl, d-14-p) % | 400 |
| SURR.(Tribromophenol, 2,4,6-)% | 800 |
| Trichlorophenol, 2,4,5- | - |
| Trichlorophenol, 2,4,6- | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00

Memphis Environmental Center

Report Date: 12-16-92 12:12

Description: E T I/NAS - SOUTHSIDE - TCLP

Base/Neutral/Acid Extractables By SW846-1311/3510/8270

QA/QC Report - Blanks

Prepared By *[Signature]*

Results given in: ug/L

QA/QC Check *[Signature]*

Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|---------------------------------|-----------------|------------------|------------|-----------|--------------|
| Lab ID Number | 11-24-1 SPK ADD | 11-24-1 SPK RCV% | 11-24-92-1 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-24-92 | 11-24-92 | 11-24-92 | | |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | | |
| Cresols | 240 | 66.8 | ND | | 10 |
| Dinitrotoluene, 2,4- | 80 | 94.6 | ND | | 5 |
| Hexachlorobenzene | 80 | 78.9 | ND | | 5 |
| Hexachlorobutadiene | 80 | 67.0 | ND | | 5 |
| Hexachloroethane | 80 | 67.2 | ND | | 5 |
| Nitrobenzene | 80 | 73.2 | ND | | 10 |
| Pentachlorophenol | 80 | 80.8 | ND | | 10 |
| Pyridine | 80 | 47.1 | ND | | 5 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 87.3 | 79.5 | | - |
| SURR.(Fluorophenol, 2-) % | 80 | 59.0 | 51.9 | | - |
| SURR.(Nitrobenzene, d-5) % | 40 | 88.6 | 81.5 | | - |
| SURR.(Phenol, d-6) % | 80 | 39.9 | 33.3 | | - |
| SURR.(Terphenyl, d-14-p-) % | 40 | 88.9 | 90.6 | | - |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 108 | 87.4 | | - |
| Trichlorophenol, 2,4,5- | 80 | 82.1 | ND | | 10 |
| Trichlorophenol, 2,4,6- | 80 | 88.8 | ND | | 10 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00

Memphis Environmental Center

Report Date: 12-16-92 12:12

Description: E T I/NAS - SOUTHSIDE - TCLP

Base/Neutral/Acid Extractables By SW846-1311/3510/8270

QA/QC Report - Blanks

Prepared By [Signature]

Results given in: ug/L

QA/QC Check [Signature]

Lab Manager [Signature]

Sample Number
Lab ID Number
Matrix
Type

SURROGATE
SPIKE
LEVELS

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | |
|---------------------------------|----|
| Cresols | - |
| Dinitrotoluene, 2,4- | - |
| Hexachlorobenzene | - |
| Hexachlorobutadiene | - |
| Hexachloroethane | - |
| Nitrobenzene | - |
| Pentachlorophenol | - |
| Pyridine | - |
| SURR.(Fluorobiphenyl, 2-) % | 40 |
| SURR.(Fluorophenol, 2-) % | 80 |
| SURR.(Nitrobenzene, d-5) % | 40 |
| SURR.(Phenol, d-6) % | 80 |
| SURR.(Terphenyl, d-14-p-) % | 40 |
| SURR.(Tribromophenol, 2,4,6-) % | 80 |
| Trichlorophenol, 2,4,5- | - |
| Trichlorophenol, 2,4,6- | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Pesticides By SW846-1311/3510/8080
Results given in: ug/L

Report Date: 12-16-92 12:11
Prepared By *[Signature]*
QA/QC Check *[Signature]*
Lab Manager *[Signature]*

| | | |
|--------------------|---------------|---------------|
| Sample Number | 110992-DH-001 | 111092-DH-002 |
| Lab ID Number | 9207332 | 9207333 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE |
| Date of Collection | 11-09-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 |

| | | |
|----------------------|------|------|
| BHC, gamma (Lindane) | ND | ND |
| Chlordane | ND | ND |
| Endrin | ND | ND |
| Heptachlor | ND | ND |
| Heptachlor epoxide | ND | ND |
| Methoxychlor | ND | ND |
| SURR.(TCMX) % | 17.0 | 14.3 |
| Toxaphene | ND | ND |

** NOTES :

9207332*SAMPLE - TCLP EXTRACTION DATES - 11/18/92 AND 11/19/92.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-16-92 12:11
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | 110992-DH-001 | 110992-DH-001 |
|----------------------|-----------------|-----------------|
| Lab ID Number | 9207332-SPIKE-1 | 9207332-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL** | % RECOVERED 1** |
| Date of Collection | 11-09-92 | 11-09-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 |
| BHC, gamma (Lindane) | 1.66 | 53.8 |
| Chlordane | - | - |
| Endrin | 1.65 | 44.4 |
| Heptachlor | 2.92 | 34.11 |
| Heptachlor epoxide | 1.74 | 0.0 |
| Methoxychlor | - | - |
| SURR.(TCMX) % | 8.0 | 19.1 |
| Toxaphene | - | - |

**** NOTES :**

- 9207332*SPK1ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- 9207332*SPK1RCV1 - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED. RECOVERY FOR Heptachlor epoxide UNACCEPTABLE DUE TO MATRIX INTERFERENCE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-16-92 12:11
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-22-3 SPK ADD | 11-22-3 SPK RCV% | 11-22-4 SPK ADD | 11-22-4 SPK RCV% | 11-22-92-3 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 | 11-30-92 | 11-30-92 | 11-29-92 |
| BHC, gamma (Lindane) | 1.66 | 100 | 1.66 | 102 | ND |
| Chlordane | - | - | - | - | ND |
| Endrin | 1.65 | 118 | 1.65 | 121 | ND |
| Heptachlor | 2.92 | 117 | 2.92 | 128 | ND |
| Heptachlor epoxide | 1.74 | 87.3 | 1.74 | 92.0 | ND |
| Methoxychlor | - | - | - | - | ND |
| SURR.(TCMX) % | 8.00 | 90.9 | 8.00 | 80.0 | 69.7 |
| Toxaphene | - | - | - | - | ND |

** NOTES :

BLANK 11-22-3 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-3 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-4 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-4 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-92-3 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-16-92 12:11
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | LIMIT | LIMIT | SURROGATE |
|---------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-22-92-4 | OF | OF | SPIKE |
| Matrix | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE** | | | |

| | |
|--------------------|----------|
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | 11-22-92 |
| Date of Analysis | 11-30-92 |

| | | | | |
|----------------------|------|------|---|------|
| BHC, gamma (Lindane) | ND | 0.20 | - | - |
| Chlordane | ND | 4.0 | - | - |
| Endrin | ND | 0.20 | - | - |
| Heptachlor | ND | 0.20 | - | - |
| Heptachlor epoxide | ND | 0.20 | - | - |
| Methoxychlor | ND | 2.0 | - | - |
| SURR.(TCMX) % | 76.4 | - | - | 2.00 |
| Toxaphene | ND | 20.0 | - | - |

** NOTES :

BLANK 11-22-92-4 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-16-92 12:11

Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-22-1 SPK ADD | 11-22-1 SPK RCV% | 11-22-2 SPK ADD | 11-22-2 SPK RCV% | 11-22-92-1 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 | 11-29-92 | 11-29-92 | 11-29-92 |
| BHC, gamma (Lindane) | 0.416 | 98.8 | 0.416 | 82.2 | ND |
| Chlordane | - | - | - | - | ND |
| Endrin | 0.412 | 120 | 0.412 | 31.3 | ND |
| Heptachlor | 0.729 | 119 | 0.729 | 82.2 | ND |
| Heptachlor epoxide | 0.435 | 88.9 | - | - | ND |
| Methoxychlor | - | - | - | - | ND |
| SURR.(TCMX) % | 2.00 | 80.5 | - | - | 80.0 |
| Toxaphene | - | - | - | - | ND |

** NOTES :

- BLANK 11-22-1 SPK ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-22-1 SPK RCV% - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-22-2 SPK ADD - SURROGATE NOT APPLICABLE.
- BLANK 11-22-2 SPK RCV% - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-16-92 12:11
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| | | | | |
|---------------|------------|-----------|--------------|-----------|
| Sample Number | BLANK | LIMIT | LIMIT | SURROGATE |
| Lab ID Number | 11-22-92-2 | OF | OF | SPIKE |
| Matrix | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE** | | | |

| | |
|--------------------|----------|
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | 11-22-92 |
| Date of Analysis | 11-29-92 |

| | | | | |
|----------------------|----|------|---|------|
| BHC, gamma (Lindane) | ND | 0.05 | - | - |
| Chlordane | ND | 1.0 | - | - |
| Endrin | ND | 0.05 | - | - |
| Heptachlor | ND | 0.05 | - | - |
| Heptachlor epoxide | ND | 0.05 | - | - |
| Methoxychlor | ND | 0.50 | - | - |
| SURR.(TCMX) % | - | | - | 2.00 |
| Toxaphene | ND | 5.0 | - | - |

** NOTES :
 BLANK 11-22-92-2 - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Herbicides By SW846-1311/8150
Results given in: ug/L

Report Date: 12-16-92 12:16
Prepared By: *[Signature]*
QA/QC Check: *[Signature]*
Lab Manager: *[Signature]*

| | | |
|--------------------|---------------|---------------|
| Sample Number | 110992-DH-001 | 111092-DH-002 |
| Lab ID Number | 9207332 | 9207333 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE |
| Date of Collection | 11-09-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-19-92 | 11-19-92 |
| Date of Analysis | 12-09-92 | 12-09-92 |
| 2,4-D | ND | ND |
| SURR.(DCAA) % | 22.0 | 12.8 |
| Silvex (2,4,5-TP) | ND | ND |

** NOTES :

9207332*SAMPLE - TCLP EXTRACTION DATES - 11/18/92 AND 11/19/92.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Spikes
Herbicides By SW846-1311/8150
Results given in: ug/L

Report Date: 12-16-92 12:16

Prepared By JVL
QA/QC Check JA
Lab Manager JS

| Sample Number | 110992-DH-001 | 110992-DH-001 |
|--------------------|-----------------|-----------------|
| Lab ID Number | 9207332-SPIKE-1 | 9207332-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-09-92 | 11-09-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-19-92 | 11-19-92 |
| Date of Analysis | 12-09-92 | 12-09-92 |
| 2,4-D | 41.4 | 24.5 |
| SURR.(DCAA) % | 200 | 22.1 |
| Silvex (2,4,5-TP) | 38.6 | 15.2 |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-16-92 12:16
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-19-2 SPK ADD | 11-19-2 SPK RCV% | 11-19-3 SPK ADD | 11-19-3 SPK RCV% | 11-19-92-2 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-19-92 | 11-19-92 | 11-19-92 | 11-19-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 |
| 2,4-D | 41.4 | 123 | 41.4 | 98.4 | ND |
| SURR.(DCAA) % | 200 | 112 | 200 | 138 | 105 |
| Silvex (2,4,5-TP) | 38.6 | 150 | 38.6 | 121 | ND |

** NOTES :
 BLANK 11-19-2 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-19-2 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-19-3 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-19-3 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-19-92-2 - TCLP BLANK.

| Sample Number | BLANK | LIMIT | LIMIT | SURROGATE |
|--------------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-19-92-3 | OF | OF | SPIKE |
| Matrix | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE** | | | |
| Date of Collection | | | | |
| Date of Receipt | | | | |
| Date of Extraction | 11-19-92 | | | |
| Date of Analysis | 12-09-92 | | | |
| 2,4-D | ND | 25 | - | - |
| SURR.(DCAA) % | 150 | - | - | 10.0 |
| Silvex (2,4,5-TP) | ND | 5.0 | - | - |

** NOTES :
 BLANK 11-19-92-3 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-16-92 12:16
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|-----------------|------------------|------------|-----------|--------------|
| Lab ID Number | 11-19-1 SPK ADD | 11-19-1 SPK RCV% | 11-19-92-1 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-19-92 | 11-19-92 | | |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | | |
| 2,4-D | 2.07 | 160 | ND | 0.25 | - |
| SURR.(DCAA) % | 10 | 152 | 146 | - | - |
| Silvex (2,4,5-TP) | 1.93 | 134 | ND | 0.05 | - |

** NOTES :

| Sample Number | SURROGATE |
|--------------------|-----------|
| Lab ID Number | SPIKE |
| Matrix | LEVELS |
| Type | |
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | |
| Date of Analysis | |
| 2,4-D | - |
| SURR.(DCAA) % | 10.0 |
| Silvex (2,4,5-TP) | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-16-92 14:31
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| | | |
|--------------------|----------------|----------------|
| Sample Number | 110992-DH-001 | 111092-DH-002 |
| Lab ID Number | 9207332 | 9207333 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE |
| Date of Collection | 11-09-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 |

| | | |
|----------|----|----|
| Arsenic | ND | ND |
| Barium | ND | ND |
| Cadmium | ND | ND |
| Chromium | ND | ND |
| Lead | ND | ND |
| Mercury | ND | ND |
| Selenium | ND | ND |
| Silver | ND | ND |

** NOTES :

9207332*SAMPLE - TCLP FILTRATION DATE 11/19/92. Hg ANALYZED 12/10/92. DIGESTED SAMPLE DILUTED 1:10 FOR Se ANALYSIS. SAMPLES RERUN FOR Ag; UNACCEPTABLE SPIKE RECOVERIES. SAMPLES RERUN FOR Hg; MATRIX INTERFERENCE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Spikes
Metals By SW846-1311/6010/7000
Results given in: ug/L

Report Date: 12-16-92 14:31
Prepared By *RH*
QA/QC Check *TA*
Lab Manager *TA*

| Sample Number | 110992-DH-001 | 110992-DH-001 |
|---------------|-----------------|-----------------|
| Lab ID Number | 9207332-SPIKE-1 | 9207332-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1** |

| | | |
|--------------------|----------------|----------------|
| Date of Collection | 11-09-92 | 11-09-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 |

| | | |
|----------|------|------|
| Arsenic | 200 | - |
| Barium | 5000 | 106 |
| Cadmium | 1000 | 103 |
| Chromium | 1000 | 104 |
| Lead | 1000 | 92.0 |
| Mercury | 500 | 97.6 |
| Selenium | 200 | - |
| Silver | 5000 | 102 |

** NOTES :

9207332*SPK1RCV1 - UNACCEPTABLE SPIKE RECOVERIES FOR Arsenic AND Selenium DUE TO MATRIX INTERFERENCE.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-16-92 14:31
 Prepared By *KH*
 QA/QC Check *TH*
 Lab Manager *TH*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|----------------|----------------|----------------|-----------|--------------|
| Lab ID Number | 11-92 | 11-92 SPK ADD | 11-92 SPK RCV% | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | | |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | | |
| Arsenic | ND | 200 | 99.7 | 10 | - |
| Barium | ND | 5000 | 98.1 | 1000 | - |
| Cadmium | ND | 1000 | 98.8 | 5 | - |
| Chromium | ND | 1000 | 98.9 | 10 | - |
| Lead | ND | 1000 | 98.0 | 50 | - |
| Mercury | ND | 500 | 101 | 20 | - |
| Selenium | ND | 200 | 101 | 5 | - |
| Silver | ND | 5000 | 98.2 | 200 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

MEMPHIS ENVIRONMENTAL CENTER, INC.

ENVIRONMENTAL ANALYTICAL LABORATORY

2603 Corporate Avenue, East Suite 100

Memphis, Tennessee 38132

(901)-345-1788

Client Contact: Bobby Allen
Project: E T I
NAS - Southside
Sample(s) Type: Water

Report No: R-921399-A
Report Date: 01/11/93
Facility ID#:

Quality Assurance Summary:

| <u>Type of Analysis</u> | <u>Method</u> | <u>Holding Time</u> | <u>Surrogate Recovery</u> | <u>Matrix Spike Recoveries</u> | <u>Blanks</u> | <u>Overall Summary</u> |
|-------------------------|---------------|---------------------|---------------------------|--------------------------------|---------------|------------------------|
| CORROSIVITY (ph) | SW846-9040 | N-1 | NA | NA | NA | See N-1 |
| CYANIDE (reactive) | SW846-7.3.3.2 | N-2 | NA | NA | A | See N-2 |
| SULFIDE (reactive) | SW846-7.3.4.2 | N-2 | NA | A | A | See N-2 |

NOTE 1: This analysis should have been performed immediately.

NOTE 2: This analysis was requested by the client after the holding time was exceeded. The values reported are considered estimated.

A = Requirements set by method were met

NA = Not applicable

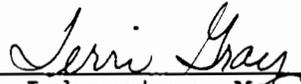
N-1 = See NOTE 1

N-2 = See NOTE 2

N-3 =

N-4 =


QA Officer


Laboratory Manager

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - WATER

Memphis Environmental Center
Analytical Report
General Chemistry
Results given in: mg/Kg

Report Date: 01-06-93 08:59
Prepared By [Signature]
QA/QC Check [Signature]
Lab Manager [Signature]

| | | |
|-----------------------------|---------------|---------------|
| Sample Number | 110992-DH-001 | 111092-DH-002 |
| Lab ID Number | 9207332 | 9207333 |
| Matrix | WATER | WATER |
| Type | SAMPLE** | SAMPLE |
| Date of Collection | 11-09-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 12-21-92 | 12-21-92 |
| Corrosivity - pH (ph units) | 11.88 | 8.42 |
| Cyanide (Reactive) | ND | ND |
| Sulfide (Reactive) | ND | ND |

** NOTES :

9207332*SAMPLE - THE HOLDING TIME HAD EXPIRED FOR ALL ANALYSES IN THIS SET.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - WATER

Memphis Environmental Center
QA/QC Report - Laboratory Duplicate Samples
General Chemistry
Results given in: mg/Kg

Report Date: 01-06-93 08:59
Prepared By *[Signature]*
QA/QC Check *[Signature]*
Lab Manager *[Signature]*

| | | |
|-----------------------------|---------------|---------------|
| Sample Number | 111092-DH-002 | 111092-DH-002 |
| Lab ID Number | 9207333 | 9207333 |
| Matrix | WATER | WATER |
| Type | SAMPLE | LAB DUPLICATE |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 12-21-92 | 12-21-92 |
| Corrosivity - pH (ph units) | 8.42 | 8.44 |
| Cyanide (Reactive) | ND | ND |
| Sulfide (Reactive) | ND | ND |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - WATER

Memphis Environmental Center
QA/QC Report - Spikes
General Chemistry
Results given in: mg/Kg

Report Date: 01-06-93 08:59
Prepared By *cut*
QA/QC Check *RA*
Lab Manager *tg*

| | | |
|-----------------------------|-----------------|-----------------|
| Sample Number | 111092-DH-002 | 111092-DH-002 |
| Lab ID Number | 9207333-SPIKE-1 | 9207333-SPIKE-1 |
| Matrix | WATER | WATER |
| Type | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 12-21-92 | 12-21-92 |
| Corrosivity - pH (ph units) | - | - |
| Cyanide (Reactive) | - | - |
| Sulfide (Reactive) | 26 | 63.0 |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921399
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - WATER

Memphis Environmental Center
 QA/QC Report - Blanks
 General Chemistry
 Results given in: mg/Kg

Report Date: 01-06-93 08:59

Prepared By *CW*
 QA/QC Check *SA*
 Lab Manager *g*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|-----------------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 12-21 SPK ADD | 12-21 SPK RCV% | 12-21-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | - | - | - | | |
| Date of Analysis | 12-21-92 | 12-21-92 | 12-21-92 | | |
| Corrosivity - pH (ph units) | - | - | - | - | - |
| Cyanide (Reactive) | 20 | 95.5 | ND | 1.2 | - |
| Sulfide (Reactive) | 26 | 70 | ND | 1 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

MEMPHIS ENVIRONMENTAL CENTER, INC.

ENVIRONMENTAL ANALYTICAL LABORATORY

2603 Corporate Avenue, East Suite 100
Memphis, Tennessee 38132
(901)-345-1788

Client Contact: Bobby Allen
Project: E T I - NAS
Southside
Sample(s) Type: Liquid Waste

Report No: R-921400
Report Date: 12/20/92
Facility ID#:

Quality Assurance Summary:

| <u>Type of Analysis</u> | <u>Method</u> | <u>Holding Time</u> | <u>Surrogate Recovery</u> | <u>Matrix Spike Recoveries</u> | <u>Blanks</u> | <u>Overall Summary</u> |
|-------------------------|-----------------|---------------------|---------------------------|--------------------------------|---------------|------------------------|
| PESTICIDES | SW846-3580/8080 | A | N-1 | NA | A | A(See N-1) |
| ASH CONTENT | AOAC-942-05 | NA | NA | NA | A | A |
| BTU | ASTM-D3286-73 | NA | NA | NA | NA | A |
| CORROSIVITY | SW846-9040 | N-2 | NA | NA | NA | See N-2 |
| CYANIDE (reactive) | SW846-7.3.3.2 | A | NA | NA | A | A |
| DENSITY | AOAC-920-212 | NA | NA | NA | NA | A |
| SOLIDS (total) | EPA-160.2 | N-3 | NA | NA | NA | See N-3 |
| SULFIDE (reactive) | SW846-7.3.4.2 | A | NA | A | NA | A |

A = Requirements set by method were met

NA = Not applicable

N-1 = See NOTE 1 on page 3

N-2 = See NOTE 2 on page 3

N-3 = See NOTE 3 on page 3

N-4 = See NOTE 4 on page 3

N-5 = See NOTE 5 on page 3

N-6 = See NOTE 6 on page 3

N-7 = See NOTE 7 on page 3

N-8 = See NOTE 8 on page 3

N-9 = See NOTE 9 on page 3

Terri Gray
QA Officer

Terri Gray
Laboratory Manager

MEMPHIS ENVIRONMENTAL CENTER, INC.

ENVIRONMENTAL ANALYTICAL LABORATORY

2603 Corporate Avenue, East Suite 100
 Memphis, Tennessee 38132
 (901)-345-1788

Client Contact: Bobby Allen
Project: E T I - NAS
 Southside
Sample(s) Type: Liquid Waste

Report No: R-921400
Report Date: 12/20/92
Facility ID#:

Quality Assurance Summary page 2:

| <u>Type of Analysis</u> | <u>Method</u> | <u>Holding Time</u> | <u>Surrogate Recovery</u> | <u>Matrix Spike Recoveries</u> | <u>Blanks</u> | <u>Overall Summary</u> |
|-----------------------------|---------------------------------|---------------------|---------------------------|--------------------------------|---------------|------------------------|
| FLASHPOINT/ IGNITABILITY | ASTM- D93/ SW846- 1010 | A | NA | NA | NA | A |
| HALOGENS | N-4 | N-5 | NA | A | A | See N-4 and N-5 |
| TCLP | SW846- 1311 | A | | | | |
| VOC | SW846- 8240 | A | A | A | A | A |
| BNA 2 Reports | SW846- 3580/ 8270 | A | N-6 | N-7 | A | A(See N-6 and N-7) |
| PESTICIDES 2 Reports | SW846- 3510/ 8080 | A | A | A(N-8) | A | A(See N-8) |
| HERBICIDES 2 Reports | SW846- 3580/ 8150 | A | A(N-9) | A | A | A(See N-9) |
| METALS 2 Reports | SW846- 6010/ 7000 | A | NA | A | A | A |

A = Requirements set by method were met
 NA = Not applicable

Terri Gray
 QA Officer

Terri Gray
 Laboratory Manager

E T I - NAS
Southside

Liquid Waste Samples

R-921400

Page 3

NOTE 1: The surrogate was diluted out.

NOTE 2: This analysis should have been performed immediately.

NOTE 3: The holding time of seven days was exceeded.

NOTE 4: These analyses were performed by Galbraith Lab:

| | |
|----------|-----------------------|
| Bromine | ASTM-D808/EPA-300.0-1 |
| Chlorine | ASTM-D808/EPA-300.0-1 |
| Fluorine | ASTM-E442/D3761 |
| Iodine | ASTM-E442/D3869-C |

NOTE 5: This analysis was requested after the holding time had expired.

NOTE 6: Due to the level of contamination present in the sample, the surrogates were diluted out in one set of samples.

NOTE 7: Due to the level of contamination present in the sample, the matrix spikes added were diluted out in one set of samples.

NOTE 8: As noted in the report, several matrix spike recoveries were unacceptable due to matrix interferences and dilutions of the sample.

NOTE 9: As noted in one of the reports, one sample had the surrogate diluted out.

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - LIQUID

Memphis Environmental Center
Analytical Report
Pesticides By SW846-3580/8080
Results given in: mg/Kg

Report Date: 12-16-92 16:36
Prepared By
QA/QC Check
Lab Manager

| | | |
|--------------------|---------------|---------------|
| Sample Number | 111092-DH-003 | 111092-DH-004 |
| Lab ID Number | 9207334 | 9207335 |
| Matrix | LIQUID WASTE | LIQUID WASTE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-22-92 | 11-22-92 |
| Date of Analysis | 12-09-92 | 12-09-92 |

| | | |
|---------------|----|----|
| Aroclor-total | ND | ND |
| SURR.(TCMX) % | - | - |

** NOTES :

- 9207334*SAMPLE - LOD FOR THIS SAMPLE IS 50 TIMES THE VALUE STATED. SURROGATE DILUTED OUT.
- 9207335*SAMPLE - LOD FOR THIS SAMPLE IS 25 TIMES THE VALUE STATED. SURROGATE DILUTED OUT.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - LIQUID

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-3580/8080
 Results given in: mg/Kg

Report Date: 12-16-92 16:36
 Prepared By Li
 QA/QC Check Li
 Lab Manager Li

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-22 SPK ADD | 11-22 SPK RCV% | 11-22-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | | |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | | |
| Aroclor-total | 2.0 | 68.0 | ND | 1.0 | - |
| SURR.(TCMX) % | 2.0 | 68.7 | 71.6 | - | - |

** NOTES :

| Sample Number | SURROGATE |
|--------------------|-----------|
| Lab ID Number | SPIKE |
| Matrix | LEVELS |
| Type | |
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | |
| Date of Analysis | |

| | |
|---------------|-----|
| Aroclor-total | - |
| SURR.(TCMX) % | 2.0 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - LIQUID

Memphis Environmental Center
 Analytical Report
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-17-92 10:27
 Prepared By:
 QA/QC Check:
 Lab Manager:

| Sample Number | 111092-DH-003 | 111092-DH-004 | 111092-DH-005 |
|-----------------------------|---------------|---------------|---------------|
| Lab ID Number | 9207334 | 9207335 | 9207336 |
| Matrix | LIQUID WASTE | LIQUID WASTE | LIQUID WASTE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - |
| Date of Analysis | 11-24-92 | 11-24-92 | 11-92 |
| Ash content (percent) | ND | ND | - |
| BTU (btu/lb) | 18900 | 18100 | - |
| Corrosivity - pH (ph units) | 9.31 | 9.54 | 9.80 |
| Cyanide (Reactive) | ND | ND | ND |
| Density | 0.8884 | 0.8611 | - |
| Solids (total) (mg/L) | 4592 | 32850 | - |
| Sulfide (Reactive) | ND | ND | ND |

** NOTES :

- 9207334*SAMPLE - ANALYSES DATES: Ash content - 11/23/92, Corrosivity-ph - 11/16/92, Cyanide (reactive) - 11/23/92 & Sulfide (reactive) - 11/17/92. Density REPORTED AS SPECIFIC GRAVITY AT 25 DEGREES/25 DEGREES CELSIUS.
- 9207335*SAMPLE - ANALYSES DATES: Ash content - 11/23/92, Corrosivity-ph - 11/16/92, Cyanide (reactive) - 11/23/92 & Sulfide (reactive) - 11/17/92. Density REPORTED AS SPECIFIC GRAVITY AT 25 DEGREES/25 DEGREES CELSIUS.
- 9207336*SAMPLE - ANALYSES DATES: Corrosivity-ph - 11/16/92, Cyanide (reactive) - 11/23/92 AND Sulfide (reactive) - 11/17/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - LIQUID

Memphis Environmental Center
 QA/QC Report - Laboratory Duplicate Samples
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-17-92 10:23
 Prepared By: LC
 QA/QC Check: TC
 Lab Manager: TC

| Sample Number | 111092-DH-003 | 111092-DH-003 |
|-----------------------------|---------------|---------------|
| Lab ID Number | 9207334 | 9207334 |
| Matrix | LIQUID WASTE | LIQUID WASTE |
| Type | SAMPLE** | LAB DUPLICATE |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 11-24-92 | 11-24-92 |
| Ash content (percent) | ND | - |
| BTU (btu/lb) | 18900 | 18600 |
| Corrosivity - pH (ph units) | 9.31 | - |
| Cyanide (Reactive) | ND | - |
| Density | 0.8884 | - |
| Solids (total) (mg/L) | 4592 | - |
| Sulfide (Reactive) | ND | - |

** NOTES :

9207334*SAMPLE - ANALYSES DATES: Ash content - 11/23/92, Corrosivity-ph - 11/16/92, Cyanide (reactive) - 11/23/92 & Sulfide (reactive) - 11/17/92. Density REPORTED AS SPECIFIC GRAVITY AT 25 DEGREES/25 DEGREES CELSIUS.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - LIQUID

Memphis Environmental Center
 QA/QC Report - Blanks
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-17-92 10:28
 Prepared By: CW
 QA/QC Check: TA
 Lab Manager: GB

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|-----------------------------|----------|---------------|----------------|-----------|--------------|
| Lab ID Number | 11-92 | 11-92 SPK ADD | 11-92 SPK RCV% | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | - | - | - | | |
| Date of Analysis | 11-92 | 11-92 | 11-92 | | |
| Ash content (percent) | - | - | - | 1 | - |
| BTU (btu/lb) | - | - | - | 900 | - |
| Corrosivity - pH (ph units) | - | - | - | - | - |
| Cyanide (Reactive) | ND | 20 | 54 | 1 | - |
| Density | - | - | - | - | - |
| Solids (total) (mg/L) | - | - | - | - | - |
| Sulfide (Reactive) | ND | 32 | 45 | 1 | - |

** NOTES :

BLANK 11-92 - Cyanide (reactive) ANALYZED 11/23/92 AND SULFIDE (reactive) ANALYZED 11/17/92.
 BLANK 11-92 SPK ADD - Cyanide (reactive) ANALYZED 11/23/92 AND SULFIDE (reactive) ANALYZED 11/17/92.
 BLANK 11-92 SPK RCV% - Cyanide (reactive) ANALYZED 11/23/92 AND SULFIDE (reactive) ANALYZED 11/17/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - LIQUID

Memphis Environmental Center
Analytical Report
General Chemistry
Results given in:

Report Date: 11-23-92 10:07
Prepared By CW
QA/QC Check TA
Lab Manager TA

| | | | |
|------------------------|---------------|---------------|---------------|
| Sample Number | 111092-DH-003 | 111092-DH-004 | 111092-DH-005 |
| Lab ID Number | 9207334 | 9207335 | 9207336 |
| Matrix | LIQUID WASTE | LIQUID WASTE | LIQUID WASTE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - |
| Date of Analysis | 11-14-92 | 11-15-92 | 11-15-92 |
| Flash point (degrees) | 116 | 100 | - |
| Ignitability (degrees) | - | - | 140 |

** NOTES :

- 9207334*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207335*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207336*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - LIQUID

Memphis Environmental Center
 QA/QC Report - Laboratory Duplicate Samples
 General Chemistry
 Results given in:

Report Date: 11-23-92 10:07

Prepared By CW
 QA/QC Check ta
 Lab Manager ky

| Sample Number | 111092-DH-003 | 111092-DH-003 | 111092-DH-004 | 111092-DH-004 |
|------------------------|---------------|-----------------|---------------|-----------------|
| Lab ID Number | 9207334 | 9207334 | 9207335 | 9207335 |
| Matrix | LIQUID WASTE | LIQUID WASTE | LIQUID WASTE | LIQUID WASTE |
| Type | SAMPLE** | LAB DUPLICATE** | SAMPLE** | LAB DUPLICATE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - | - |
| Date of Analysis | 11-14-92 | 11-14-92 | 11-15-92 | 11-15-92 |
| Flash point (degrees) | 116 | 113 | 100 | 106 |
| Ignitability (degrees) | - | - | - | - |

** NOTES :

- 9207334*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207334*LAB DUP - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207335*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207335*LAB DUP - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.

| Sample Number | LIMIT | LIMIT |
|------------------------|-----------|--------------|
| Lab ID Number | OF | OF |
| Matrix | DETECTION | QUANTITATION |
| Type | | |
| Date of Collection | | |
| Date of Receipt | | |
| Date of Extraction | | |
| Date of Analysis | | |
| Flash point (degrees) | - | - |
| Ignitability (degrees) | - | - |

** NOTES :

- Not Applicable
- ND Non detected at stated limit
- NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
Analytical Report
General Chemistry
Results given in: ppm

Report Date: 12-18-92 14:14
Prepared By *KH*
QA/QC Check *TS*
Lab Manager *TS*

| | | |
|--------------------|---------------|---------------|
| Sample Number | 111092-DH-003 | 111092-DH-004 |
| Lab ID Number | 9207334 | 9207335 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 12-92 | 12-92 |
| Bromine | ND | ND |
| Chlorine | 99 | ND |
| Fluorine | 74 | 49 |
| Iodine | 39 | ND |

** NOTES :

- 9207334*SAMPLE - HOLDING TIME EXCEEDED. ANALYSES REQUESTED AFTER HOLDING TIME EXPIRED. ANALYSES PERFORMED BY GALBRAITH LABS.
Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
- 9207335*SAMPLE - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
QA/QC Report - Laboratory Duplicate Samples
General Chemistry
Results given in: ppm

Report Date: 12-18-92 14:14
Prepared By [Signature]
QA/QC Check [Signature]
Lab Manager [Signature]

| | | |
|--------------------|---------------|-----------------|
| Sample Number | 111092-DH-003 | 111092-DH-003 |
| Lab ID Number | 9207334 | 9207334 |
| Matrix | LEACHATE | LIQUID WASTE |
| Type | SAMPLE** | LAB DUPLICATE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 12-92 | 12-92 |
| Bromine | ND | ND |
| Chlorine | 99 | 115 |
| Fluorine | 74 | 80 |
| Iodine | 39 | 38 |

** NOTES :

9207334*SAMPLE - HOLDING TIME EXCEEDED. ANALYSES REQUESTED AFTER HOLDING TIME EXPIRED. ANALYSES PERFORMED BY GALBRAITH LABS.
Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
9207334*LAB DUP - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.

- Not Applicable
D Non detected at stated limit
A Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 General Chemistry
 Results given in: ppm

Report Date: 12-18-92 14:14
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|----------|---------------|----------------|-----------|--------------|
| Lab ID Number | 12-92 | 12-92 SPK ADD | 12-92 SPK RCV% | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | - | - | - | | |
| Date of Analysis | 12-92 | 12-92 | 12-92 | | |
| Bromine | ND | 1000 | 96.0 | 20 | - |
| Chlorine | ND | 100 | 107 | 10 | - |
| Fluorine | ND | 134000 | 98.8 | 25 | - |
| Iodine | ND | 500 | 97.4 | 5 | - |

** NOTES :

BLANK 12-92 - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
 BLANK 12-92 SPK ADD - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
 BLANK 12-92 SPK RCV% - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 14:56
 Prepared By
 QA/QC Check
 Lab Manager

| Sample Number | 111092-DH-003 | 111092-DH-004 | 111092-DH-005 |
|--------------------------------|---------------|---------------|---------------|
| Lab ID Number | 9207334 | 9207335 | 9207336 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-10-92 | 11-19-92 | 11-17-92 |
| Date of Analysis | 11-20-92 | 11-20-92 | 11-23-92 |
| Benzene | ND | ND | 806 |
| Carbon tetrachloride | ND | ND | 833 |
| Chlorobenzene | ND | ND | ND |
| Chloroform | ND | ND | ND |
| Dichlorobenzene, 1,4- | ND | ND | ND |
| Dichloroethane, 1,2- | ND | ND | ND |
| Dichloroethene, 1,1- | ND | ND | ND |
| Methylethyl ketone | ND | ND | 3950 |
| SURR.(Bromofluorobenzene, 4-)% | 98 | 96 | 96 |
| SURR.(Toluene-d8) % | 104 | 108 | 101 |
| SURR.(d-4,1,2-Dichloroethane)% | 104 | 102 | 102 |
| Tetrachloroethene | ND | ND | ND |
| Trichloroethene | ND | ND | ND |
| Vinyl chloride | ND | ND | ND |

** NOTES :

- 9207334*SAMPLE - PQLs FOR THIS SAMPLE ARE 500 TIMES THE VALUES STATED.
- 9207335*SAMPLE - PQLs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 14:56
 Prepared By: PL
 QA/QC Check: PL
 Lab Manager: PL

| Sample Number | 111092-DH-003 | 111092-DH-003 | 111092-DH-003 |
|--------------------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207334-SPIKE-1 | 9207334-SPIKE-1 | 9207334-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Analysis | 11-20-92 | 11-20-92 | 11-20-92 |
| Benzene | 25000 | 78 | 79 |
| Carbon tetrachloride | 25000 | 92 | 93 |
| Chlorobenzene | 25000 | 81 | 84 |
| Chloroform | 25000 | 85 | 86 |
| Dichlorobenzene, 1,4- | 25000 | 64 | 70 |
| Dichloroethane, 1,2- | 25000 | 82 | 83 |
| Dichloroethene, 1,1- | 25000 | 88 | 71 |
| Methylethyl ketone | 50000 | 75 | 85 |
| SURR.(Bromofluorobenzene, 4-)% | 20800 | 98 | 106 |
| SURR.(Toluene-d8) % | 22000 | 104 | 102 |
| SURR.(d-4,1,2-Dichloroethane)% | 23200 | 98 | 97 |
| Tetrachloroethene | 25000 | 104 | 106 |
| Trichloroethene | 25000 | 87 | 85 |
| Vinyl chloride | 25000 | 89 | 72 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 14:56
 Prepared By: LT
 QA/QC Check: LT
 Lab Manager: LT

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------------------|---------------|----------------|----------|---------------|----------------|
| Lab ID Number | 11-12 SPK ADD | 11-12 SPK RCV% | 11-12-92 | 11-20 SPK ADD | 11-20 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-12-92 | 11-12-92 | 11-12-92 | 11-20-92 | 11-20-92 |
| Date of Analysis | 11-16-92 | 11-16-92 | 11-16-92 | 11-20-92 | 11-20-92 |
| Benzene | 500 | 90 | ND | 100 | 86 |
| Carbon tetrachloride | 500 | 91 | ND | 100 | 89 |
| Chlorobenzene | 500 | 93 | ND | 100 | 89 |
| Chloroform | 500 | 89 | ND | 100 | 84 |
| Dichlorobenzene, 1,4- | 500 | 47 | ND | 100 | 91 |
| Dichloroethane, 1,2- | 500 | 83 | ND | 100 | 89 |
| Dichloroethene, 1,1- | 500 | 94 | ND | 100 | 82 |
| Methylethyl ketone | 1000 | 86 | ND | 200 | 119 |
| SURR.(Bromofluorobenzene, 4-)% | 415 | 93 | 98 | 41.5 | 107 |
| SURR.(Toluene-d8) % | 440 | 103 | 103 | 44 | 93 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 99 | 104 | 46.4 | 95 |
| Tetrachloroethene | 500 | 95 | ND | 100 | 96 |
| Trichloroethene | 500 | 92 | ND | 100 | 101 |
| Vinyl chloride | 500 | 69 | ND | 200 | 82 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 14:56
 Prepared By: LS
 QA/QC Check: LS
 Lab Manager: LS

| Sample Number | BLANK | BLANK | BLANK | BLANK | METHOD |
|--------------------------------|----------|---------------|----------------|----------|-----------|
| Lab ID Number | 11-20-92 | 11-23 SPK ADD | 11-23 SPK RCVX | 11-23-92 | DETECTION |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | LIMIT |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-20-92 | 11-23-92 | 11-23-92 | 11-23-92 | |
| Date of Analysis | 11-20-92 | 11-23-92 | 11-23-92 | 11-23-92 | |
| Benzene | ND | 50 | 98 | ND | |
| Carbon tetrachloride | ND | 50 | 82 | ND | |
| Chlorobenzene | ND | 50 | 98 | ND | |
| Chloroform | ND | 50 | 90 | ND | |
| Dichlorobenzene, 1,4- | ND | 50 | 96 | ND | |
| Dichloroethane, 1,2- | ND | 50 | 104 | ND | |
| Dichloroethene, 1,1- | ND | 50 | 84 | ND | |
| Methylethyl ketone | ND | 149 | 100 | ND | |
| SURR.(Bromofluorobenzene, 4-)% | 95 | 41.5 | 103 | 94 | |
| SURR.(Toluene-d8) % | 101 | 44 | 98 | 102 | |
| SURR.(d-4,1,2-Dichloroethane)% | 103 | 46.4 | 101 | 104 | |
| Tetrachloroethene | ND | 50 | 92 | ND | |
| Trichloroethene | ND | 50 | 96 | ND | |
| Vinyl chloride | ND | 100 | 87 | ND | |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-16-92 14:57
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | PRACTICAL | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | QUANTITATION | SPIKE |
| Matrix | LIMIT | LEVELS |
| Type | | |

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

| | | |
|--------------------------------|-----|------|
| Benzene | 50 | - |
| Carbon tetrachloride | 50 | - |
| Chlorobenzene | 50 | - |
| Chloroform | 50 | - |
| Dichlorobenzene, 1,4- | 50 | - |
| Dichloroethane, 1,2- | 50 | - |
| Dichloroethene, 1,1- | 50 | - |
| Methylethyl ketone | 500 | - |
| SURR.(Bromofluorobenzene, 4-)% | - | 41.5 |
| SURR.(Toluene-d8) % | - | 44 |
| SURR.(d-4,1,2-Dichloroethane)% | - | 46.4 |
| Tetrachloroethene | 50 | - |
| Trichloroethene | 50 | - |
| Vinyl chloride | 100 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00

Memphis Environmental Center
Analytical Report

Report Date: 12-18-92 11:10

Description: E T I/NAS - TCLP LIQUID PHASE Base/Neutral/Acid Extractables By SW846-1311/3580/8270
Results given in: mg/Kg

Prepared By EF
QA/QC Check TE
Lab Manager EG

| | | |
|--------------------|---------------|---------------|
| Sample Number | 111092-DH-003 | 111092-DH-004 |
| Lab ID Number | 9207334 | 9207335 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-10-92 | 12-10-92 |

| | | |
|---------------------------------|----|----|
| Cresols | ND | ND |
| Dinitrotoluene, 2,4- | ND | ND |
| Hexachlorobenzene | ND | ND |
| Hexachlorobutadiene | ND | ND |
| Hexachloroethane | ND | ND |
| Nitrobenzene | ND | ND |
| Pentachlorophenol | ND | ND |
| Pyridine | ND | ND |
| SURR.(Fluorobiphenyl, 2-) % | - | - |
| SURR.(Fluorophenol, 2-) % | - | - |
| SURR.(Nitrobenzene, d-5) % | - | - |
| SURR.(Phenol, d-6) % | - | - |
| SURR.(Terphenyl, d-14-p-) % | - | - |
| SURR.(Tribromophenol, 2,4,6-) % | - | - |
| Trichlorophenol, 2,4,5- | ND | ND |
| Trichlorophenol, 2,4,6- | ND | ND |

** NOTES :

9207334*SAMPLE - LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. SURROGATES DILUTED OUT.
9207335*SAMPLE - LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. SURROGATES DILUTED OUT.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00

Memphis Environmental Center
QA/QC Report - Laboratory Duplicate Samples

Report Date: 12-18-92 11:10

Description: E T I/NAS - TCLP LIQUID PHASE Base/Neutral/Acid Extractables By SW846-1311/3580/8270

Prepared By *[Signature]*
QA/QC Check *[Signature]*
Lab Manager *[Signature]*

Results given in: mg/Kg

| | | |
|--------------------|---------------|-----------------|
| Sample Number | 111092-DH-003 | 111092-DH-003 |
| Lab ID Number | 9207334 | 9207334 |
| Matrix | LEACHATE | LIQUID WASTE |
| Type | SAMPLE** | LAB DUPLICATE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-10-92 | 12-10-92 |

| | | |
|---------------------------------|----|----|
| Cresols | ND | ND |
| Dinitrotoluene, 2,4- | ND | ND |
| Hexachlorobenzene | ND | ND |
| Hexachlorobutadiene | ND | ND |
| Hexachloroethane | ND | ND |
| Nitrobenzene | ND | ND |
| Pentachlorophenol | ND | ND |
| Pyridine | ND | ND |
| SURR.(Fluorobiphenyl, 2-) % | - | - |
| SURR.(Fluorophenol, 2-) % | - | - |
| SURR.(Nitrobenzene, d-5) % | - | - |
| SURR.(Phenol, d-6) % | - | - |
| SURR.(Terphenyl, d-14-p) % | - | - |
| SURR.(Tribromophenol, 2,4,6-) % | - | - |
| Trichlorophenol, 2,4,5- | ND | ND |
| Trichlorophenol, 2,4,6- | ND | ND |

** NOTES :

9207334*SAMPLE - LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. SURROGATES DILUTED OUT.
9207334*LAB DUP - LOQs FOR THIS DUPLICATE ARE 10 TIMES THE VALUES STATED. SURROGATES DILUTED OUT.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00

Memphis Environmental Center

Report Date: 12-18-92 11:10

Description: E T I/NAS - TCLP LIQUID PHASE Base/Neutral/Acid Extractables By SW846-1311/3580/8270

QA/QC Report - Blanks

Prepared By *[Signature]*

Results given in: mg/Kg

QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|---------------------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-25 SPK ADD | 11-25 SPK RCV% | 11-25-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 | | |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-10-92 | | |
| Cresols | 240 | 78.1 | ND | | 250 |
| Dinitrotoluene, 2,4- | 80 | 49.4 | ND | | 125 |
| Hexachlorobenzene | 80 | 73.1 | ND | | 125 |
| Hexachlorobutadiene | 80 | 81.3 | ND | | 125 |
| Hexachloroethane | 80 | 77.8 | ND | | 125 |
| Nitrobenzene | 80 | 71.8 | ND | | 125 |
| Pentachlorophenol | 80 | 17.5 | ND | | 250 |
| Pyridine | 80 | 56.6 | ND | | 250 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 102 | 101 | | - |
| SURR.(Fluorophenol, 2-) % | 80 | 97.8 | 102 | | - |
| SURR.(Nitrobenzene, d-5) % | 40 | 91.8 | 90.6 | | - |
| SURR.(Phenol, d-6) % | 80 | 95.9 | 102 | | - |
| SURR.(Terphenyl, d-14-p-) % | 40 | 104 | 101 | | - |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 83.8 | 80.9 | | - |
| Trichlorophenol, 2,4,5- | 80 | 64.7 | ND | | 250 |
| Trichlorophenol, 2,4,6- | 80 | 70.3 | ND | | 250 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400

Memphis Environmental Center

Report Date: 12-18-92 11:10

Project Number: 375-05-02-00

QA/QC Report - Blanks

Prepared By

Description: E T I/NAS - TCLP LIQUID PHASE

Base/Neutral/Acid Extractables By SW846-1311/3580/8270

QA/QC Check

Results given in: mg/Kg

Lab Manager

| | |
|---------------|-----------|
| Sample Number | SURROGATE |
| Lab ID Number | SPIKE |
| Matrix | LEVELS |
| Type | |

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | |
|---------------------------------|----|
| Cresols | - |
| Dinitrotoluene, 2,4- | - |
| Hexachlorobenzene | - |
| Hexachlorobutadiene | - |
| Hexachloroethane | - |
| Nitrobenzene | - |
| Pentachlorophenol | - |
| Pyridine | - |
| SURR.(Fluorobiphenyl, 2-) % | 40 |
| SURR.(Fluorophenol, 2-) % | 80 |
| SURR.(Nitrobenzene, d-5) % | 40 |
| SURR.(Phenol, d-6) % | 80 |
| SURR.(Terphenyl, d-14-p-) % | 40 |
| SURR.(Tribromophenol, 2,4,6-) % | 80 |
| Trichlorophenol, 2,4,5- | - |
| Trichlorophenol, 2,4,6- | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00

Memphis Environmental Center
Analytical Report

Report Date: 12-18-92 15:55

Description: E T I/NAS - SOUTHSIDE - TCLP

Base/Neutral/Acid Extractables By SW846-1311/3510/8270
Results given in: ug/L

Prepared By
QA/QC Check
Lab Manager

| Sample Number | 111092-DH-003 | 111092-DH-004 | 111092-DH-005 |
|--------------------|---------------|---------------|---------------|
| Lab ID Number | 9207334 | 9207335 | 9207336 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-30-92 |
| Date of Analysis | 12-10-92 | 12-12-92 | 12-11-92 |

| | | | |
|---------------------------------|------|------|------|
| Cresols | ND | ND | ND |
| Dinitrotoluene, 2,4- | ND | ND | ND |
| Hexachlorobenzene | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND |
| Hexachloroethane | ND | ND | ND |
| Nitrobenzene | ND | ND | ND |
| Pentachlorophenol | ND | ND | ND |
| Pyridine | ND | ND | ND |
| SURR.(Fluorobiphenyl, 2-) % | 92.3 | 90.5 | 82.2 |
| SURR.(Fluorophenol, 2-) % | 67.5 | 50.7 | 57.3 |
| SURR.(Nitrobenzene, d-5) % | 91.2 | 94.1 | 86.4 |
| SURR.(Phenol, d-6) % | 42.7 | 44.6 | 37.6 |
| SURR.(Terphenyl, d-14-p-) % | 87.0 | 104 | 92.2 |
| SURR.(Tribromophenol, 2,4,6-) % | 109 | 95.1 | 94.2 |
| Trichlorophenol, 2,4,5- | ND | ND | ND |
| Trichlorophenol, 2,4,6- | ND | ND | ND |

** NOTES :

9207334*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/22/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.
9207335*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/22/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.
9207336*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/23/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00

Memphis Environmental Center
 QA/QC Report - Spikes
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-18-92 15:55
 Prepared By *R*
 QA/QC Check *Te*
 Lab Manager *Te*

| Sample Number | 111092-DH-003 | 111092-DH-003 | 111092-DH-005 | 111092-DH-005 |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207334-SPIKE-1 | 9207334-SPIKE-1 | 9207336-SPIKE-1 | 9207336-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-30-92 | 11-30-92 |
| Date of Analysis | 12-16-92 | 12-16-92 | 12-11-92 | 12-11-92 |
| Cresols | 2400 | 67.0 | 2400 | 75.3 |
| Dinitrotoluene, 2,4- | 800 | 90.1 | 800 | 71.8 |
| Hexachlorobenzene | 800 | 75.4 | 800 | 73.9 |
| Hexachlorobutadiene | 800 | 72.0 | 800 | 48.8 |
| Hexachloroethane | 800 | 69.3 | 800 | 50.1 |
| Nitrobenzene | 800 | 77.8 | 800 | 70.8 |
| Pentachlorophenol | 800 | 22.0 | 800 | 52.5 |
| Pyridine | 800 | 39.4 | 800 | 34.8 |
| SURR.(Fluorobiphenyl, 2-) % | 400 | 88.2 | 400 | 73.1 |
| SURR.(Fluorophenol, 2-) % | 800 | 60.9 | 800 | 56.1 |
| SURR.(Nitrobenzene, d-5) % | 400 | 90.2 | 400 | 79.5 |
| SURR.(Phenol, d-6) % | 800 | 40.6 | 800 | 36.1 |
| SURR.(Terphenyl, d-14-p-) % | 400 | 82.6 | 400 | 93.3 |
| SURR.(Tribromophenol, 2,4,6-)% | 800 | 60.7 | 800 | 94.0 |
| Trichlorophenol, 2,4,5- | 800 | 57.9 | 800 | 74.4 |
| Trichlorophenol, 2,4,6- | 800 | 58.1 | 800 | 81.8 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400

Memphis Environmental Center

Report Date: 12-18-92 15:55

Project Number: 375-05-02-00

QA/QC Report - Blanks

Prepared By:

Description: E T I/NAS - SOUTHSIDE - TCLP

Base/Neutral/Acid Extractables By SW846-1311/3510/8270

QA/QC Check

Results given in: ug/L

Lab Manager

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------------------------|-----------------|------------------|------------|-----------------|------------------|
| Lab ID Number | 11-28-2 SPK ADD | 11-28-2 SPK RCV% | 11-28-92-2 | 11-30-2 SPK ADD | 11-30-2 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-28-92 | 11-30-92 | 11-30-92 |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-10-92 | 12-10-92 | 12-10-92 |
| Cresols | 240 | 38.8 | ND | 2400 | 43.2 |
| Dinitrotoluene, 2,4- | 80 | 86.7 | ND | 800 | 76.2 |
| Hexachlorobenzene | 80 | 71.2 | ND | 800 | 78.0 |
| Hexachlorobutadiene | 80 | 60.9 | ND | 800 | 59.2 |
| Hexachloroethane | 80 | 52.4 | ND | 800 | 50.9 |
| Nitrobenzene | 80 | 69.0 | ND | 800 | 65.8 |
| Pentachlorophenol | 80 | 65.7 | ND | 800 | 59.4 |
| Pyridine | 80 | 40.2 | ND | 800 | 30.7 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 78.3 | 86.2 | 400 | 78.8 |
| SURR.(Fluorophenol, 2-) % | 80 | 57.8 | 54.7 | 800 | 47.8 |
| SURR.(Nitrobenzene, d-5) % | 40 | 86.4 | 91.0 | 400 | 79.0 |
| SURR.(Phenol, d-6) % | 80 | 39.2 | 19.3 | 800 | 32.9 |
| SURR.(Terphenyl, d-14-p-) % | 40 | 85.9 | 92.0 | 400 | 98.6 |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 97.5 | 100 | 800 | 84.5 |
| Trichlorophenol, 2,4,5- | 80 | 64.6 | ND | 800 | 56.5 |
| Trichlorophenol, 2,4,6- | 80 | 76.7 | ND | 800 | 77.9 |

** NOTES :

- BLANK 11-28-2 SPK ADD - TCLP BLANK SPIKE.
- BLANK 11-28-2 SPK RCV% - TCLP BLANK SPIKE.
- BLANK 11-28-92-2 - TCLP BLANK.
- BLANK 11-30-2 SPK ADD - TCLP BLANK SPIKE.
- BLANK 11-30-2 SPK RCV% - TCLP BLANK SPIKE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-18-92 15:55
 Prepared By:
 QA/QC Check:
 Lab Manager:

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|---------------------------------|-----------------|------------------|------------|------------|-----------|
| Lab ID Number | 11-30-3 SPK ADD | 11-30-3 SPK RCV% | 11-30-92-2 | 11-30-92-3 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-30-92 | 11-30-92 | 11-30-92 | 11-30-92 | |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-10-92 | 12-10-92 | |
| Cresols | 2400 | 44.1 | ND | ND | |
| Dinitrotoluene, 2,4- | 800 | 89.4 | ND | ND | |
| Hexachlorobenzene | 800 | 73.7 | ND | ND | |
| Hexachlorobutadiene | 800 | 58.8 | ND | ND | |
| Hexachloroethane | 800 | 47.5 | ND | ND | |
| Nitrobenzene | 800 | 66.5 | ND | ND | |
| Pentachlorophenol | 800 | 71.7 | ND | ND | |
| Pyridine | 800 | 70.9 | ND | ND | |
| SURR.(Fluorobiphenyl, 2-) % | 400 | 76.9 | 72.9 | 77.6 | |
| SURR.(Fluorophenol, 2-) % | 800 | 50.5 | 47.1 | 50.9 | |
| SURR.(Nitrobenzene, d-5) % | 400 | 82.3 | 74.5 | 76.4 | |
| SURR.(Phenol, d-6) % | 800 | 35.6 | 27.7 | 29.5 | |
| SURR.(Terphenyl, d-14-p-) % | 400 | 86.2 | 82.8 | 86.1 | |
| SURR.(Tribromophenol, 2,4,6-) % | 800 | 99.7 | 88.3 | 103 | |
| Trichlorophenol, 2,4,5- | 800 | 60.4 | ND | ND | |
| Trichlorophenol, 2,4,6- | 800 | 78.7 | ND | ND | |

** NOTES :

- BLANK 11-30-3 SPK ADD - TCLP BLANK SPIKE.
- BLANK 11-30-3 SPK RCV% - TCLP BLANK SPIKE.
- BLANK 11-30-92-2 - TCLP BLANK.
- BLANK 11-30-92-3 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-18-92 15:55
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

| | | |
|---------------------------------|-----|-----|
| Cresols | 100 | - |
| Dinitrotoluene, 2,4- | 50 | - |
| Hexachlorobenzene | 50 | - |
| Hexachlorobutadiene | 50 | - |
| Hexachloroethane | 50 | - |
| Nitrobenzene | 100 | - |
| Pentachlorophenol | 100 | - |
| Pyridine | 50 | - |
| SURR.(Fluorobiphenyl, 2-) % | - | 400 |
| SURR.(Fluorophenol, 2-) % | - | 800 |
| SURR.(Nitrobenzene, d-5) % | - | 400 |
| SURR.(Phenol, d-6) % | - | 800 |
| SURR.(Terphenyl, d-14-p-) % | - | 400 |
| SURR.(Tribromophenol, 2,4,6-) % | - | 800 |
| Trichlorophenol, 2,4,5- | 100 | - |
| Trichlorophenol, 2,4,6- | 100 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/WAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-18-92 15:55
 Prepared By: RF
 QA/QC Check: JL
 Lab Manager: TL

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------------------------|-----------------|------------------|------------|-----------------|------------------|
| Lab ID Number | 11-28-1 SPK ADD | 11-28-1 SPK RCV% | 11-28-92-1 | 11-30-1 SPK ADD | 11-30-1 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-28-92 | 11-30-92 | 11-30-92 |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-10-92 | 12-11-92 | 12-11-92 |
| Cresols | 240 | 32.7 | ND | 240 | 38.1 |
| Dinitrotoluene, 2,4- | 80 | 89.0 | ND | 80 | 71.6 |
| Hexachlorobenzene | 80 | 76.9 | ND | 80 | 61.4 |
| Hexachlorobutadiene | 80 | 61.7 | ND | 80 | 48.2 |
| Hexachloroethane | 80 | 57.8 | ND | 80 | 41.1 |
| Nitrobenzene | 80 | 70.6 | ND | 80 | 54.4 |
| Pentachlorophenol | 80 | 70.7 | ND | 80 | 57.2 |
| Pyridine | 80 | 38.3 | ND | 80 | 29.7 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 81.8 | 78.8 | 40 | 63.9 |
| SURR.(Fluorophenol, 2-) % | 80 | 49.4 | 48.3 | 80 | 44.8 |
| SURR.(Nitrobenzene, d-5) % | 40 | 86.9 | 80.4 | 40 | 66.5 |
| SURR.(Phenol, d-6) % | 80 | 32.2 | 30.2 | 80 | 29.3 |
| SURR.(Terphenyl, d-14-p-) % | 40 | 88.9 | 86.7 | 40 | 72.4 |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 106 | 96.7 | 80 | 87.2 |
| Trichlorophenol, 2,4,5- | 80 | 67.4 | ND | 80 | 63.5 |
| Trichlorophenol, 2,4,6- | 80 | 80.6 | ND | 80 | 68.7 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-18-92 15:55
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | LIMIT | LIMIT | SURROGATE |
|---------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-30-92-1 | OF | OF | SPIKE |
| Matrix | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE | | | |

| | |
|--------------------|----------|
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | 11-30-92 |
| Date of Analysis | 12-11-92 |

| | | | |
|---------------------------------|------|----|----|
| Cresols | ND | 10 | - |
| Dinitrotoluene, 2,4- | ND | 5 | - |
| Hexachlorobenzene | ND | 5 | - |
| Hexachlorobutadiene | ND | 5 | - |
| Hexachloroethane | ND | 5 | - |
| Nitrobenzene | ND | 10 | - |
| Pentachlorophenol | ND | 10 | - |
| Pyridine | ND | 5 | - |
| SURR.(Fluorobiphenyl, 2-) % | 65.3 | - | 40 |
| SURR.(Fluorophenol, 2-) % | 44.4 | - | 80 |
| SURR.(Nitrobenzene, d-5) % | 62.4 | - | 40 |
| SURR.(Phenol, d-6) % | 30.6 | - | 80 |
| SURR.(Terphenyl, d-14-p-) % | 73.5 | - | 40 |
| SURR.(Tribromophenol, 2,4,6-) % | 84.0 | - | 80 |
| Trichlorophenol, 2,4,5- | ND | 10 | - |
| Trichlorophenol, 2,4,6- | ND | 10 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 Analytical Report
 Pesticides By SW846-3580/8080
 Results given in: mg/Kg

Report Date: 12-18-92 10:59
 Prepared By: Ku
 QA/QC Check: To
 Lab Manager: To

| Sample Number | 111092-DH-003 | 111092-DH-004 |
|--------------------|---------------|---------------|
| Lab ID Number | 9207334 | 9207335 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-11-92 | 12-11-92 |

| | 111092-DH-003 | 111092-DH-004 |
|----------------------|---------------|---------------|
| BHC, gamma (Lindane) | ND | ND |
| Chlordane | ND | ND |
| Endrin | ND | ND |
| Heptachlor | ND | ND |
| Heptachlor epoxide | ND | ND |
| Methoxychlor | ND | ND |
| SURR.(TCMX) % | 75.0 | 38.9 |
| Toxaphene | ND | ND |

** NOTES :

9207334*SAMPLE - LODs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED EXCEPT FOR Toxaphene WHICH IS 25 TIMES THE VALUE STATED.
 9207335*SAMPLE - LODs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Laboratory Duplicate Samples
 Pesticides By SW846-3580/8080
 Results given in: mg/Kg

Report Date: 12-18-92 10:59
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 111092-DH-003 | 111092-DH-003 | 111092-DH-003 | 111092-DH-003 |
|----------------------|---------------|---------------|---------------|-----------------|
| Lab ID Number | 9207334 | 9207334 | 9207334 | 9207334 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LIQUID WASTE |
| Type | SAMPLE** | LAB DUP2** | SAMPLE** | LAB DUPLICATE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-11-92 | 12-11-92 | 12-11-92 | 12-11-92 |
| BHC, gamma (Lindane) | ND | ND | ND | ND |
| Chlordane | ND | ND | ND | ND |
| Endrin | ND | ND | ND | ND |
| Heptachlor | ND | ND | ND | ND |
| Heptachlor epoxide | ND | ND | ND | ND |
| Methoxychlor | ND | ND | ND | ND |
| SURR.(TCMX) % | 75.0 | 70.3 | 75.0 | 70.6 |
| Toxaphene | ND | ND | ND | ND |

** NOTES :

- 9207334*SAMPLE - LODs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED EXCEPT FOR Toxaphene WHICH IS 25 TIMES THE VALUE STATED.
- 9207334*LAB DUP2 - LODs FOR THIS DUPLICATE ARE 10 TIMES THE VALUES STATED.
- 9207334*SAMPLE - LODs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED EXCEPT FOR Toxaphene WHICH IS 25 TIMES THE VALUE STATED.
- 9207334*LAB DUP - LODs FOR THIS DUPLICATE ARE 10 TIMES THE VALUES STATED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-3580/8080
 Results given in: mg/Kg

Report Date: 12-18-92 10:59
 Prepared By:
 QA/QC Check:
 Lab Manager:

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|----------------------|---------------|----------------|------------|------------|-----------|
| Lab ID Number | 11-25 SPK ADD | 11-25 SPK RCV% | 11-25-92-1 | 11-25-92-2 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE | SAMPLE** | SAMPLE** | SAMPLE** | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 | 11-25-92 | |
| Date of Analysis | 12-11-92 | 12-11-92 | 12-11-92 | 12-11-92 | |
| BHC, gamma (Lindane) | 0.472 | 105 | ND | ND | 0.25 |
| Chlordane | - | - | ND | ND | 2.5 |
| Endrin | 1.92 | 44.4 | ND | ND | 0.25 |
| Heptachlor | 0.546 | 158 | ND | ND | 0.25 |
| Heptachlor epoxide | - | - | ND | ND | 0.25 |
| Methoxychlor | - | - | ND | ND | 0.50 |
| SURR.(TCMX) % | 4.0 | 81.0 | - | - | - |
| Toxaphene | - | - | ND | ND | 12.5 |

** NOTES :

- BLANK 11-25 SPK RCV% - RECOVERY FOR Heptachlor ABOVE ACCEPTED LIMIT OF 111%.
- BLANK 11-25-92-1 - SURROGATE NOT ADDED.
- BLANK 11-25-92-2 - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
QA/QC Report - Blanks
Pesticides By SW846-3580/8080
Results given in: mg/Kg

Report Date: 12-18-92 10:59
Prepared By: la
QA/QC Check: te
Lab Manager: te

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | | |
|----------------------|---|-----|
| BHC, gamma (Lindane) | - | - |
| Chlordane | - | - |
| Endrin | - | - |
| Heptachlor | - | - |
| Heptachlor epoxide | - | - |
| Methoxychlor | - | - |
| SURR.(TCMX) % | - | 4.0 |
| Toxaphene | - | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-18-92 09:14
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 111092-DH-003 | 111092-DH-004 | 111092-DH-005 |
|----------------------|---------------|---------------|---------------|
| Lab ID Number | 9207334 | 9207335 | 9207336 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-22-92 |
| Date of Analysis | 12-06-92 | 12-06-92 | 11-29-92 |
| BHC, gamma (Lindane) | ND | ND | ND |
| Chlordane | ND | ND | ND |
| Endrin | ND | ND | ND |
| Heptachlor | ND | ND | ND |
| Heptachlor epoxide | ND | ND | ND |
| Methoxychlor | ND | ND | ND |
| SURR.(TCMX) % | 13.8 | 20.9 | 78.5 |
| Toxaphene | ND | ND | ND |

** NOTES :

- 9207334*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/21/92 AND 11/22/92. RECOVERY FOR SURR.(TCMX) LOW DUE TO MATRIX INTERFERENCE.
- 9207335*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/21/92 AND 11/22/92.
- 9207336*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-18-92 09:14
 Prepared By Ku
 QA/QC Check by
 Lab Manager by

| Sample Number | 111092-DH-003 | 111092-DH-003 | 111092-DH-005 | 111092-DH-005 |
|----------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207334-SPIKE-1 | 9207334-SPIKE-1 | 9207336-SPIKE-1 | 9207336-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL** | % RECOVERED 1** | ADDED LEVEL** | % RECOVERED 1** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 12-06-92 | 12-06-92 | 11-30-92 | 11-30-92 |
| BHC, gamma (Lindane) | 1.66 | 57.2 | 1.66 | 77.7 |
| Chlordane | - | - | - | - |
| Endrin | 1.65 | 4.2 | 1.65 | 69.9 |
| Heptachlor | 2.92 | 6.99 | 2.92 | 90.3 |
| Heptachlor epoxide | 1.74 | 0.0 | 1.74 | 53.2 |
| Methoxychlor | - | - | - | - |
| SURR.(TCMX) % | 8.0 | 13.9 | 8.0 | 73.4 |
| Toxaphene | - | - | - | - |

** NOTES :

- 9207334*SPK1ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- 9207334*SPK1RCV1 - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED. LOW RECOVERIES FOR Endrin, Heptachlor, Heptachlor epoxide AND SURR.(TCMX) DUE TO MATRIX INTERFERENCES.
- 9207336*SPK1ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- 9207336*SPK1RCV1 - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOQ

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-18-92 09:14
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-22-3 SPK ADD | 11-22-3 SPK RCV% | 11-22-4 SPK ADD | 11-22-4 SPK RCV% | 11-22-92-3 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 | 11-30-92 | 11-30-92 | 11-29-92 |
| BHC, gamma (Lindane) | 1.66 | 100 | 1.66 | 102 | ND |
| Chlordane | - | - | - | - | ND |
| Endrin | 1.65 | 118 | 1.65 | 121 | ND |
| Heptachlor | 2.92 | 117 | 2.92 | 128 | ND |
| Heptachlor epoxide | 1.74 | 87.3 | 1.74 | 92.0 | ND |
| Methoxychlor | - | - | - | - | ND |
| SURR.(TCMX) % | 8.00 | 90.9 | 8.00 | 80.0 | 69.7 |
| Toxaphene | - | - | - | - | ND |

** NOTES :

BLANK 11-22-3 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-3 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-4 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-4 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-92-3 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-18-92 09:14
 Prepared By:
 QA/QC Check:
 Lab Manager:

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|----------------------|------------|-----------------|------------------|------------|-----------|
| Lab ID Number | 11-22-92-4 | 11-28-2 SPK ADD | 11-28-2 SPK RCV% | 11-28-92-2 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-28-92 | 11-28-92 | 11-28-92 | |
| Date of Analysis | 11-30-92 | 12-06-92 | 12-06-92 | 12-06-92 | |
| BHC, gamma (Lindane) | ND | 0.416 | 124 | ND | 0.20 |
| Chlordane | ND | - | - | ND | 4.0 |
| Endrin | ND | 0.412 | 127 | ND | 0.20 |
| Heptachlor | ND | 0.729 | 107 | ND | 0.20 |
| Heptachlor epoxide | ND | 0.435 | 129 | ND | 0.20 |
| Methoxychlor | ND | - | - | ND | 2.0 |
| SURR.(TCMX) % | 76.4 | 2.00 | 81.1 | 62.7 | - |
| Toxaphene | ND | - | - | ND | 20.0 |

** NOTES :

BLANK 11-22-92-4 - TCLP BLANK.
 BLANK 11-28-2 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-28-2 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-28-92-2 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Blanks
Pesticides By SW846-1311/3510/8080
Results given in: ug/L

Report Date: 12-18-92 09:14
Prepared By: JK
QA/QC Check: JK
Lab Manager: JK

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | | |
|----------------------|---|-----|
| BHC, gamma (Lindane) | - | - |
| Chlordane | - | - |
| Endrin | - | - |
| Heptachlor | - | - |
| Heptachlor epoxide | - | - |
| Methoxychlor | - | - |
| SURR.(TCMX) % | - | 2.0 |
| Toxaphene | - | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-18-92 09:14
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-22-1 SPK ADD | 11-22-1 SPK RCV% | 11-22-2 SPK ADD | 11-22-2 SPK RCV% | 11-22-92-1 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 | 11-29-92 | 11-29-92 | 11-29-92 |
| BHC, gamma (Lindane) | 0.416 | 98.8 | 0.416 | 82.2 | ND |
| Chlordane | - | - | - | - | ND |
| Endrin | 0.412 | 120 | 0.412 | 31.3 | ND |
| Heptachlor | 0.729 | 119 | 0.729 | 82.2 | ND |
| Heptachlor epoxide | 0.435 | 88.9 | 0.435 | - | ND |
| Methoxychlor | - | - | - | - | ND |
| SURR.(TCMX) % | 2.00 | 80.5 | - | - | 80.0 |
| Toxaphene | - | - | - | - | ND |

** NOTES :

- BLANK 11-22-1 SPK ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-22-1 SPK RCV% - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-22-2 SPK ADD - SURROGATE NOT APPLICABLE.
- BLANK 11-22-2 SPK RCV% - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-18-92 09:14
 Prepared By:
 QA/QC Check:
 Lab Manager:

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|------------|-----------------|------------------|-----------------|------------------|
| Lab ID Number | 11-22-92-2 | 11-28-1 SPK ADD | 11-28-1 SPK RCV% | 11-28-3 SPK ADD | 11-28-3 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-28-92 | 11-28-92 | 11-28-92 | 11-28-92 |
| Date of Analysis | 11-29-92 | 12-06-92 | 12-06-92 | 12-06-92 | 12-06-92 |
| BHC, gamma (Lindane) | ND | 0.416 | 97.2 | 0.416 | 108 |
| Chlordane | ND | - | - | - | - |
| Endrin | ND | 0.412 | 51.5 | 0.412 | 161 |
| Heptachlor | ND | 0.729 | 87.6 | 0.729 | 90.3 |
| Heptachlor epoxide | ND | 0.435 | 64.0 | 0.435 | 127 |
| Methoxychlor | ND | - | - | - | - |
| SURR.(TCMX) % | - | 2.00 | 69.4 | - | - |
| Toxaphene | ND | - | - | - | - |

** NOTES :

- BLANK 11-22-92-2 - SURROGATE NOT APPLICABLE.
- BLANK 11-28-1 SPK ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-28-1 SPK RCV% - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-28-3 SPK ADD - SURROGATE NOT APPLICABLE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-28-3 SPK RCV% - SURROGATE NOT APPLICABLE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-18-92 09:14
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | LIMIT | LIMIT | SURROGATE |
|----------------------|------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-28-92-1 | 11-28-92-3 | OF | OF | SPIKE |
| Matrix | SYSTEM | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE | SAMPLE** | | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-28-92 | 11-28-92 | | | |
| Date of Analysis | 12-06-92 | 12-06-92 | | | |
| BHC, gamma (Lindane) | ND | ND | 0.05 | - | - |
| Chlordane | ND | ND | 1.0 | - | - |
| Endrin | ND | ND | 0.05 | - | - |
| Heptachlor | ND | ND | 0.05 | - | - |
| Heptachlor epoxide | ND | ND | 0.05 | - | - |
| Methoxychlor | ND | ND | 0.5 | - | - |
| SURR.(TCMX) % | 68.3 | - | - | - | 2.0 |
| Toxaphene | ND | ND | 5.0 | - | - |

** NOTES :

BLANK 11-28-92-3 - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Herbicides By SW846-1311/8150
Results given in: ug/L

Report Date: 12-17-92 10:35
Prepared By: X 11
QA/QC Check: Ca
Lab Manager: Ca

| Sample Number | 111092-DH-003 | 111092-DH-004 | 111092-DH-005 |
|--------------------|---------------|---------------|---------------|
| Lab ID Number | 9207334 | 9207335 | 9207336 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-24-92 | 11-24-92 | 11-19-92 |
| Date of Analysis | 11-30-92 | 11-30-92 | 12-09-92 |
| 2,4-D | ND | ND | ND |
| SURR.(DCAA) % | 88.5 | 107 | 154 |
| Silvex (2,4,5-TP) | ND | ND | ND |

** NOTES :

- 9207334*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/22/92.
- 9207335*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/22/92.
- 9207336*SAMPLE - LODs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/18/92 AND 11/19/92.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/MAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-17-92 10:35
 Prepared By: JA
 QA/QC Check: JA
 Lab Manager: JA

| Sample Number | 111092-DH-003 | 111092-DH-003 | 111092-DH-005 | 111092-DH-005 |
|--------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207334-SPIKE-1 | 9207334-SPIKE-1 | 9207336-SPIKE-1 | 9207336-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | ADDED LEVEL | % RECOVERED 1** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-24-92 | 11-24-92 | 11-19-92 | 11-19-92 |
| Date of Analysis | 11-30-92 | 11-30-92 | 12-09-92 | 12-09-92 |
| 2,4-D | 41.4 | 87.3 | 41.4 | 12.4 |
| SURR.(DCAA) % | 200 | 76.3 | 200 | 10.1 |
| Silvex (2,4,5-TP) | 38.6 | 54.7 | 38.6 | 6.07 |

** NOTES :

9207336*SPK1RCV1 - RECOVERIES FOR 2,4-D, SURR.(DCAA) AND Silvex (2,4,5-TP) ARE LOW DUE TO MATRIX INTERFERENCES.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-17-92 10:35
 Prepared By: K11
 QA/QC Check: TS
 Lab Manager: TS

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-19-2 SPK ADD | 11-19-2 SPK RCV% | 11-19-3 SPK ADD | 11-19-3 SPK RCV% | 11-19-92-2 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-19-92 | 11-19-92 | 11-19-92 | 11-19-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 |
| 2,4-D | 41.4 | 123 | 41.4 | 98.4 | ND |
| SURR.(DCAA) % | 200 | 112 | 200 | 138 | 105 |
| Silvex (2,4,5-TP) | 38.6 | 150 | 38.6 | 121 | ND |

** NOTES :

BLANK 11-19-2 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-19-2 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-19-3 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-19-3 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-19-92-2 - TCLP BLANK.

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|--------------------|------------|-----------------|------------------|------------|-----------|
| Lab ID Number | 11-19-92-3 | 11-24-1 SPK ADD | 11-24-1 SPK RCV% | 11-24-92-1 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-24-92 | 11-24-92 | 11-24-92 | |
| Date of Analysis | 12-09-92 | 11-30-92 | 11-30-92 | 11-30-92 | |
| 2,4-D | ND | 41.4 | 135 | ND | 25 |
| SURR.(DCAA) % | 150 | 200 | 101 | 107 | - |
| Silvex (2,4,5-TP) | ND | 38.6 | 109 | ND | 5.0 |

** NOTES :

BLANK 11-19-92-3 - TCLP BLANK.
 BLANK 11-24-1 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-24-1 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-24-92-1 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Blanks
Herbicides By SW846-1311/8150
Results given in: ug/L

Report Date: 12-17-92 10:35
Prepared By: RL
QA/QC Check: to
Lab Manager: to

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | | |
|-------------------|---|------|
| 2,4-D | - | - |
| SURR.(DCAA) % | - | 10.0 |
| Silvex (2,4,5-TP) | - | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-17-92 10:35
 Prepared By: h
 QA/QC Check: h
 Lab Manager: h

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|-----------------|------------------|------------|-----------------|------------------|
| Lab ID Number | 11-19-1 SPK ADD | 11-19-1 SPK RCV% | 11-19-92-1 | 11-24-2 SPK ADD | 11-24-2 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-19-92 | 11-19-92 | 11-24-92 | 11-24-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 11-30-92 | 11-30-92 |
| 2,4-D | 2.07 | 160 | ND | 2.07 | 129 |
| SURR.(DCAA) % | 10 | 152 | 146 | 10 | 105 |
| Silvex (2,4,5-TP) | 1.93 | 134 | ND | 1.93 | 118 |

** NOTES :

| Sample Number | BLANK | LIMIT | LIMIT | SURROGATE |
|--------------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-24-92-2 | OF | OF | SPIKE |
| Matrix | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE | | | |
| Date of Collection | | | | |
| Date of Receipt | | | | |
| Date of Extraction | 11-24-92 | | | |
| Date of Analysis | 11-30-92 | | | |
| 2,4-D | ND | 0.25 | - | - |
| SURR.(DCAA) % | 69.1 | - | - | 10.0 |
| Silvex (2,4,5-TP) | ND | 0.05 | - | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
Analytical Report
Herbicides By SW846-3580/8150
Results given in: mg/Kg

Report Date: 12-18-92 10:34
Prepared By KL
QA/QC Check TL
Lab Manager TL

| | | |
|--------------------|---------------|---------------|
| Sample Number | 111092-DH-003 | 111092-DH-004 |
| Lab ID Number | 9207334 | 9207335 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-01-92 | 12-11-92 |
| 2,4-D | 1.28 | ND |
| SURR.(DCAA) % | 109 | - |
| Silvex (2,4,5-TP) | 0.529 | ND |

** NOTES :

9207335*SAMPLE - LODs FOR THIS SAMPLE ARE 100 TIMES THE VALUES STATED. SURROGATE DILUTED OUT.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Spikes
 Herbicides By SW846-3580/8150
 Results given in: mg/Kg

Report Date: 12-18-92 10:34
 Prepared By *h*
 QA/QC Check *h*
 Lab Manager *h*

| Sample Number | 111092-DH-003 | 111092-DH-003 | 111092-DH-003 |
|--------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207334-SPIKE-1 | 9207334-SPIKE-1 | 9207334-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-01-92 | 12-01-92 | 12-01-92 |
| 2,4-D | 4.02 | 157 | 189 |
| SURR.(DCAA) % | 10.0 | 183 | 191 |
| Silvex (2,4,5-TP) | 3.75 | 98.2 | 129 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-3580/8150
 Results given in: mg/Kg

Report Date: 12-18-92 10:3-
 Prepared By: J
 QA/QC Check: tg
 Lab Manager: tg

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-25 SPK ADD | 11-25 SPK RCV% | 11-25-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 | | |
| Date of Analysis | 12-01-92 | 12-01-92 | 12-01-92 | | |
| 2,4-D | 4.14 | 112 | ND | 0.25 | - |
| SURR.(DCAA) % | 10.0 | 174 | 134 | - | - |
| Silvex (2,4,5-TP) | 3.86 | 102 | ND | 0.05 | - |

** NOTES :

| Sample Number | SURROGATE |
|--------------------|-----------|
| Lab ID Number | SPIKE |
| Matrix | LEVELS |
| Type | |
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | |
| Date of Analysis | |
| 2,4-D | - |
| SURR.(DCAA) % | 10.0 |
| Silvex (2,4,5-TP) | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-17-92 12:46
 Prepared By *KC*
 QA/QC Check *LB*
 Lab Manager *LB*

| | | |
|--------------------|----------------|----------------|
| Sample Number | 111092-DH-003 | 111092-DH-004 |
| Lab ID Number | 9207334 | 9207335 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 |

| | | |
|----------|----|----|
| Arsenic | ND | ND |
| Barium | ND | ND |
| Cadmium | ND | 60 |
| Chromium | ND | ND |
| Lead | ND | ND |
| Mercury | ND | ND |
| Selenium | ND | ND |
| Silver | ND | ND |

** NOTES :

- 9207334*SAMPLE - TCLP EXTRACTION DATE - 11/21/92. Hg ANALYZED 12/01/92. DUE TO LIMITED SAMPLE VOLUME, 10ml USED IN DIGESTION; STATED LODs 10xs HIGHER THAN NORMAL. Ag RE-ANALYZED DUE TO UNACCEPTABLE SPIKE RECOVERIES.
- 9207335*SAMPLE - TCLP EXTRACTION DATE - 11/21/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Spikes
Metals By SW846-1311/6010/7000
Results given in: ug/L

Report Date: 12-17-92 12:46
Prepared By KA
QA/QC Check ts
Lab Manager IG

| | | |
|--------------------|-----------------|-----------------|
| Sample Number | 111092-DH-003 | 111092-DH-003 |
| Lab ID Number | 9207334-SPIKE-1 | 9207334-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 |

| | | |
|----------|-------|------|
| Arsenic | 2000 | 97.0 |
| Barium | 50000 | 97.2 |
| Cadmium | 10000 | 97.7 |
| Chromium | 10000 | 98.4 |
| Lead | 10000 | 98.0 |
| Mercury | 50.0 | 108 |
| Selenium | 2000 | 107 |
| Silver | 50000 | 98.0 |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-17-92 12:46
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------|---------|-----------------|------------------|----------|-----------------|
| Lab ID Number | 11-92-1 | 11-92-1 SPK ADD | 11-92-1 SPK RCV% | 11-92-2 | 11-92-2 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE** | SAMPLE** |

| | | | | | |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Digestion | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 |

| | | | | | |
|----------|----|-------|------|----|-------|
| Arsenic | ND | 2000 | 95.6 | ND | 2000 |
| Barium | ND | 50000 | 96.8 | ND | 50000 |
| Cadmium | ND | 10000 | 96.3 | ND | 10000 |
| Chromium | ND | 10000 | 97.4 | ND | 10000 |
| Lead | ND | 10000 | 101 | ND | 10000 |
| Mercury | ND | 50.0 | 115 | ND | 50.0 |
| Selenium | ND | 2000 | 98.5 | ND | 2000 |
| Silver | ND | 50000 | 98.4 | ND | 50000 |

** NOTES :

BLANK 11-92-2 - TCLP BLANK.
 BLANK 11-92-2 SPK ADD - TCLP BLANK SPIKE.

| Sample Number | BLANK | LIMIT | LIMIT |
|---------------|------------------|-----------|--------------|
| Lab ID Number | 11-92-2 SPK RCV% | OF | OF |
| Matrix | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | | |

| | |
|--------------------|----------------|
| Date of Collection | |
| Date of Receipt | |
| Date of Digestion | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 |

| | | | |
|----------|------|-------|---|
| Arsenic | 96.8 | 100 | - |
| Barium | 99.8 | 10000 | - |
| Cadmium | 98.3 | 50 | - |
| Chromium | 98.2 | 100 | - |
| Lead | 101 | 500 | - |
| Mercury | 104 | 2 | - |
| Selenium | 99.0 | 50 | - |
| Silver | 99.0 | 2000 | - |

** NOTES :

BLANK 11-92-2 SPK RCV% - TCLP BLANK SPIKE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Metals By SW846-1311/6010/7000
Results given in: ug/L

Report Date: 12-17-92 12:46
Prepared By [Signature]
QA/QC Check [Signature]
Lab Manager [Signature]

Sample Number 111092-DH-005
Lab ID Number 9207336
Matrix LEACHATE
Type SAMPLE**

Date of Collection 11-10-92
Date of Receipt 11-11-92
Date of Digestion 11-92 TO 12-92
Date of Analysis 11-92 TO 12-92

| | |
|----------|------|
| Arsenic | ND |
| Barium | ND |
| Cadmium | ND |
| Chromium | 2960 |
| Lead | 9370 |
| Mercury | ND |
| Selenium | ND |
| Silver | ND |

** NOTES :

9207336*SAMPLE - TCLP EXTRACTION DATE - 11/18/92.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-17-92 12:46
 Prepared By KL
 QA/QC Check TL
 Lab Manager TL

| Sample Number | 111092-DH-005 | 111092-DH-005 |
|--------------------|-----------------|-----------------|
| Lab ID Number | 9207336-SPIKE-1 | 9207336-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Arsenic | 200 | 136 |
| Barium | 5000 | 101 |
| Cadmium | 1000 | 97.6 |
| Chromium | 1000 | 82.7 |
| Lead | 1000 | - |
| Mercury | 4.76 | 119 |
| Selenium | 200 | 97.8 |
| Silver | 5000 | 101 |

** NOTES :

9207336*SPK1RCV1 - INVALID SPIKE DATA FOR Lead DUE TO HIGH CONCENTRATION OF SAMPLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-17-92 12:46
 Prepared By *Xi*
 QA/QC Check *Ja*
 Lab Manager *LB*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------|---------|-----------------|------------------|----------|-----------------|
| Lab ID Number | 11-92-3 | 11-92-3 SPK ADD | 11-92-3 SPK RCV% | 11-92-4 | 11-92-4 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE** | SAMPLE** |

| | | | | | |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Digestion | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 |

| | | | | | |
|----------|----|------|------|----|------|
| Arsenic | ND | 200 | 99.7 | ND | 200 |
| Barium | ND | 5000 | 98.1 | ND | 5000 |
| Cadmium | ND | 1000 | 98.8 | ND | 1000 |
| Chromium | ND | 1000 | 98.9 | ND | 1000 |
| Lead | ND | 1000 | 98.0 | ND | 1000 |
| Mercury | - | - | - | ND | 4.76 |
| Selenium | ND | 200 | 101 | ND | 200 |
| Silver | ND | 5000 | 98.2 | ND | 5000 |

** NOTES :

BLANK 11-92-4 - TCLP BLANK.
 BLANK 11-92-4 SPK ADD - TCLP BLANK SPIKE.

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|---------------|------------------|---------------|----------------|----------|-----------|
| Lab ID Number | 11-92-4 SPK RCV% | 12-01 SPK ADD | 12-01 SPK RCV% | 12-01-92 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE** | SAMPLE | SAMPLE | SAMPLE | |

| | | | | |
|--------------------|----------------|----------|----------|----------|
| Date of Collection | | | | |
| Date of Receipt | | | | |
| Date of Digestion | 11-92 TO 12-92 | 12-01-92 | 12-01-92 | 12-01-92 |
| Date of Analysis | 11-92 TO 12-92 | 12-01-92 | 12-01-92 | 12-01-92 |

| | | | | | |
|----------|------|------|-----|----|------|
| Arsenic | 94.1 | - | - | - | 10 |
| Barium | 102 | - | - | - | 1000 |
| Cadmium | 95.5 | - | - | - | 5 |
| Chromium | 101 | - | - | - | 10 |
| Lead | 92.0 | - | - | - | 50 |
| Mercury | 92.8 | 4.76 | 115 | ND | 0.2 |
| Selenium | 81.0 | - | - | - | 5 |
| Silver | 98.2 | - | - | - | 200 |

** NOTES :

BLANK 11-92-4 SPK RCV% - TCLP BLANK SPIKE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Blanks
Metals By SW846-1311/6010/7000
Results given in: ug/L

Report Date: 12-17-92 12:46
Prepared By JK
QA/QC Check TA
Lab Manager TB

Sample Number
Lab ID Number
Matrix
Type

LIMIT
OF
QUANTITATION

Date of Collection
Date of Receipt
Date of Digestion
Date of Analysis

| | |
|----------|---|
| Arsenic | - |
| Barium | - |
| Cadmium | - |
| Chromium | - |
| Lead | - |
| Mercury | - |
| Selenium | - |
| Silver | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 Analytical Report
 Metals By SW846-1311/6010/7000
 Results given in: mg/Kg

Report Date: 12-18-92 10:44
 Prepared By JK
 QA/QC Check TS
 Lab Manager TS

| Sample Number | 111092-DH-003 | 111092-DH-004 |
|--------------------|----------------|----------------|
| Lab ID Number | 9207334 | 9207335 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 12-92 | 12-92 |

| | | |
|----------|----|----|
| Arsenic | ND | ND |
| Barium | ND | ND |
| Cadmium | ND | ND |
| Chromium | ND | ND |
| Lead | ND | ND |
| Mercury | ND | ND |
| Selenium | ND | ND |
| Silver | ND | ND |

** NOTES :

9207334*SAMPLE - TCLP EXTRACTION DATE - 11/21/92. Hg ANALYSIS DATE - 12/04/92. ALL SAMPLES RERUN (DIGESTION AND ANALYSIS) FOR Ag DUE TO UNACCEPTABLE SPIKE RECOVERIES.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
QA/QC Report - Spikes
Metals By SW846-1311/6010/7000
Results given in: mg/Kg

Report Date: 12-18-92 10:4-
Prepared By *[Signature]*
QA/QC Check *[Signature]*
Lab Manager *[Signature]*

| Sample Number | 111092-DH-003 | 111092-DH-003 |
|--------------------|-----------------|-----------------|
| Lab ID Number | 9207334-SPIKE-1 | 9207334-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 12-92 | 12-92 |
| Arsenic | 200 | 91.6 |
| Barium | 4170 | 97.2 |
| Cadmium | 833 | 97.2 |
| Chromium | 833 | 96.4 |
| Lead | 833 | 97.0 |
| Mercury | 4.54 | 86.8 |
| Selenium | 200 | 88.1 |
| Silver | 454 | - |

** NOTES :

9207334*SPK1RCV1 - UNACCEPTABLE SPIKE RECOVERY FOR Ag DUE TO MATRIX INTERFERENCE.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921400
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: mg/Kg

Report Date: 12-18-92 10:4
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|---------------|--------|---------------|----------------|-----------|--------------|
| Lab ID Number | 11-92 | 11-92 SPK ADD | 11-92 SPK RCV% | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |

| Date of Collection | | | |
|--------------------|----------------|----------------|----------------|
| Date of Receipt | | | |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 12-92 | 12-92 | 12-92 |

| | | | | | |
|----------|----|------|------|-----|---|
| Arsenic | ND | 200 | 87.2 | 10 | - |
| Barium | ND | 5000 | 96.1 | 200 | - |
| Cadmium | ND | 1000 | 97.0 | 5 | - |
| Chromium | ND | 1000 | 97.1 | 10 | - |
| Lead | ND | 1000 | 99.0 | 50 | - |
| Mercury | ND | 4.54 | 101 | 0.2 | - |
| Selenium | ND | 200 | 88.1 | 5 | - |
| Silver | ND | 454 | 98.8 | 20 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

MEMPHIS ENVIRONMENTAL CENTER, INC.

ENVIRONMENTAL ANALYTICAL LABORATORY

2603 Corporate Avenue, East Suite 100
 Memphis, Tennessee 38132
 (901)-345-1788

Client Contact: Bobby Allen
Project: E T I - NAS
 Southside
Sample(s) Type: Solid Waste

Report No: R-921401
Report Date: 12/21/92
Facility ID#:

Quality Assurance Summary:

| <u>Type of Analysis</u> | <u>Method</u> | <u>Holding Time</u> | <u>Surrogate Recovery</u> | <u>Matrix Spike Recoveries</u> | <u>Blanks</u> | <u>Overall Summary</u> |
|-------------------------|--------------------|---------------------|---------------------------|--------------------------------|---------------|------------------------|
| PESTICIDES | SW846-3580/8080 | A | N-1 | NA | A | A(See N-1) |
| ASH CONTENT | AOAC-942-05 | NA | NA | NA | A | A |
| BTU | ASTM-D3286-73(N-2) | NA | NA | NA | NA | A(See N-2) |
| CORROSIVITY | SW846-9040 | A | NA | NA | NA | A |
| CYANIDE (reactive) | SW846-7.3.3.2 | A | NA | NA | A | A |
| DENSITY | AOAC-920-212 | NA | NA | NA | NA | A |
| PAINT FILTER | SW846-9095 | NA | NA | NA | NA | A |
| SOLIDS (total) | EPA-160.2 | N-3 | NA | NA | NA | See N-3 |
| SULFIDE (reactive) | SW846-7.3.4.2 | A | NA | A | NA | A |

A = Requirements set by method were met

NA = Not applicable

N-1 = See NOTE 1 on page 3

N-6 = See NOTE 6 on page 3

N-2 = See NOTE 2 on page 3

N-7 = See NOTE 7 on page 3

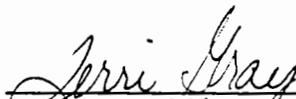
N-3 = See NOTE 3 on page 3

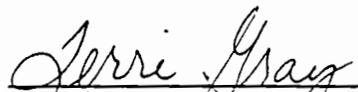
N-8 = See NOTE 8 on page 3

N-4 = See NOTE 4 on page 3

N-9 = See NOTE 9 on page 3

N-5 = See NOTE 5 on page 3


 QA Officer


 Laboratory Manager

MEMPHIS ENVIRONMENTAL CENTER, INC.

ENVIRONMENTAL ANALYTICAL LABORATORY

2603 Corporate Avenue, East Suite 100
 Memphis, Tennessee 38132
 (901)-345-1788

| | | | |
|------------------------|-------------|----------------------|----------|
| Client Contact: | Bobby Allen | Report No: | R-921401 |
| Project: | E T I - NAS | Report Date: | 12/21/92 |
| | Southside | Facility ID#: | |
| Sample(s) Type: | Solid Waste | | |

Quality Assurance Summary page 2:

| <u>Type of Analysis</u> | <u>Method</u> | <u>Holding Time</u> | <u>Surrogate Recovery</u> | <u>Matrix Spike Recoveries</u> | <u>Blanks</u> | <u>Overall Summary</u> |
|-----------------------------|---------------------------------|---------------------|---------------------------|--------------------------------|---------------|------------------------|
| FLASHPOINT/ IGNITABILITY | ASTM- D93/ SW846- 1010 | A | NA | NA | NA | A |
| HALOGENS | N-4 | N-5 | NA | A | A | See N-4 and N-5 |
| TCLP | SW846- 1311 | A | | | | |
| VOC 2 Reports | SW846- 8240 | A | A | A | A | A |
| BNA 2 Reports | SW846- 3580/ 8270 | A | N-6 | A | A | A(See N-6) |
| PESTICIDES 2 Reports | SW846- 3510/ 8080 | A | A | A(N-7) | A | A(See N-7) |
| HERBICIDES 2 Reports | SW846- 3580/ 8150 | A | A(N-8) | A | A | A(See N-8) |
| METALS 2 Reports | SW846- 6010/ 7000 | A | NA | A(N-9) | A | A(See N-9) |
| TPH | CA/LUFT (modified) | A | NA | A | A | A |

A = Requirements set by method were met
 NA = Not applicable

Terri Gray

 QA Officer

Terri Gray

 Laboratory Manager

E T I - NAS
Southside

Solid Waste Samples

R-921401

Page 3

- NOTE 1: The surrogate was diluted out.
- NOTE 2: This analysis performed by Barrw Agee Labs.
- NOTE 3: The holding time of seven days was exceeded.
- NOTE 4: These analyses were performed by Galbraith Lab:
- | | |
|----------|-----------------------|
| Bromine | ASTM-D808/EPA-300.0-1 |
| Chlorine | ASTM-D808/EPA-300.0-1 |
| Fluorine | ASTM-E442/D3761 |
| Iodine | ASTM-E442/D3869-C |
- NOTE 5: This analysis was requested after the holding time had expired.
- NOTE 6: Due to the level of contamination present in the sample, the surrogates were diluted out in one set of samples.
- NOTE 7: Due to the level of contamination present in the sample, the matrix spikes added were diluted out in one set of samples.
- NOTE 8: As noted in one of the reports, one sample had the surrogate diluted out.
- NOTE 9: As noted in the report, several matrix spike recoveries were unacceptable due to matrix interferences.

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 Analytical Report
 Pesticides By SW846-3580/8080
 Results given in: mg/Kg

Report Date: 12-17-92 15:15
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-010 | 111092-DH-011 | 111092-DH-012 |
|--------------------|---------------|---------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207341 | 9207342 | 9207343 |
| Matrix | SOLID WASTE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 |
| Aroclor-total | ND | ND | ND | ND | ND |
| SURR.(TCMX) % | - | - | - | - | - |

** NOTES :

- 9207337*SAMPLE - LOD FOR THIS SAMPLE IS 25 TIMES THE VALUE STATED. SURROGATE DILUTED OUT.
- 9207338*SAMPLE - LOD FOR THIS SAMPLE IS 25 TIMES THE VALUE STATED. SURROGATE DILUTED OUT.
- 9207341*SAMPLE - LOD FOR THIS SAMPLE IS 25 TIMES THE VALUE STATED. SURROGATE DILUTED OUT.
- 9207342*SAMPLE - LOD FOR THIS SAMPLE IS 25 TIMES THE VALUE STATED. SURROGATE DILUTED OUT.
- 9207343*SAMPLE - LOD FOR THIS SAMPLE IS 25 TIMES THE VALUE STATED. SURROGATE DILUTED OUT.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-3580/8080
 Results given in: mg/Kg

Report Date: 12-17-92 15:16
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-22 SPK ADD | 11-22 SPK RCV% | 11-22-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | | |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | | |
| Aroclor-total | 2.0 | 68.0 | ND | 1.0 | - |
| SURR.(TCMX) % | 2.0 | 68.7 | 71.6 | - | - |

** NOTES :

| Sample Number | SURROGATE |
|--------------------|-----------|
| Lab ID Number | SPIKE |
| Matrix | LEVELS |
| Type | |
| Date of Collection | |
| Date of Receipt | |
| Date of Extraction | |
| Date of Analysis | |

| | |
|---------------|-----|
| Aroclor-total | - |
| SURR.(TCMX) % | 2.0 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/WAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 Analytical Report
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-20-92 18:00
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-008 | 111092-DH-010 | 111092-DH-011 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207339 | 9207341 | 9207342 |
| Matrix | SOLID WASTE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - | - | - |
| Date of Analysis | 11-24-92 | 11-24-92 | 11-92 | 11-23-92 | 11-92 |
| Ash content (percent) | ND | - | - | 37.3 | - |
| BTU (btu/lb) | 13100 | 18600 | - | 13900 | - |
| Corrosivity - pH (ph units) | 9.96 | 8.31 | 8.36 | 8.04 | 7.72 |
| Cyanide (Reactive) | ND | ND | ND | ND | ND |
| Density | 0.9087 | 0.9444 | - | - | - |
| Paint filter | - | - | - | ND | - |
| Solids (total) (mg/L) | 5620 | 103450 | - | - | - |
| Sulfide (Reactive) | ND | ND | ND | ND | ND |

** NOTES :

- 9207337*SAMPLE - ANALYSES DATES: Ash content 11/23/92, Corrosivity-pH 11/16/92, Cyanide (reactive) 11/23/92, Sulfide (reactive) 11/17/92. Density EXPRESSED IN SPECIFIC GRAVITY AT 25 DEGREES/25 DEGREES CELSIUS.
- 9207338*SAMPLE - ANALYSES DATES: Corrosivity-pH 11/19/92, Cyanide (reactive) 12/04/92, AND Sulfide (reactive) 12/02/92. Density EXPRESSED IN SPECIFIC GRAVITY AT 25 DEGREES/25 DEGREES CELSIUS.
- 9207339*SAMPLE - ANALYSES DATES: Corrosivity-pH 11/16/92, Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.
- 9207341*SAMPLE - ANALYSES DATES: BTU 11/24/92, Corrosivity-pH 11/16/92 AND Sulfide (reactive) 11/17/92.
- 9207342*SAMPLE - ANALYSES DATES: Corrosivity-pH 11/16/92, Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 Analytical Report
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-20-92 18:00
 Prepared By CL
 QA/QC Check CL
 Lab Manager CL

| Sample Number | 111092-DH-012 | 111092-DH-013 |
|-----------------------------|---------------|---------------|
| Lab ID Number | 9207343 | 9207344 |
| Matrix | SOLID WASTE | SOLID WASTE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 11-92 | 11-92 |
| Ash content (percent) | - | - |
| BTU (btu/lb) | - | - |
| Corrosivity - pH (ph units) | 7.16 | 7.31 |
| Cyanide (Reactive) | ND | ND |
| Density | - | - |
| Paint filter | - | - |
| Solids (total) (mg/L) | - | - |
| Sulfide (Reactive) | ND | ND |

** NOTES :

- 9207343*SAMPLE - ANALYSES DATES: Corrosivity-pH 11/16/92, Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.
- 9207344*SAMPLE - ANALYSES DATES: Corrosivity-pH 11/16/92, Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 QA/QC Report - Laboratory Duplicate Samples
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-20-92 18:00
 Prepared By Ci
 QA/QC Check Hy
 Lab Manager Hy

| Sample Number | 111092-DH-008 | 111092-DH-008 | 111092-DH-011 | 111092-DH-011 |
|-----------------------------|---------------|-----------------|---------------|---------------|
| Lab ID Number | 9207339 | 9207339 | 9207342 | 9207342 |
| Matrix | SOLID WASTE | SOLID WASTE | SOLID WASTE | SOLID WASTE |
| Type | SAMPLE** | LAB DUPLICATE** | SAMPLE** | LAB DUPLICATE |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - | - |
| Date of Analysis | 11-92 | 11-92 | 11-92 | 11-23-92 |
| Ash content (percent) | - | - | - | - |
| BTU (btu/lb) | - | - | - | - |
| Corrosivity - pH (ph units) | 8.36 | 8.29 | 7.72 | - |
| Cyanide (Reactive) | ND | - | ND | ND |
| Density | - | - | - | - |
| Paint filter | - | - | - | - |
| Solids (total) (mg/L) | - | - | - | - |
| Sulfide (Reactive) | ND | ND | ND | - |

** NOTES :

- 9207339*SAMPLE - ANALYSES DATES: Corrosivity-ph 11/16/92, Cyadine (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.
- 9207339*LAB DUP - ANALYSES DATES: Corrosivity-ph 11/16/92 AND Sulfide 11/17/92.
- 9207342*SAMPLE - ANALYSES DATES: Corrosivity-ph 11/16/92, Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 QA/QC Report - Spikes
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-20-92 18:01
 Prepared By: CL
 QA/QC Check: CL
 Lab Manager: CL

| Sample Number | 111092-DH-007 | 111092-DH-007 | 111092-DH-007 | 111092-DH-007 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207338-SPIKE-1 | 9207338-SPIKE-1 | 9207338-SPIKE-2 | 9207338-SPIKE-2 |
| Matrix | SOLID WASTE | SOLID WASTE | SOLID WASTE | SOLID WASTE |
| Type | ADDED LEVEL | % RECOVERED 1 | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - | - |
| Date of Analysis | 12-02-92 | 12-02-92 | 12-04-92 | 12-04-92 |
| Ash content (percent) | - | - | - | - |
| BTU (btu/lb) | - | - | - | - |
| Corrosivity - pH (ph units) | - | - | - | - |
| Cyanide (Reactive) | - | - | 20 | 71.2 |
| Density | - | - | - | - |
| Paint filter | - | - | - | - |
| Solids (total) (mg/L) | - | - | - | - |
| Sulfide (Reactive) | 32 | 53.2 | - | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 QA/QC Report - Blanks
 General Chemistry
 Results given in: mg/Kg

Report Date: 12-20-92 18:07
 Prepared By CL
 QA/QC Check TS
 Lab Manager TS

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|-----------------------------|----------|---------------|----------------|-----------|--------------|
| Lab ID Number | 11-92 | 11-92 SPK ADD | 11-92 SPK RCV% | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | - | - | - | | |
| Date of Analysis | 11-92 | 11-92 | 11-92 | | |
| Ash content (percent) | - | - | - | 1 | - |
| BTU (btu/lb) | - | - | - | 900 | - |
| Corrosivity - pH (ph units) | - | - | - | - | - |
| Cyanide (Reactive) | ND | 20 | 54 | 1 | - |
| Density | - | - | - | - | - |
| Paint filter | - | - | - | - | - |
| Solids (total) (mg/L) | - | - | - | - | - |
| Sulfide (Reactive) | ND | 32 | 45 | 1 | - |

** NOTES :

BLANK 11-92 - ANALYSES DATES: Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.
 BLANK 11-92 SPK ADD - ANALYSES DATES: Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.
 BLANK 11-92 SPK RCV% - ANALYSES DATES: Cyanide (reactive) 11/23/92 AND Sulfide (reactive) 11/17/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 Analytical Report
 General Chemistry
 Results given in:

Report Date: 12-19-92 13:48
 Prepared By: PK
 QA/QC Check: JK
 Lab Manager: JK

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-008 | 111092-DH-010 | 111092-DH-011 |
|------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207339 | 9207341 | 9207342 |
| Matrix | SOLID WASTE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - | - | - |
| Date of Analysis | 11-15-92 | 11-17-92 | 11-17-92 | 11-19-92 | 11-19-92 |
| Flash point (degrees) | 190 | 122 | - | 100 | - |
| Ignitability (degrees) | - | - | 140 | - | 140 |

** NOTES :

- 9207337*SAMPLE - RESULT FOR Flash point > 190 DEGREES FAHRENHEIT. SAMPLE BOILED ABOVE 190 DEGREES; NO Flash point COULD BE DETERMINED ABOVE THIS TEMPERATURE.
- 9207338*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207339*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.
- 9207341*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207342*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.

| Sample Number | 111092-DH-012 | 111092-DH-013 |
|------------------------|---------------|---------------|
| Lab ID Number | 9207343 | 9207344 |
| Matrix | SOLID WASTE | SOLID WASTE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - |
| Date of Analysis | 11-19-92 | 11-19-92 |
| Flash point (degrees) | - | - |
| Ignitability (degrees) | 140 | 140 |

** NOTES :

- 9207343*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.
- 9207344*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 QA/QC Report - Laboratory Duplicate Samples
 General Chemistry
 Results given in:

Report Date: 12-19-92 13:48
 Prepared By *K*
 QA/QC Check *TL*
 Lab Manager *LG*

| Sample Number | 111092-DH-007 | 111092-DH-007 | 111092-DH-008 | 111092-DH-008 |
|------------------------|---------------|-----------------|---------------|-----------------|
| Lab ID Number | 9207338 | 9207338 | 9207339 | 9207339 |
| Matrix | SOLID WASTE | SOLID WASTE | SOLID WASTE | SOLID WASTE |
| Type | SAMPLE** | LAB DUPLICATE** | SAMPLE** | LAB DUPLICATE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - | - |
| Date of Analysis | 11-17-92 | 11-17-92 | 11-17-92 | 11-17-92 |
| Flash point (degrees) | 122 | 118 | - | - |
| Ignitability (degrees) | - | - | 140 | 140 |

** NOTES :

- 9207338*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207338*LAB DUP - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207339*SAMPLE - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.
- 9207339*LAB DUP - RESULT FOR Ignitability > 140 DEGREES FAHRENHEIT.

| Sample Number | 111092-DH-010 | 111092-DH-010 | LIMIT | LIMIT |
|------------------------|---------------|-----------------|-----------|--------------|
| Lab ID Number | 9207341 | 9207341 | OF | OF |
| Matrix | SOLID WASTE | SOLID WASTE | DETECTION | QUANTITATION |
| Type | SAMPLE** | LAB DUPLICATE** | | |
| Date of Collection | 11-10-92 | 11-10-92 | | |
| Date of Receipt | 11-11-92 | 11-11-92 | | |
| Date of Extraction | - | - | | |
| Date of Analysis | 11-19-92 | 11-19-92 | | |
| Flash point (degrees) | 100 | 108 | - | - |
| Ignitability (degrees) | - | - | - | - |

** NOTES :

- 9207341*SAMPLE - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.
- 9207341*LAB DUP - RESULT FOR Flash point REPORTED IN DEGREES FAHRENHEIT.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 Analytical Report
 General Chemistry
 Results given in: ppm

Report Date: 12-18-92 09:25
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-010 |
|--------------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207341 |
| Matrix | SOLID WASTE | SOLID WASTE | SOLID WASTE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | - | - | - |
| Date of Analysis | 12-92 | 12-92 | 12-92 |
| Bromine | ND | ND | ND |
| Chlorine | 70 | 99 | 43 |
| Fluorine | 45 | ND | ND |
| Iodine | ND | ND | 476 |

** NOTES :

- 9207337*SAMPLE - HOLDING TIME EXCEEDED. ANALYSES REQUESTED AFTER HOLDING TIME EXPIRED. ANALYSES PERFORMED BY GALBRAITH LABS.
 Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
- 9207338*SAMPLE - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
- 9207341*SAMPLE - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - SOLID

Memphis Environmental Center
 QA/QC Report - Blanks
 General Chemistry
 Results given in: ppm

Report Date: 12-18-92 09:25
 Prepared By: *RJT*
 QA/QC Check: *JG*
 Lab Manager: *LG*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|----------|---------------|----------------|-----------|--------------|
| Lab ID Number | 12-92 | 12-92 SPK ADD | 12-92 SPK RCV% | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | - | - | - | | |
| Date of Analysis | 12-92 | 12-92 | 12-92 | | |
| Bromine | ND | 1000 | 96.0 | 20 | - |
| Chlorine | ND | 100 | 107 | 10 | - |
| Fluorine | ND | 134000 | 98.8 | 25 | - |
| Iodine | ND | 500 | 97.4 | 5 | - |

** NOTES :

BLANK 12-92 - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
 BLANK 12-92 SPK ADD - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.
 BLANK 12-92 SPK RCV% - Bromine AND Chlorine ANALYZED 12/14/92. Fluorine ANALYZED 12/08/92 & Iodine ANALYZED 12/11/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:58
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-008 | 111092-DH-010 | 111092-DH-011 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207339 | 9207341 | 9207342 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-10-92 | 11-10-92 | 11-14-92 | 11-16-92 | 11-16-92 |
| Date of Analysis | 11-21-92 | 11-21-92 | 11-16-92 | 11-17-92 | 11-17-92 |
| Benzene | ND | ND | ND | ND | ND |
| Carbon tetrachloride | ND | ND | ND | ND | ND |
| Chlorobenzene | ND | ND | ND | ND | ND |
| Chloroform | ND | ND | ND | ND | ND |
| Dichlorobenzene, 1,4- | ND | ND | ND | ND | ND |
| Dichloroethane, 1,2- | ND | ND | ND | ND | ND |
| Dichloroethene, 1,1- | ND | ND | ND | ND | ND |
| Methylethyl ketone | ND | ND | ND | ND | ND |
| SURR.(Bromofluorobenzene, 4-)% | 91 | 112 | 92 | 95 | 94 |
| SURR.(Toluene-d8) % | 103 | 102 | 99 | 103 | 101 |
| SURR.(d-4,1,2-Dichloroethane)% | 102 | 109 | 105 | 110 | 105 |
| Tetrachloroethene | ND | ND | ND | ND | ND |
| Trichloroethene | ND | ND | ND | ND | ND |
| Vinyl chloride | ND | ND | ND | ND | ND |

** NOTES :

- 9207337*SAMPLE - PQLs FOR THIS SAMPLE ARE 200 TIMES THE VALUES STATED.
- 9207338*SAMPLE - PQLs FOR THIS SAMPLE ARE 1000 TIMES THE VALUES STATED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Volatile Organics By Method: SW846-8240
Results given in: ug/L

Report Date: 12-18-92 15:58
Prepared By NI
QA/QC Check TS
Lab Manager TS

| Sample Number | 111092-DH-012 | 111092-DH-013 |
|--------------------|---------------|---------------|
| Lab ID Number | 9207343 | 9207344 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE | SAMPLE |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-17-92 | 11-16-92 |
| Date of Analysis | 11-20-92 | 11-23-92 |

| | | |
|--------------------------------|-----|-----|
| Benzene | ND | ND |
| Carbon tetrachloride | ND | ND |
| Chlorobenzene | ND | ND |
| Chloroform | ND | ND |
| Dichlorobenzene, 1,4- | ND | ND |
| Dichloroethane, 1,2- | ND | ND |
| Dichloroethene, 1,1- | ND | ND |
| Methylethyl ketone | ND | ND |
| SURR.(Bromofluorobenzene, 4-)% | 96 | 95 |
| SURR.(Toluene-d8) % | 104 | 106 |
| SURR.(d-4,1,2-Dichloroethane)% | 108 | 108 |
| Tetrachloroethene | ND | ND |
| Trichloroethene | ND | ND |
| Vinyl chloride | ND | ND |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:58
 Prepared By LSI
 QA/QC Check LB
 Lab Manager LB

| Sample Number | 111092-DH-006 | 111092-DH-006 | 111092-DH-006 |
|--------------------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207337-SPIKE-1 | 9207337-SPIKE-1 | 9207337-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Analysis | 11-21-92 | 11-21-92 | 11-21-92 |
| Benzene | 100000 | 93 | 124 |
| Carbon tetrachloride | 100000 | 97 | 98 |
| Chlorobenzene | 100000 | 85 | 78 |
| Chloroform | 100000 | 96 | 91 |
| Dichlorobenzene, 1,4- | 100000 | 61 | 73 |
| Dichloroethane, 1,2- | 100000 | 93 | 93 |
| Dichloroethene, 1,1- | 100000 | 90 | 93 |
| Methylethyl ketone | 200000 | 92 | 99 |
| SURR.(Bromofluorobenzene, 4-)% | 83000 | 109 | 98 |
| SURR.(Toluene-d8) % | 88000 | 100 | 104 |
| SURR.(d-4,1,2-Dichloroethane)% | 92800 | 103 | 105 |
| Tetrachloroethene | 100000 | 100 | 94 |
| Trichloroethene | 100000 | 84 | 87 |
| Vinyl chloride | 100000 | 85 | 81 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 VA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:58
 Prepared By: JS
 QA/QC Check: TS
 Lab Manager: TS

| Sample Number | 111092-DH-007 | 111092-DH-007 | 111092-DH-007 |
|--------------------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207338-SPIKE-1 | 9207338-SPIKE-1 | 9207338-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Analysis | 11-23-92 | 11-23-92 | 11-23-92 |
| Benzene | 500000 | 95 | 101 |
| Carbon tetrachloride | 500000 | 89 | 99 |
| Chlorobenzene | 500000 | 80 | 83 |
| Chloroform | 500000 | 87 | 91 |
| Dichlorobenzene, 1,4- | 500000 | 58 | 51 |
| Dichloroethane, 1,2- | 500000 | 87 | 91 |
| Dichloroethene, 1,1- | 500000 | 95 | 96 |
| Methylethyl ketone | 1000000 | 78 | 88 |
| SURR.(Bromofluorobenzene, 4-)% | 414000 | 96 | 109 |
| SURR.(Toluene-d8) % | 440000 | 100 | 100 |
| SURR.(d-4,1,2-Dichloroethane)% | 464000 | 96 | 104 |
| Tetrachloroethene | 500000 | 91 | 96 |
| Trichloroethene | 500000 | 82 | 86 |
| Vinyl chloride | 500000 | 82 | 80 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:59
 Prepared By:
 QA/QC Check:
 Lab Manager:

| Sample Number | 111092-DH-008 | 111092-DH-008 | 111092-DH-008 |
|--------------------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207339-SPIKE-1 | 9207339-SPIKE-1 | 9207339-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-14-92 | 11-14-92 | 11-14-92 |
| Date of Analysis | 11-16-92 | 11-16-92 | 11-16-92 |
| Benzene | 500 | 89 | 94 |
| Carbon tetrachloride | 500 | 96 | 99 |
| Chlorobenzene | 500 | 93 | 95 |
| Chloroform | 500 | 87 | 90 |
| Dichlorobenzene, 1,4- | 500 | 77 | 74 |
| Dichloroethane, 1,2- | 500 | 84 | 85 |
| Dichloroethene, 1,1- | 500 | 88 | 95 |
| Methylethyl ketone | 1000 | 84 | 85 |
| SURR.(Bromofluorobenzene, 4-)% | 415 | 97 | 99 |
| SURR.(Toluene-d8) % | 440 | 102 | 104 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 101 | 99 |
| Tetrachloroethene | 500 | 102 | 104 |
| Trichloroethene | 500 | 92 | 98 |
| Vinyl chloride | 500 | 70 | 74 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:59

Prepared By JS
 QA/QC Check JS
 Lab Manager JS

| Sample Number | 111092-DH-010 | 111092-DH-010 | 111092-DH-010 |
|--------------------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207341-SPIKE-1 | 9207341-SPIKE-1 | 9207341-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-16-92 | 11-16-92 | 11-16-92 |
| Date of Analysis | 11-20-92 | 11-20-92 | 11-20-92 |
| Benzene | 500 | 89 | 85 |
| Carbon tetrachloride | 500 | 109 | 103 |
| Chlorobenzene | 500 | 107 | 92 |
| Chloroform | 500 | 92 | 90 |
| Dichlorobenzene, 1,4- | 500 | 85 | 88 |
| Dichloroethane, 1,2- | 500 | 91 | 88 |
| Dichloroethene, 1,1- | 500 | 75 | 93 |
| Methylethyl ketone | 1000 | 79 | 75 |
| SURR.(Bromofluorobenzene, 4-)% | 415 | 96 | 103 |
| SURR.(Toluene-d8) % | 440 | 104 | 103 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 98 | 98 |
| Tetrachloroethene | 500 | 115 | 108 |
| Trichloroethene | 500 | 104 | 98 |
| Vinyl chloride | 500 | 74 | 85 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:59
 Prepared By: Li
 QA/QC Check: Te
 Lab Manager: Ry

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------------------|-----------------|------------------|------------|------------|-----------------|
| Lab ID Number | 11-12-1 SPK ADD | 11-12-1 SPK RCV% | 11-12-92-1 | 11-12-92-2 | 11-17-1 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-12-92 | 11-12-92 | 11-12-92 | 11-12-92 | 11-17-92 |
| Date of Analysis | 11-16-92 | 11-16-92 | 11-16-92 | 11-17-92 | 11-17-92 |
| Benzene | 500 | 90 | ND | ND | 500 |
| Carbon tetrachloride | 500 | 91 | ND | ND | - |
| Chlorobenzene | 500 | 93 | ND | ND | 500 |
| Chloroform | 500 | 89 | ND | ND | - |
| Dichlorobenzene, 1,4- | 500 | 47 | ND | ND | - |
| Dichloroethane, 1,2- | 500 | 83 | ND | ND | - |
| Dichloroethene, 1,1- | 500 | 94 | ND | ND | 500 |
| Methylethyl ketone | 1000 | 86 | ND | ND | - |
| SURR.(Bromofluorobenzene, 4-)% | 415 | 93 | 98 | 94 | 415 |
| SURR.(Toluene-d8) % | 440 | 103 | 103 | 103 | 440 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 99 | 104 | 108 | 464 |
| Tetrachloroethene | 500 | 95 | ND | ND | - |
| Trichloroethene | 500 | 92 | ND | ND | 500 |
| Vinyl chloride | 500 | 69 | ND | ND | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:59
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------------------|------------------|-----------------|------------------|------------|-----------------|
| Lab ID Number | 11-17-1 SPK RCV% | 11-20-1 SPK ADD | 11-20-1 SPK RCV% | 11-20-92-1 | 11-21-1 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-17-92 | 11-20-92 | 11-20-92 | 11-20-92 | 11-21-92 |
| Date of Analysis | 11-17-92 | 11-20-92 | 11-20-92 | 11-20-92 | 11-21-92 |
| Benzene | 90 | 100 | 86 | ND | 50 |
| Carbon tetrachloride | - | 100 | 89 | ND | - |
| Chlorobenzene | 90 | 100 | 89 | ND | 50 |
| Chloroform | - | 100 | 84 | ND | - |
| Dichlorobenzene, 1,4- | - | 100 | 91 | ND | - |
| Dichloroethane, 1,2- | - | 100 | 89 | ND | - |
| Dichloroethene, 1,1- | 79 | 100 | 82 | ND | 50 |
| Methylethyl ketone | - | 200 | 119 | ND | - |
| SURR.(Bromofluorobenzene, 4-)% | 94 | 41.5 | 107 | 95 | 41.5 |
| SURR.(Toluene-d8) % | 104 | 44.0 | 93 | 101 | 44 |
| SURR.(d-4,1,2-Dichloroethane)% | 107 | 46.4 | 95 | 103 | 46.4 |
| Tetrachloroethene | - | 100 | 96 | ND | - |
| Trichloroethene | 90 | 100 | 101 | ND | 50 |
| Vinyl chloride | - | 200 | 82 | ND | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:59
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------------------|------------------|------------|-----------------|------------------|------------|
| Lab ID Number | 11-21-1 SPK RCV% | 11-21-92-1 | 11-23-1 SPK ADD | 11-23-1 SPK RCV% | 11-23-92-1 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-21-92 | 11-21-92 | 11-23-92 | 11-23-92 | 11-23-92 |
| Date of Analysis | 11-21-92 | 11-21-92 | 11-23-92 | 11-23-92 | 11-23-92 |
| Benzene | 97 | ND | 50 | 98 | ND |
| Carbon tetrachloride | - | ND | 50 | 82 | ND |
| Chlorobenzene | 46.8 | ND | 50 | 98 | ND |
| Chloroform | - | ND | 50 | 90 | ND |
| Dichlorobenzene, 1,4- | - | ND | 50 | 96 | ND |
| Dichloroethane, 1,2- | - | ND | 50 | 104 | ND |
| Dichloroethene, 1,1- | 86 | ND | 50 | 84 | ND |
| Methylethyl ketone | - | ND | 149 | 100 | ND |
| SURR.(Bromofluorobenzene, 4-)% | 94 | 95 | 41.5 | 103 | 94 |
| SURR.(Toluene-d8) % | 105 | 102 | 44 | 98 | 102 |
| SURR.(d-4,1,2-Dichloroethane)% | 105 | 103 | 46.4 | 101 | 104 |
| Tetrachloroethene | - | ND | 50 | 92 | ND |
| Trichloroethene | 91 | ND | 50 | 96 | ND |
| Vinyl chloride | - | ND | 100 | 87 | ND |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 15:59
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | METHOD | PRACTICAL | SURROGATE |
|---------------|-----------|--------------|-----------|
| Lab ID Number | DETECTION | QUANTITATION | SPIKE |
| Matrix | LIMIT | LIMIT | LEVELS |
| Type | | | |

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

| | | | |
|--------------------------------|--|-----|-----|
| Benzene | | 50 | - |
| Carbon tetrachloride | | 50 | - |
| Chlorobenzene | | 50 | - |
| Chloroform | | 50 | - |
| Dichlorobenzene, 1,4- | | 50 | - |
| Dichloroethane, 1,2- | | 50 | - |
| Dichloroethene, 1,1- | | 50 | - |
| Methylethyl ketone | | 50 | - |
| SURR.(Bromofluorobenzene, 4-)% | | - | 415 |
| SURR.(Toluene-d8) % | | - | 440 |
| SURR.(d-4,1,2-Dichloroethane)% | | - | 464 |
| Tetrachloroethene | | 50 | - |
| Trichloroethene | | 50 | - |
| Vinyl chloride | | 100 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Volatile Organics By Method: SW846-8240
Results given in: ug/L

Report Date: 12-18-92 12:39
Prepared By RL
QA/QC Check TE
Lab Manager CG

Sample Number 111092-DH-009
Lab ID Number 9207340
Matrix LEACHATE
Type SAMPLE

Date of Collection 11-10-92
Date of Receipt 11-11-92
Date of Extraction 11-14-92
Date of Analysis 11-17-92

Benzene ND
SURR.(BFB) % 93
SURR.(Toluene-d8) % 103
SURR.(d-4,1,2-Dichloroethane)% 107

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 12:39
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 111092-DH-008 | 111092-DH-008 | 111092-DH-008 |
|--------------------------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207339-SPIKE-1 | 9207339-SPIKE-1 | 9207339-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | % RECOVERED 2 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-14-92 | 11-14-92 | 11-14-92 |
| Date of Analysis | 11-16-92 | 11-16-92 | 11-16-92 |
| Benzene | 500 | 89 | 94 |
| SURR.(BFB) % | 415 | 97 | 99 |
| SURR.(Toluene-d8) % | 440 | 102 | 104 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 101 | 99 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Volatile Organics By Method: SW846-8240
 Results given in: ug/L

Report Date: 12-18-92 12:39
 Prepared By: SK
 QA/QC Check: TE
 Lab Manager: EG

| Sample Number | BLANK | BLANK | BLANK | METHOD | PRACTICAL |
|--------------------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-12 SPK ADD | 11-12 SPK RCV% | 11-12-92 | DETECTION | QUANTITATION |
| Matrix | SYSTEM | SYSTEM | SYSTEM | LIMIT | LIMIT |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-12-92 | 11-12-92 | 11-12-92 | | |
| Date of Analysis | 11-16-92 | 11-16-92 | 11-16-92 | | |
| Benzene | 500 | 90 | ND | | 50 |
| SURR.(BFB) % | 415 | 93 | 98 | | - |
| SURR.(Toluene-d8) % | 440 | 103 | 103 | | - |
| SURR.(d-4,1,2-Dichloroethane)% | 464 | 99 | 104 | | - |

** NOTES :

Sample Number SURROGATE
 Lab ID Number SPIKE
 Matrix LEVELS
 Type

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

| | |
|--------------------------------|-----|
| Benzene | - |
| SURR.(BFB) % | 415 |
| SURR.(Toluene-d8) % | 440 |
| SURR.(d-4,1,2-Dichloroethane)% | 464 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00

Memphis Environmental Center
Analytical Report

Report Date: 12-18-92 14:23

Description: E T I/NAS - TCLP LIQUID PHASE Base/Neutral/Acid Extractables By SW846-1311/3580/8270
Results given in: mg/Kg

Prepared By *[Signature]*
QA/QC Check *[Signature]*
Lab Manager *[Signature]*

| | | |
|--------------------|---------------|---------------|
| Sample Number | 111092-DH-006 | 111092-DH-007 |
| Lab ID Number | 9207337 | 9207338 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-10-92 | 12-10-92 |

| | | |
|---------------------------------|----|----|
| Cresols | ND | ND |
| Dinitrotoluene, 2,4- | ND | ND |
| Hexachlorobenzene | ND | ND |
| Hexachlorobutadiene | ND | ND |
| Hexachloroethane | ND | ND |
| Nitrobenzene | ND | ND |
| Pentachlorophenol | ND | ND |
| Pyridine | ND | ND |
| SURR.(Fluorobiphenyl, 2-) % | - | - |
| SURR.(Fluorophenol, 2-) % | - | - |
| SURR.(Nitrobenzene, d-5) % | - | - |
| SURR.(Phenol, d-6) % | - | - |
| SURR.(Terphenyl, d-14-p-) % | - | - |
| SURR.(Tribromophenol, 2,4,6-) % | - | - |
| Trichlorophenol, 2,4,5- | ND | ND |
| Trichlorophenol, 2,4,6- | ND | ND |

** NOTES :

9207337*SAMPLE - LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. SURROGATES DILUTED OUT.
9207338*SAMPLE - LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. SURROGATES DILUTED OUT.

- Not Applicable
D Non detected at stated limit
A Not analyzed

[] - Below LOQ, Above LOQ

Report Number: R-921401
 Project Number: 375-05-02-00

Memphis Environmental Center
 QA/QC Report - Blanks
 Description: E T I/NAS - TCLP LIQUID PHASE Base/Neutral/Acid Extractables By SW846-1311/3580/8270
 Results given in: mg/Kg

Report Date: 12-18-92 14:23
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|---------------------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-25 SPK ADD | 11-25 SPK RCV% | 11-25-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 | | |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-10-92 | | |
| Cresols | 240 | 78.1 | ND | | 250 |
| Dinitrotoluene, 2,4- | 80 | 49.4 | ND | | 125 |
| Hexachlorobenzene | 80 | 73.1 | ND | | 125 |
| Hexachlorobutadiene | 80 | 81.3 | ND | | 125 |
| Hexachloroethane | 80 | 77.8 | ND | | 125 |
| Nitrobenzene | 80 | 71.8 | ND | | 125 |
| Pentachlorophenol | 80 | 17.5 | ND | | 250 |
| Pyridine | 80 | 56.6 | ND | | 250 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 102 | 101 | | - |
| SURR.(Fluorophenol, 2-) % | 80 | 97.8 | 102 | | - |
| SURR.(Nitrobenzene, d-5) % | 40 | 91.8 | 90.6 | | - |
| SURR.(Phenol, d-6) % | 80 | 95.9 | 102 | | - |
| SURR.(Terphenyl, d-14-p-) % | 40 | 104 | 101 | | - |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 83.8 | 80.9 | | - |
| Trichlorophenol, 2,4,5- | 80 | 64.7 | ND | | 250 |
| Trichlorophenol, 2,4,6- | 80 | 70.3 | ND | | 250 |

** NOTES :

- Not Applicable
 ID Non detected at stated limit
 IA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
QA/QC Report - Blanks
Base/Neutral/Acid Extractables By SW846-1311/3580/8270
Results given in: mg/Kg

Report Date: 12-18-92 14:23
Prepared By: [Signature]
QA/QC Check: [Signature]
Lab Manager: [Signature]

Sample Number
Lab ID Number
Matrix
Type

SURROGATE
SPIKE
LEVELS

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | |
|---------------------------------|----|
| Cresols | - |
| Dinitrotoluene, 2,4- | - |
| Hexachlorobenzene | - |
| Hexachlorobutadiene | - |
| Hexachloroethane | - |
| Nitrobenzene | - |
| Pentachlorophenol | - |
| Pyridine | - |
| SURR.(Fluorobiphenyl, 2-) % | 40 |
| SURR.(Fluorophenol, 2-) % | 80 |
| SURR.(Nitrobenzene, d-5) % | 40 |
| SURR.(Phenol, d-6) % | 80 |
| SURR.(Terphenyl, d-14-p-) % | 40 |
| SURR.(Tribromophenol, 2,4,6-) % | 80 |
| Trichlorophenol, 2,4,5- | - |
| Trichlorophenol, 2,4,6- | - |

** NOTES :

- Not Applicable
VD Non detected at stated limit
VA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-20-92 14:57
 Prepared By: *FE*
 QA/QC Check: *JS*
 Lab Manager: *LS*

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-008 | 111092-DH-010 | 111092-DH-011 |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207339 | 9207341 | 9207342 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-30-92 | 11-28-92 | 11-24-92 |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-11-92 | 12-10-92 | 12-10-92 |
| Cresols | ND | ND | 9410 | ND | ND |
| Dinitrotoluene, 2,4- | ND | ND | ND | ND | ND |
| Hexachlorobenzene | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND | ND | ND |
| Hexachloroethane | ND | ND | ND | ND | ND |
| Nitrobenzene | ND | ND | 2590 | ND | ND |
| Pentachlorophenol | ND | ND | ND | ND | ND |
| Pyridine | ND | ND | ND | ND | ND |
| SURR.(Fluorobiphenyl, 2-) % | 89.3 | 87.2 | 77.0 | 73.1 | 86.2 |
| SURR.(Fluorophenol, 2-) % | 63.8 | 51.9 | 60.5 | 60.9 | 47.5 |
| SURR.(Nitrobenzene, d-5) % | 241 | 91.7 | 86.7 | 94.5 | 87.6 |
| SURR.(Phenol, d-6) % | 42.4 | 32.4 | 39.8 | 42.2 | 30.9 |
| SURR.(Terphenyl, d-14-p-) % | 82.8 | 95.8 | 90.3 | 88.6 | 101 |
| SURR.(Tribromophenol, 2,4,6-) % | 109 | 73.8 | 99.1 | 58.0 | 79.8 |
| Trichlorophenol, 2,4,5- | ND | ND | ND | ND | ND |
| Trichlorophenol, 2,4,6- | ND | ND | ND | ND | ND |

** NOTES :

- 9207337*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/21/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED. RECOVERY FOR SURR.(Nitrobenzene,d-5) ABOVE ACCEPTED LIMIT OF 114%.
- 9207338*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/21/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.
- 9207339*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/18/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.
- 9207341*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/18/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.
- 9207342*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/18/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-20-92 14:57
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | 111092-DH-012 | 111092-DH-013 |
|--------------------|---------------|---------------|
| Lab ID Number | 9207343 | 9207344 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-24-92 | 11-24-92 |
| Date of Analysis | 12-10-92 | 12-10-92 |

| Compound | 111092-DH-012 | 111092-DH-013 |
|---------------------------------|---------------|---------------|
| Cresols | ND | ND |
| Dinitrotoluene, 2,4- | ND | ND |
| Hexachlorobenzene | ND | ND |
| Hexachlorobutadiene | ND | ND |
| Hexachloroethane | ND | ND |
| Nitrobenzene | ND | ND |
| Pentachlorophenol | ND | ND |
| Pyridine | ND | ND |
| SURR.(Fluorobiphenyl, 2-) % | 75.9 | 66.2 |
| SURR.(Fluorophenol, 2-) % | 64.1 | 60.7 |
| SURR.(Nitrobenzene, d-5) % | 95.7 | 92.4 |
| SURR.(Phenol, d-6) % | 40.4 | 41.4 |
| SURR.(Terphenyl, d-14-p-) % | 93.3 | 92.7 |
| SURR.(Tribromophenol, 2,4,6-) % | 103 | 95.9 |
| Trichlorophenol, 2,4,5- | ND | ND |
| Trichlorophenol, 2,4,6- | ND | ND |

** NOTES :

9207343*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/18/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.
 9207344*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/18/92. LOQs FOR THIS SAMPLE ARE 10 TIMES THE VALUES STATED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-20-92 14:57
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 111092-DH-008 | 111092-DH-008 | 111092-DH-010 | 111092-DH-010 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207339-SPIKE-1 | 9207339-SPIKE-1 | 9207341-SPIKE-1 | 9207341-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-30-92 | 11-30-92 | 11-28-92 | 11-28-92 |
| Date of Analysis | 12-11-92 | 12-11-92 | 12-10-92 | 12-10-92 |
| Cresols | 2400 | 28.2 | 2400 | 53.9 |
| Dinitrotoluene, 2,4- | 800 | 98.3 | 800 | 70.0 |
| Hexachlorobenzene | 800 | 72.1 | 800 | 62.8 |
| Hexachlorobutadiene | 800 | 52.1 | 800 | 41.0 |
| Hexachloroethane | 800 | 42.8 | 800 | 42.6 |
| Nitrobenzene | 800 | 80.4 | 800 | 61.5 |
| Pentachlorophenol | 800 | 60.9 | 800 | 15.1 |
| Pyridine | 800 | 38.5 | 800 | 27.6 |
| SURR.(Fluorobiphenyl, 2-) % | 400 | 75.9 | 400 | 69.1 |
| SURR.(Fluorophenol, 2-) % | 800 | 59.0 | 800 | 46.3 |
| SURR.(Nitrobenzene, d-5) % | 400 | 88.9 | 400 | 69.7 |
| SURR.(Phenol, d-6) % | 800 | 38.6 | 800 | 30.1 |
| SURR.(Terphenyl, d-14-p-) % | 400 | 85.8 | 400 | 70.5 |
| SURR.(Tribromophenol, 2,4,6-) % | 800 | 103 | 800 | 50.6 |
| Trichlorophenol, 2,4,5- | 800 | 80.6 | 800 | 53.0 |
| Trichlorophenol, 2,4,6- | 800 | 85.5 | 800 | 68.4 |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-20-92 14:57
 Prepared By: PF
 QA/QC Check: Tg
 Lab Manager: Tg

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------------------------|-----------------|------------------|------------|-----------------|------------------|
| Lab ID Number | 11-24-2 SPK ADD | 11-24-2 SPK RCV% | 11-24-92-2 | 11-28-2 SPK ADD | 11-28-2 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-24-92 | 11-24-92 | 11-24-92 | 11-28-92 | 11-28-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 12-10-92 | 12-10-92 |
| Cresols | 240 | 61.5 | ND | 240 | 38.8 |
| Dinitrotoluene, 2,4- | 80 | 92.4 | ND | 80 | 86.7 |
| Hexachlorobenzene | 80 | 76.2 | ND | 80 | 71.2 |
| Hexachlorobutadiene | 80 | 59.2 | ND | 80 | 60.9 |
| Hexachloroethane | 80 | 56.4 | ND | 80 | 52.4 |
| Nitrobenzene | 80 | 67.6 | ND | 80 | 69.0 |
| Pentachlorophenol | 80 | 82.8 | ND | 80 | 65.7 |
| Pyridine | 80 | 45.1 | ND | 80 | 40.2 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 83.9 | 71.7 | 40 | 78.3 |
| SURR.(Fluorophenol, 2-) % | 80 | 52.2 | 45.8 | 80 | 57.8 |
| SURR.(Nitrobenzene, d-5) % | 40 | 83.0 | 70.6 | 40 | 86.4 |
| SURR.(Phenol, d-6) % | 80 | 37.0 | 31.8 | 80 | 39.2 |
| SURR.(Terphenyl, d-14-p-) % | 40 | 87.6 | 72.9 | 40 | 85.9 |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 105 | 86.3 | 80 | 97.5 |
| Trichlorophenol, 2,4,5- | 80 | 79.4 | ND | 80 | 64.6 |
| Trichlorophenol, 2,4,6- | 80 | 84.6 | ND | 80 | 76.7 |

** NOTES :

BLANK 11-24-2 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-24-2 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-24-92-2 - TCLP BLANK.
 BLANK 11-28-2 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-28-2 SPK RCV% - TCLP BLANK SPIKE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-20-92 14:57
 Prepared By: RE
 QA/QC Check: TE
 Lab Manager: LG

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------------------------|------------|-----------------|------------------|-----------------|------------------|
| Lab ID Number | 11-28-92-2 | 11-30-1 SPK ADD | 11-30-1 SPK RCV% | 11-30-2 SPK ADD | 11-30-2 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-28-92 | 11-30-92 | 11-30-92 | 11-30-92 | 11-30-92 |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-10-92 | 12-10-92 | 12-10-92 |
| Cresols | ND | 2400 | 43.2 | 2400 | 44.1 |
| Dinitrotoluene, 2,4- | ND | 800 | 76.2 | 800 | 89.4 |
| Hexachlorobenzene | ND | 800 | 78.0 | 800 | 73.7 |
| Hexachlorobutadiene | ND | 800 | 59.2 | 800 | 58.8 |
| Hexachloroethane | ND | 800 | 50.9 | 800 | 47.5 |
| Nitrobenzene | ND | 800 | 65.8 | 800 | 66.5 |
| Pentachlorophenol | ND | 800 | 59.4 | 800 | 71.7 |
| Pyridine | ND | 800 | 30.7 | 800 | 70.9 |
| SURR.(Fluorobiphenyl, 2-) % | 86.2 | 400 | 78.8 | 400 | 76.9 |
| SURR.(Fluorophenol, 2-) % | 54.7 | 800 | 47.8 | 800 | 50.5 |
| SURR.(Nitrobenzene, d-5) % | 91.0 | 400 | 79.0 | 400 | 82.3 |
| SURR.(Phenol, d-6) % | 19.3 | 800 | 32.9 | 800 | 35.6 |
| SURR.(Terphenyl, d-14-p) % | 92.0 | 400 | 98.6 | 400 | 86.2 |
| SURR.(Tribromophenol, 2,4,6-) % | 100 | 800 | 84.5 | 800 | 99.7 |
| Trichlorophenol, 2,4,5- | ND | 800 | 56.5 | 800 | 60.4 |
| Trichlorophenol, 2,4,6- | ND | 800 | 77.9 | 800 | 78.7 |

** NOTES :

- BLANK 11-28-92-2 - TCLP BLANK.
- BLANK 11-30-1 SPK ADD - TCLP BLANK SPIKE.
- BLANK 11-30-1 SPK RCV% - TCLP BLANK SPIKE.
- BLANK 11-30-2 SPK ADD - TCLP BLANK SPIKE.
- BLANK 11-30-2 SPK RCV% - TCLP BLANK SPIKE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-20-92 14:57
 Prepared By: RS
 QA/QC Check: TE
 Lab Manager: LG

| Sample Number | BLANK | BLANK | LIMIT | LIMIT | SURROGATE |
|---------------------------------|------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-30-92-1 | 11-30-92-2 | OF | OF | SPIKE |
| Matrix | SYSTEM | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE** | SAMPLE** | | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-30-92 | 11-30-92 | | | |
| Date of Analysis | 12-10-92 | 12-10-92 | | | |
| Cresols | ND | ND | | 100 | - |
| Dinitrotoluene, 2,4- | ND | ND | | 50 | - |
| Hexachlorobenzene | ND | ND | | 50 | - |
| Hexachlorobutadiene | ND | ND | | 50 | - |
| Hexachloroethane | ND | ND | | 50 | - |
| Nitrobenzene | ND | ND | | 100 | - |
| Pentachlorophenol | ND | ND | | 100 | - |
| Pyridine | ND | ND | | 50 | - |
| SURR.(Fluorobiphenyl, 2-) % | 72.9 | 77.6 | | - | 400 |
| SURR.(Fluorophenol, 2-) % | 47.1 | 50.9 | | - | 800 |
| SURR.(Nitrobenzene, d-5) % | 74.5 | 76.4 | | - | 400 |
| SURR.(Phenol, d-6) % | 27.7 | 29.5 | | - | 800 |
| SURR.(Terphenyl, d-14-p-) % | 82.8 | 86.1 | | - | 400 |
| SURR.(Tribromophenol, 2,4,6-) % | 88.3 | 103 | | - | 800 |
| Trichlorophenol, 2,4,5- | ND | ND | | 100 | - |
| Trichlorophenol, 2,4,6- | ND | ND | | 100 | - |

** NOTES :

BLANK 11-30-92-1 - TCLP BLANK.
 BLANK 11-30-92-2 - TCLP BLANK.

- Not Applicable
 VD Non detected at stated limit
 VA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401

Memphis Environmental Center

Report Date: 12-20-92 14:57

Project Number: 375-05-02-00

QA/QC Report - Blanks

Prepared By: *[Signature]*

Description: E T I/NAS - SOUTHSIDE - TCLP

Base/Neutral/Acid Extractables By SW846-1311/3510/8270

QA/QC Check *[Signature]*

Results given in: ug/L

Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------------------------|-----------------|------------------|------------|-----------------|------------------|
| Lab ID Number | 11-24-1 SPK ADD | 11-24-1 SPK RCV% | 11-24-92-1 | 11-28-1 SPK ADD | 11-28-1 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-24-92 | 11-24-92 | 11-24-92 | 11-28-92 | 11-28-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 12-10-92 | 12-10-92 |
| Cresols | 240 | 66.8 | ND | 240 | 32.7 |
| Dinitrotoluene, 2,4- | 80 | 94.6 | ND | 80 | 89.0 |
| Hexachlorobenzene | 80 | 78.9 | ND | 80 | 76.9 |
| Hexachlorobutadiene | 80 | 67.0 | ND | 80 | 61.7 |
| Hexachloroethane | 80 | 67.2 | ND | 80 | 57.8 |
| Nitrobenzene | 80 | 73.2 | ND | 80 | 70.6 |
| Pentachlorophenol | 80 | 80.8 | ND | 80 | 70.7 |
| Pyridine | 80 | 47.1 | ND | 80 | 38.3 |
| SURR.(Fluorobiphenyl, 2-) % | 40 | 87.3 | 79.5 | 40 | 81.8 |
| SURR.(Fluorophenol, 2-) % | 80 | 59.0 | 51.9 | 80 | 49.4 |
| SURR.(Nitrobenzene, d-5) % | 40 | 88.6 | 81.5 | 40 | 86.9 |
| SURR.(Phenol, d-6) % | 80 | 39.9 | 33.3 | 80 | 32.2 |
| SURR.(Terphenyl, d-14-p) % | 40 | 88.9 | 90.6 | 40 | 88.9 |
| SURR.(Tribromophenol, 2,4,6-) % | 80 | 108 | 87.4 | 80 | 106 |
| Trichlorophenol, 2,4,5- | 80 | 82.1 | ND | 80 | 67.4 |
| Trichlorophenol, 2,4,6- | 80 | 88.8 | ND | 80 | 80.6 |

** NOTES :

- Not Applicable
- ND Non detected at stated limit
- NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Base/Neutral/Acid Extractables By SW846-1311/3510/8270
 Results given in: ug/L

Report Date: 12-20-92 14:57
 Prepared By: JE
 QA/QC Check: JE
 Lab Manager: JE

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|---------------------------------|------------|-----------------|------------------|------------|-----------|
| Lab ID Number | 11-28-92-1 | 11-30-3 SPK ADD | 11-30-3 SPK RCV% | 11-30-92-3 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-28-92 | 11-30-92 | 11-30-92 | 11-30-92 | |
| Date of Analysis | 12-10-92 | 12-11-92 | 12-11-92 | 12-11-92 | |
| Cresols | ND | 240 | 38.1 | ND | |
| Dinitrotoluene, 2,4- | ND | 80 | 71.6 | ND | |
| Hexachlorobenzene | ND | 80 | 61.4 | ND | |
| Hexachlorobutadiene | ND | 80 | 48.2 | ND | |
| Hexachloroethane | ND | 80 | 41.1 | ND | |
| Nitrobenzene | ND | 80 | 54.4 | ND | |
| Pentachlorophenol | ND | 80 | 57.2 | ND | |
| Pyridine | ND | 80 | 29.7 | ND | |
| SURR.(Fluorobiphenyl, 2-) % | 78.8 | 40 | 63.9 | 65.3 | |
| SURR.(Fluorophenol, 2-) % | 48.3 | 80 | 44.8 | 44.4 | |
| SURR.(Nitrobenzene, d-5) % | 80.4 | 40 | 66.5 | 62.4 | |
| SURR.(Phenol, d-6) % | 30.2 | 80 | 29.3 | 30.6 | |
| SURR.(Terphenyl, d-14-p-) % | 86.7 | 40 | 72.4 | 73.5 | |
| SURR.(Tribromophenol, 2,4,6-) % | 96.7 | 80 | 87.2 | 84.0 | |
| Trichlorophenol, 2,4,5- | ND | 80 | 63.5 | ND | |
| Trichlorophenol, 2,4,6- | ND | 80 | 68.7 | ND | |

** NOTES :

- Not Applicable
 VD Non detected at stated limit
 VA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00

Memphis Environmental Center

Report Date: 12-20-92 14:58

Description: E T I/NAS - SOUTHSIDE - TCLP

Base/Neutral/Acid Extractables By SW846-1311/3510/8270

QA/QC Report - Blanks

Prepared By *[Signature]*

Results given in: ug/L

QA/QC Check *[Signature]*

Lab Manager *[Signature]*

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | | |
|---------------------------------|----|----|
| Cresols | 10 | - |
| Dinitrotoluene, 2,4- | 5 | - |
| Hexachlorobenzene | 5 | - |
| Hexachlorobutadiene | 5 | - |
| Hexachloroethane | 5 | - |
| Nitrobenzene | 10 | - |
| Pentachlorophenol | 10 | - |
| Pyridine | 5 | - |
| SURR.(Fluorobiphenyl, 2-) % | - | 40 |
| SURR.(Fluorophenol, 2-) % | - | 80 |
| SURR.(Nitrobenzene, d-5) % | - | 40 |
| SURR.(Phenol, d-6) % | - | 80 |
| SURR.(Terphenyl, d-14-p-) % | - | 40 |
| SURR.(Tribromophenol, 2,4,6-) % | - | 80 |
| Trichlorophenol, 2,4,5- | 10 | - |
| Trichlorophenol, 2,4,6- | 10 | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:40
 Prepared By KL
 QA/QC Check KL
 Lab Manager KL

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-008 | 111092-DH-010 | 111092-DH-011 |
|----------------------|---------------|---------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207339 | 9207341 | 9207342 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-28-92 | 11-28-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 12-06-92 | 12-06-92 | 11-30-92 | 11-30-92 | 11-30-92 |
| BHC, gamma (Lindane) | ND | ND | ND | ND | ND |
| Chlordane | ND | ND | ND | ND | ND |
| Endrin | ND | ND | ND | ND | ND |
| Heptachlor | ND | ND | ND | ND | ND |
| Heptachlor epoxide | ND | ND | ND | ND | ND |
| Methoxychlor | ND | ND | ND | ND | ND |
| SURR.(TCMX) % | 52.4 | 51.1 | 70.2 | 67.7 | 83.2 |
| Toxaphene | ND | ND | ND | ND | ND |

** NOTES :

- 9207337*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/21/92 AND 11/22/92.
- 9207338*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/21/92 AND 11/22/92.
- 9207339*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.
- 9207341*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.
- 9207342*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Pesticides By SW846-1311/3510/8080
Results given in: ug/L

Report Date: 12-20-92 14:40
Prepared By KL
QA/QC Check KL
Lab Manager KL

| | | |
|--------------------|---------------|---------------|
| Sample Number | 111092-DH-012 | 111092-DH-013 |
| Lab ID Number | 9207343 | 9207344 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-30-92 | 11-30-92 |

| | | |
|----------------------|------|------|
| BHC, gamma (Lindane) | ND | ND |
| Chlordane | ND | ND |
| Endrin | ND | ND |
| Heptachlor | ND | ND |
| Heptachlor epoxide | ND | ND |
| Methoxychlor | ND | ND |
| SURR.(TCMX) % | 68.5 | 62.0 |
| Toxaphene | ND | ND |

** NOTES :

9207343*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.
9207344*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:40
 Prepared By KL
 QA/QC Check TL
 Lab Manager BL

| Sample Number | 111092-DH-008 | 111092-DH-008 | 111092-DH-010 | 111092-DH-010 |
|----------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207339-SPIKE-1 | 9207339-SPIKE-1 | 9207341-SPIKE-1 | 9207341-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL** | % RECOVERED 1** | ADDED LEVEL** | % RECOVERED 1** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-30-92 | 11-30-92 | 11-30-92 | 11-30-92 |
| BHC, gamma (Lindane) | 1.66 | 94.3 | 1.66 | 104 |
| Chlordane | - | - | - | - |
| Endrin | 1.65 | 103 | 1.65 | 124 |
| Heptachlor | 2.92 | 109 | 2.92 | 107 |
| Heptachlor epoxide | 1.74 | 76.9 | 1.74 | 94.6 |
| Methoxychlor | - | - | - | - |
| SURR.(TCMX) % | 8.00 | 78.9 | 8.0 | 68.6 |
| Toxaphene | - | - | - | - |

** NOTES :

- 9207339*SPK1ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- 9207339*SPK1RCV1 - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- 9207341*SPK1ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- 9207341*SPK1RCV1 - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:40
 Prepared By: 
 QA/QC Check: 
 Lab Manager: 

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-22-3 SPK ADD | 11-22-3 SPK RCV% | 11-22-4 SPK ADD | 11-22-4 SPK RCV% | 11-22-92-3 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 | 11-30-92 | 11-30-92 | 11-29-92 |
| BHC, gamma (Lindane) | 1.66 | 100 | 1.66 | 102 | ND |
| Chlordane | - | - | - | - | ND |
| Endrin | 1.65 | 118 | 1.65 | 121 | ND |
| Heptachlor | 2.92 | 117 | 2.92 | 128 | ND |
| Heptachlor epoxide | 1.74 | 87.3 | 1.74 | 92.0 | ND |
| Methoxychlor | - | - | - | - | ND |
| SURR.(TCMX) % | 8.00 | 90.9 | 8.00 | 80.0 | 69.7 |
| Toxaphene | - | - | - | - | ND |

** NOTES :

BLANK 11-22-3 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-3 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-4 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-4 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-22-92-3 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:40
 Prepared By KL
 QA/QC Check TS
 Lab Manager TC

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|----------------------|------------|-----------------|------------------|------------|-----------|
| Lab ID Number | 11-22-92-4 | 11-28-3 SPK ADD | 11-28-3 SPK RCV% | 11-28-92-3 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-28-92 | 11-28-92 | 11-28-92 | |
| Date of Analysis | 11-30-92 | 12-06-92 | 12-06-92 | 12-06-92 | |
| BHC, gamma (Lindane) | ND | 0.416 | 124 | ND | 0.20 |
| Chlordane | ND | - | - | ND | 4.0 |
| Endrin | ND | 0.412 | 127 | ND | 0.20 |
| Heptachlor | ND | 0.729 | 107 | ND | 0.20 |
| Heptachlor epoxide | ND | 0.435 | 129 | ND | 0.20 |
| Methoxychlor | ND | - | - | ND | 2.0 |
| SURR.(TCMX) % | 76.4 | 2.00 | 81.1 | 62.7 | - |
| Toxaphene | ND | - | - | ND | 20.0 |

** NOTES :

BLANK 11-22-92-4 - TCLP BLANK.
 BLANK 11-28-3 SPK ADD - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-28-3 SPK RCV% - TCLP BLANK SPIKE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
 BLANK 11-28-92-3 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:40
 Prepared By KL
 QA/QC Check KL
 Lab Manager KL

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

| | | |
|----------------------|---|-----|
| BHC, gamma (Lindane) | - | - |
| Chlordane | - | - |
| Endrin | - | - |
| Heptachlor | - | - |
| Heptachlor epoxide | - | - |
| Methoxychlor | - | - |
| SURR.(TCMX) % | - | 2.0 |
| Toxaphene | - | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:40
 Prepared By *KLH*
 QA/QC Check *KLH*
 Lab Manager *KLH*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-22-1 SPK ADD | 11-22-1 SPK RCV% | 11-22-2 SPK ADD | 11-22-2 SPK RCV% | 11-22-92-1 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 11-29-92 | 11-29-92 | 11-29-92 | 11-29-92 | 11-29-92 |
| BHC, gamma (Lindane) | 0.416 | 98.8 | 0.416 | 82.2 | ND |
| Chlordane | - | - | - | - | ND |
| Endrin | 0.412 | 120 | 0.412 | 31.3 | ND |
| Heptachlor | 0.729 | 119 | 0.729 | 82.2 | ND |
| Heptachlor epoxide | 0.435 | 88.9 | - | - | ND |
| Methoxychlor | - | - | - | - | ND |
| SURR.(TCMX) % | 2.00 | 80.5 | - | - | 80.0 |
| Toxaphene | - | - | - | - | ND |

** NOTES :

- BLANK 11-22-1 SPK ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-22-1 SPK RCV% - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-22-2 SPK ADD - SURROGATE NOT APPLICABLE.
- BLANK 11-22-2 SPK RCV% - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:47
 Prepared By KV
 QA/QC Check TA
 Lab Manager TS

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|----------------------|------------|-----------------|------------------|-----------------|------------------|
| Lab ID Number | 11-22-92-2 | 11-28-1 SPK ADD | 11-28-1 SPK RCV% | 11-28-2 SPK ADD | 11-28-2 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-28-92 | 11-28-92 | 11-28-92 | 11-28-92 |
| Date of Analysis | 11-29-92 | 12-06-92 | 12-06-92 | 12-06-92 | 12-06-92 |
| BHC, gamma (Lindane) | ND | 0.416 | 108 | 0.416 | 97.2 |
| Chlordane | ND | - | - | - | - |
| Endrin | ND | 0.412 | 161 | 0.412 | 51.5 |
| Heptachlor | ND | 0.729 | 90.3 | 0.729 | 87.6 |
| Heptachlor epoxide | ND | 0.435 | 127 | 0.435 | 64.0 |
| Methoxychlor | ND | - | - | - | - |
| SURR.(TCMX) % | - | - | - | 2.00 | 69.4 |
| Toxaphene | ND | - | - | - | - |

** NOTES :

- BLANK 11-22-92-2 - SURROGATE NOT APPLICABLE.
- BLANK 11-28-1 SPK ADD - SURROGATE NOT APPLICABLE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-28-1 SPK RCV% - SURROGATE NOT APPLICABLE. Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-28-2 SPK ADD - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.
- BLANK 11-28-2 SPK RCV% - Methoxychlor SPIKED BELOW THE LIMIT OF DETECTION. DATA NOT REPORTED.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-1311/3510/8080
 Results given in: ug/L

Report Date: 12-20-92 14:41
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | LIMIT | LIMIT | SURROGATE |
|----------------------|------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-28-92-1 | 11-28-92-2 | OF | OF | SPIKE |
| Matrix | SYSTEM | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE** | SAMPLE | | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-28-92 | 11-28-92 | | | |
| Date of Analysis | 12-06-92 | 12-06-92 | | | |
| BHC, gamma (Lindane) | ND | ND | 0.05 | - | - |
| Chlordane | ND | ND | 1.0 | - | - |
| Endrin | ND | ND | 0.05 | - | - |
| Heptachlor | ND | ND | 0.05 | - | - |
| Heptachlor epoxide | ND | ND | 0.05 | - | - |
| Methoxychlor | ND | ND | 0.5 | - | - |
| SURR.(TCMX) % | - | 68.3 | - | - | 2.0 |
| Toxaphene | ND | ND | 5.0 | - | - |

** NOTES :

BLANK 11-28-92-1 - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
Analytical Report
Pesticides By SW846-3580/8080
Results given in: mg/Kg

Report Date: 12-18-92 12:37
Prepared By *KV*
QA/QC Check *KG*
Lab Manager *KG*

| Sample Number | 111092-DH-006 | 111092-DH-007 |
|----------------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-11-92 | 12-11-92 |
| BHC, gamma (Lindane) | ND | ND |
| Chlordane | ND | ND |
| Endrin | ND | ND |
| Heptachlor | ND | ND |
| Heptachlor epoxide | ND | ND |
| Methoxychlor | ND | ND |
| SURR.(TCMX) % | 67.2 | 83.3 |
| Toxaphene | ND | ND |

** NOTES :

- 9207337*SAMPLE - LODs FOR THIS SAMPLE ARE 10 TIMES THE VALUE STATED EXCEPT FOR Toxaphene WHICH IS 25 TIMES THE VALUE STATED.
- 9207338*SAMPLE - LODs FOR THIS SAMPLE ARE 10 TIMES THE VALUE STATED.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SW846-3580/8080
 Results given in: mg/Kg

Report Date: 12-18-92 12:37
 Prepared By: JK
 QA/QC Check: JK
 Lab Manager: JK

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|----------------------|-----------------|------------------|------------|------------|-----------|
| Lab ID Number | 11-25-1 SPK ADD | 11-25-1 SPK RCV% | 11-25-92-1 | 11-25-92-2 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE | SAMPLE** | SAMPLE** | SAMPLE** | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 | 11-25-92 | |
| Date of Analysis | 12-11-92 | 12-11-92 | 12-11-92 | 12-11-92 | |
| BHC, gamma (Lindane) | 0.472 | 105 | ND | ND | 0.25 |
| Chlordane | - | - | ND | ND | 2.5 |
| Endrin | 1.92 | 44.4 | ND | ND | 0.25 |
| Heptachlor | 0.546 | 158 | ND | ND | 0.25 |
| Heptachlor epoxide | - | - | ND | ND | 0.25 |
| Methoxychlor | - | - | ND | ND | 0.50 |
| SURR.(TCMX) % | 4.0 | 81.0 | - | - | - |
| Toxaphene | - | - | ND | ND | 12.5 |

** NOTES :

- BLANK 11-25-1 SPK RCV% - RECOVERY FOR Heptachlor ABOVE THE ACCEPTABLE LIMIT OF 111%.
- BLANK 11-25-92-1 - SURROGATE NOT ADDED.
- BLANK 11-25-92-2 - SURROGATE NOT APPLICABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 Pesticides By SWB46-3580/8080
 Results given in: mg/Kg

Report Date: 12-18-92 12:37
 Prepared By K
 QA/QC Check TE
 Lab Manager AS

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

| | | |
|----------------------|---|-----|
| BHC, gamma (Lindane) | - | - |
| Chlordane | - | - |
| Endrin | - | - |
| Heptachlor | - | - |
| Heptachlor epoxide | - | - |
| Methoxychlor | - | - |
| SURR.(TCMX) % | - | 4.0 |
| Toxaphene | - | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-19-92 13:30
 Prepared By: KL
 QA/QC Check: KL
 Lab Manager: KL

| Sample Number | 111092-DH-006 | 111092-DH-007 | 111092-DH-008 | 111092-DH-010 | 111092-DH-011 |
|--------------------|---------------|---------------|---------------|---------------|---------------|
| Lab ID Number | 9207337 | 9207338 | 9207339 | 9207341 | 9207342 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-24-92 | 11-24-92 | 11-19-92 | 11-19-92 | 11-19-92 |
| Date of Analysis | 11-30-92 | 11-30-92 | 12-09-92 | 12-09-92 | 12-09-92 |
| 2,4-D | 75.5 | ND | ND | ND | ND |
| SURR.(DCAA) % | 55.8 | 102 | - | 149 | 136 |
| Silvex (2,4,5-TP) | ND | ND | ND | ND | ND |

** NOTES :

- 9207337*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/22/92.
- 9207338*SAMPLE - TCLP EXTRACTION DATE FOR THIS SAMPLE - 11/22/92.
- 9207339*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92. LODs FOR THIS SAMPLE ARE 50 TIMES THE VALUES STATED. SURROGATE DILUTED OUT.
- 9207341*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.
- 9207342*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.

| Sample Number | 111092-DH-012 | 111092-DH-013 |
|--------------------|---------------|---------------|
| Lab ID Number | 9207343 | 9207344 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-19-92 | 11-19-92 |
| Date of Analysis | 12-09-92 | 12-09-92 |
| 2,4-D | ND | ND |
| SURR.(DCAA) % | 105 | 83.6 |
| Silvex (2,4,5-TP) | ND | ND |

** NOTES :

- 9207343*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.
- 9207344*SAMPLE - TCLP EXTRACTION DATES FOR THIS SAMPLE - 11/18/92 AND 11/19/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-19-92 13:32
 Prepared By: JC
 QA/QC Check: TC
 Lab Manager: TG

| Sample Number | 111092-DH-008 | 111092-DH-008 | 111092-DH-010 | 111092-DH-010 |
|--------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207339-SPIKE-1 | 9207339-SPIKE-1 | 9207341-SPIKE-1 | 9207341-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL** | % RECOVERED 1** | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-19-92 | 11-19-92 | 11-19-92 | 11-19-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 |
| 2,4-D | 41.4 | - | 41.4 | 153 |
| SURR.(DCAA) % | 200 | - | 200 | 149 |
| Silvex (2,4,5-TP) | 38.6 | - | 38.6 | 129 |

** NOTES :

- 9207339*SPK1ADD - LODs FOR THIS MATRIX SPIKE ARE 50 TIMES THE VALUES STATED.
- 9207339*SPK1RCV1 - MATRIX SPIKE DILUTED OUT. NO RECOVERIES AVAILABLE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-19-92 13:32
 Prepared By: KW
 QA/QC Check: TS
 Lab Manager: ES

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-19-2 SPK ADD | 11-19-2 SPK RCV% | 11-19-3 SPK ADD | 11-19-3 SPK RCV% | 11-19-92-2 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-19-92 | 11-19-92 | 11-19-92 | 11-19-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 | 12-09-92 |
| 2,4-D | 41.4 | 123 | 41.4 | 98.4 | ND |
| SURR.(DCAA) % | 200 | 112 | 200 | 138 | 105 |
| Silvex (2,4,5-TP) | 38.6 | 150 | 38.6 | 121 | ND |

**** NOTES :**

BLANK 11-19-2 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-19-2 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-19-3 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-19-3 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-19-92-2 - TCLP BLANK.

| Sample Number | BLANK | BLANK | BLANK | BLANK | LIMIT |
|--------------------|------------|-----------------|------------------|------------|-----------|
| Lab ID Number | 11-19-92-3 | 11-24-2 SPK ADD | 11-24-2 SPK RCV% | 11-24-92-2 | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | DETECTION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-24-92 | 11-24-92 | 11-24-92 | |
| Date of Analysis | 12-09-92 | 11-30-92 | 11-30-92 | 11-30-92 | |
| 2,4-D | ND | 41.4 | 135 | ND | 25 |
| SURR.(DCAA) % | 150 | 200 | 101 | 107 | - |
| Silvex (2,4,5-TP) | ND | 38.6 | 109 | ND | 5.0 |

**** NOTES :**

BLANK 11-19-92-3 - TCLP BLANK.
 BLANK 11-24-2 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-24-2 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-24-92-2 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Blanks
Herbicides By SW846-1311/8150
Results given in: ug/L

Report Date: 12-19-92 13:33
Prepared By KL
QA/QC Check KL
Lab Manager KL

| Sample Number | LIMIT | SURROGATE |
|---------------|--------------|-----------|
| Lab ID Number | OF | SPIKE |
| Matrix | QUANTITATION | LEVELS |
| Type | | |

Date of Collection
Date of Receipt
Date of Extraction
Date of Analysis

| | | |
|-------------------|---|------|
| 2,4-D | - | - |
| SURR. (DCAA) % | - | 10.0 |
| Silvex (2,4,5-TP) | - | - |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-1311/8150
 Results given in: ug/L

Report Date: 12-19-92 13:31
 Prepared By *K-*
 QA/QC Check *L*
 Lab Manager *H*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|-----------------|------------------|------------|-----------------|------------------|
| Lab ID Number | 11-19-1 SPK ADD | 11-19-1 SPK RCV% | 11-19-92-1 | 11-24-1 SPK ADD | 11-24-1 SPK RCV% |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-19-92 | 11-19-92 | 11-19-92 | 11-24-92 | 11-24-92 |
| Date of Analysis | 12-09-92 | 12-09-92 | 12-09-92 | 11-30-92 | 11-30-92 |
| 2,4-D | 2.07 | 160 | ND | 2.07 | 129 |
| SURR.(DCAA) % | 10 | 152 | 146 | 10 | 105 |
| Silvex (2,4,5-TP) | 1.93 | 134 | ND | 1.93 | 118 |

** NOTES :

| Sample Number | BLANK | LIMIT | LIMIT | SURROGATE |
|--------------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-24-92-1 | OF | OF | SPIKE |
| Matrix | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE | | | |
| Date of Collection | | | | |
| Date of Receipt | | | | |
| Date of Extraction | 11-24-92 | | | |
| Date of Analysis | 11-30-92 | | | |
| 2,4-D | ND | 0.25 | - | - |
| SURR.(DCAA) % | 69.1 | - | - | 10.0 |
| Silvex (2,4,5-TP) | ND | 0.05 | - | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
Analytical Report
Herbicides By SW846-8150
Results given in: mg/Kg

Report Date: 12-18-92 12:13
Prepared By KL
QA/QC Check TL
Lab Manager TL

| | | |
|--------------------|---------------|---------------|
| Sample Number | 111092-DH-006 | 111092-DH-007 |
| Lab ID Number | 9207337 | 9207338 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE | SAMPLE |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-25-92 | 11-25-92 |
| Date of Analysis | 12-01-92 | 12-01-92 |
| 2,4-D | 0.363 | ND |
| SURR.(DCAA) % | 56.0 | 129 |
| Silvex (2,4,5-TP) | ND | ND |

** NOTES :

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 Herbicides By SW846-8150
 Results given in: mg/Kg

Report Date: 12-18-92 12:13
 Prepared By: *KW*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 11-25 SPK ADD | 11-25 SPK RCV% | 11-25-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-25-92 | 11-25-92 | 11-25-92 | | |
| Date of Analysis | 12-01-92 | 12-01-92 | 12-01-92 | | |
| 2,4-D | 4.14 | 112 | ND | 0.25 | - |
| SURR.(DCAA) % | 10.0 | 174 | 134 | - | - |
| Silvex (2,4,5-TP) | 3.86 | 102 | ND | 0.05 | - |

** NOTES :

Sample Number SURROGATE
 Lab ID Number SPIKE
 Matrix LEVELS
 Type

Date of Collection
 Date of Receipt
 Date of Extraction
 Date of Analysis

2,4-D -
 SURR.(DCAA) % 10.0
 Silvex (2,4,5-TP) -

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
Analytical Report
Metals By SW846-1311/6010/7000
Results given in: mg/Kg

Report Date: 12-18-92 13:04
Prepared By AKH
QA/QC Check JA
Lab Manager LB

| | | |
|--------------------|----------------|----------------|
| Sample Number | 111092-DH-006 | 111092-DH-007 |
| Lab ID Number | 9207337 | 9207338 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 12-92 | 12-92 |

| | | |
|----------|----|----|
| Arsenic | ND | ND |
| Barium | ND | ND |
| Cadmium | ND | ND |
| Chromium | ND | ND |
| Lead | ND | ND |
| Mercury | ND | ND |
| Selenium | ND | ND |
| Silver | ND | ND |

** NOTES :

9207337*SAMPLE - TCLP EXTRACTION STARTED - 11/21/92. Hg DIGESTION DATE - 12/04/92. ALL SAMPLES RERUN (DIGESTION AND ANALYSIS) FOR Ag DUE TO UNACCEPTABLE SPIKE RECOVERIES.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - TCLP LIQUID PHASE

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: mg/Kg

Report Date: 12-18-92 13:05
 Prepared By *RJ*
 QA/QC Check *LG*
 Lab Manager *LG*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|---------------|--------|---------------|----------------|-----------|--------------|
| Lab ID Number | 11-92 | 11-92 SPK ADD | 11-92 SPK RCV% | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | SAMPLE | | |

Date of Collection

Date of Receipt

Date of Digestion

Date of Analysis

| 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 |
|----------------|----------------|----------------|
| 12-92 | 12-92 | 12-92 |

| | | | | | |
|----------|----|------|------|-----|---|
| Arsenic | ND | 200 | 87.2 | 10 | - |
| Barium | ND | 5000 | 96.1 | 200 | - |
| Cadmium | ND | 1000 | 97.0 | 5 | - |
| Chromium | ND | 1000 | 97.1 | 10 | - |
| Lead | ND | 1000 | 99.0 | 50 | - |
| Mercury | ND | 4.54 | 101 | 0.2 | - |
| Selenium | ND | 200 | 88.1 | 5 | - |
| Silver | ND | 454 | 98.8 | 20 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-21-92 10:30
 Prepared By *RJ*
 QA/QC Check *tg*
 Lab Manager *tg*

| Sample Number | 111092-DH-008 | 111092-DH-010 | 111092-DH-011 | 111092-DH-012 | 111092-DH-013 |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Lab ID Number | 9207339 | 9207341 | 9207342 | 9207343 | 9207344 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 |

| | | | | | |
|----------|----|----|------|----|------|
| Arsenic | ND | ND | ND | ND | ND |
| Barium | ND | ND | 1070 | ND | ND |
| Cadmium | ND | ND | ND | ND | ND |
| Chromium | ND | ND | ND | ND | 50 |
| Lead | ND | ND | ND | ND | 150 |
| Mercury | ND | ND | ND | ND | 29.0 |
| Selenium | ND | ND | ND | ND | ND |
| Silver | ND | ND | ND | ND | ND |

** NOTES :

- 9207339*SAMPLE - TCLP EXTRACTION FOR THIS SAMPLE STARTED 12/08/92.
- 9207341*SAMPLE - TCLP EXTRACTION FOR THIS SAMPLE STARTED 12/08/92.
- 9207342*SAMPLE - TCLP EXTRACTION FOR THIS SAMPLE STARTED 12/08/92.
- 9207343*SAMPLE - TCLP EXTRACTION FOR THIS SAMPLE STARTED 12/08/92.
- 9207344*SAMPLE - TCLP EXTRACTION FOR THIS SAMPLE STARTED 12/08/92. LOD FOR Mercury IS 10 TIMES THE STATED VALUE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-21-92 10:30
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 111092-DH-008 | 111092-DH-008 | 111092-DH-010 | 111092-DH-010 |
|--------------------|-----------------|-----------------|-----------------|-----------------|
| Lab ID Number | 9207339-SPIKE-1 | 9207339-SPIKE-1 | 9207341-SPIKE-1 | 9207341-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1** | ADDED LEVEL | % RECOVERED 1** |
| Date of Collection | 11-10-92 | 11-10-92 | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Arsenic | 200 | - | 200 | - |
| Barium | 5000 | 98.7 | 5000 | 103 |
| Cadmium | 1000 | 95.7 | 1000 | 100 |
| Chromium | 1000 | 94.0 | 1000 | 100 |
| Lead | 1000 | 94.0 | 1000 | 98.0 |
| Mercury | 4.76 | - | 4.76 | - |
| Selenium | 200 | 80.8 | 200 | - |
| Silver | 5000 | 100 | 5000 | 99.2 |

** NOTES :

- 9207339*SPK1RCV1 - UNACCEPTABLE SPIKE RECOVERY FOR Arsenic AND Mercury DUE TO MATRIX INTERFERENCE.
- 9207341*SPK1RCV1 - UNACCEPTABLE SPIKE RECOVERY FOR Arsenic, Mercury AND Selenium DUE TO MATRIX INTERFERENCE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-21-92 10:30
 Prepared By KL
 QA/QC Check KL
 Lab Manager KL

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|----------------|-----------------|------------------|----------------|-----------------|
| Lab ID Number | 11-92-1 | 11-92-1 SPK ADD | 11-92-1 SPK RCV% | 11-92-5 | 11-92-5 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE** | SAMPLE** |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 |

| | | | | | |
|----------|----|------|------|----|------|
| Arsenic | ND | 200 | 99.7 | ND | 200 |
| Barium | ND | 5000 | 98.1 | ND | 5000 |
| Cadmium | ND | 1000 | 98.8 | ND | 1000 |
| Chromium | ND | 1000 | 98.9 | ND | 1000 |
| Lead | ND | 1000 | 98.0 | ND | 1000 |
| Mercury | - | - | - | ND | 4.76 |
| Selenium | ND | 200 | 101 | ND | 200 |
| Silver | ND | 5000 | 98.2 | ND | 5000 |

** NOTES :

BLANK 11-92-5 - TCLP BLANK.
 BLANK 11-92-5 SPK ADD - TCLP BLANK SPIKE.

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|------------------|----------------|-----------------|------------------|---------------|
| Lab ID Number | 11-92-5 SPK RCV% | 11-92-6 | 11-92-6 SPK ADD | 11-92-6 SPK RCV% | 12-01 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 12-01-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 11-92 TO 12-92 | 12-01-92 |

| | | | | | |
|----------|------|----|------|------|------|
| Arsenic | 94.1 | ND | 200 | 116 | - |
| Barium | 102 | ND | 5000 | 98.5 | - |
| Cadmium | 95.5 | ND | 1000 | 96.1 | - |
| Chromium | 101 | ND | 1000 | 96.7 | - |
| Lead | 92.0 | ND | 1000 | 100 | - |
| Mercury | 92.8 | ND | 4.76 | 110 | 4.76 |
| Selenium | 81.0 | ND | 200 | 108 | - |
| Silver | 98.2 | ND | 5000 | 99.6 | - |

** NOTES :

BLANK 11-92-5 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 11-92-6 - TCLP BLANK.
 BLANK 11-92-6 SPK ADD - TCLP BLANK SPIKE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
QA/QC Report - Blanks
Metals By SW846-1311/6010/7000
Results given in: ug/L

Report Date: 12-21-92 10:30
Prepared By *KN*
QA/QC Check *KG*
Lab Manager *KG*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------|------------------|----------|-----------------|------------------|---------------|
| Lab ID Number | 11-92-5 SPK RCV% | 11-92-6 | 11-92-6 SPK ADD | 11-92-6 SPK RCV% | 12-01 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE** | SAMPLE |

BLANK 11-92-6 SPK RCV% - TCLP BLANK SPIKE.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-21-92 10:30
 Prepared By *[Signature]*
 QA/QC Check *[Signature]*
 Lab Manager *[Signature]*

| Sample Number | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|----------------|----------|-----------|--------------|
| Lab ID Number | 12-01 SPK RCV% | 12-01-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE | SAMPLE | | |
| Date of Collection | | | | |
| Date of Receipt | | | | |
| Date of Digestion | 12-01-92 | 12-01-92 | | |
| Date of Analysis | 12-01-92 | 12-01-92 | | |
| Arsenic | - | - | 10 | - |
| Barium | - | - | 1000 | - |
| Cadmium | - | - | 5 | - |
| Chromium | - | - | 10 | - |
| Lead | - | - | 50 | - |
| Mercury | 115 | ND | 0.2 | - |
| Selenium | - | - | 5 | - |
| Silver | - | - | 200 | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 Analytical Report
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-21-92 10:30
 Prepared By *KIL*
 QA/QC Check *TL*
 Lab Manager *TL*

| | | |
|--------------------|----------------|----------------|
| Sample Number | 111092-DH-006 | 111092-DH-007 |
| Lab ID Number | 9207337 | 9207338 |
| Matrix | LEACHATE | LEACHATE |
| Type | SAMPLE** | SAMPLE** |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Digestion | 11-92 TO 12-92 | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 | 11-92 TO 12-92 |

| | | |
|----------|----|-------|
| Arsenic | ND | ND |
| Barium | ND | ND |
| Cadmium | ND | ND |
| Chromium | ND | ND |
| Lead | ND | 16800 |
| Mercury | ND | ND |
| Selenium | ND | ND |
| Silver | ND | ND |

** NOTES :

- 9207337*SAMPLE - TCLP EXTRACTION STARTED 11/21/92. Hg ANALYSIS DATE - 12/01/92. ALL SAMPLES RERUN (DIGESTION & ANALYSIS) FOR Ag DUE TO UNACCEPTABLE SPIKE RECOVERIES. TCLP EXTRACTION FOR Ag RE-RUN STARTED 12/08/92.
- 9207338*SAMPLE - TCLP EXTRACTION FOR THIS SAMPLE STARTED 11/21/92.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-21-92 10:30
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|---------------|---------|-----------------|------------------|----------|-----------------|
| Lab ID Number | 11-92-2 | 11-92-2 SPK ADD | 11-92-2 SPK RCV% | 11-92-3 | 11-92-3 SPK ADD |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE | SAMPLE** | SAMPLE** |

| | | | | | |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Digestion | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 |

| | | | | | |
|----------|----|-------|------|----|-------|
| Arsenic | ND | 2000 | 95.6 | ND | 2000 |
| Barium | ND | 50000 | 96.8 | ND | 50000 |
| Cadmium | ND | 10000 | 96.3 | ND | 10000 |
| Chromium | ND | 10000 | 97.4 | ND | 10000 |
| Lead | ND | 10000 | 101 | ND | 10000 |
| Mercury | ND | 50.0 | 115 | ND | 50.0 |
| Selenium | ND | 2000 | 98.5 | ND | 2000 |
| Silver | ND | 50000 | 98.4 | ND | 50000 |

**** NOTES :**

BLANK 11-92-3 - TCLP BLANK.
 BLANK 11-92-3 SPK ADD - TCLP BLANK SPIKE.

| Sample Number | BLANK | LIMIT | LIMIT |
|---------------|------------------|-----------|--------------|
| Lab ID Number | 11-92-3 SPK RCV% | OF | OF |
| Matrix | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | | |

| | |
|--------------------|----------------|
| Date of Collection | |
| Date of Receipt | |
| Date of Digestion | 11-92 TO 12-92 |
| Date of Analysis | 11-92 TO 12-92 |

| | | | |
|----------|------|-------|---|
| Arsenic | 96.8 | 100 | - |
| Barium | 99.8 | 10000 | - |
| Cadmium | 98.3 | 50 | - |
| Chromium | 98.2 | 100 | - |
| Lead | 101 | 500 | - |
| Mercury | 104 | 2 | - |
| Selenium | 99.0 | 50 | - |
| Silver | 99.0 | 2000 | - |

**** NOTES :**

BLANK 11-92-3 SPK RCV% - TCLP BLANK SPIKE.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Metals By SW846-1311/6010/7000
 Results given in: ug/L

Report Date: 12-21-92 10:30
 Prepared By *KY*
 QA/QC Check *TS*
 Lab Manager *TS*

| Sample Number | BLANK | BLANK | BLANK | LIMIT | LIMIT |
|--------------------|---------------|----------------|----------|-----------|--------------|
| Lab ID Number | 12-09 SPK ADD | 12-09 SPK RCV% | 12-09-92 | OF | OF |
| Matrix | SYSTEM | SYSTEM | SYSTEM | DETECTION | QUANTITATION |
| Type | SAMPLE** | SAMPLE** | SAMPLE** | | |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Digestion | 12-09-92 | 12-09-92 | 12-09-92 | | |
| Date of Analysis | 12-10-92 | 12-10-92 | 12-10-92 | | |
| Arsenic | - | - | - | - | - |
| Barium | - | - | - | - | - |
| Cadmium | - | - | - | - | - |
| Chromium | - | - | - | - | - |
| Lead | - | - | - | - | - |
| Mercury | 50000 | 101 | ND | 2000 | - |
| Selenium | - | - | - | - | - |
| Silver | - | - | - | - | - |

** NOTES :

BLANK 12-09 SPK ADD - TCLP BLANK SPIKE.
 BLANK 12-09 SPK RCV% - TCLP BLANK SPIKE.
 BLANK 12-09-92 - TCLP BLANK.

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
Project Number: 375-05-02-00
Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
Analytical Report
Total Petroleum Hydrocarbons By CA/LUFT-MODIFIED
Results given in: mg/L

Report Date: 12-18-92 11:57
Prepared By:
QA/QC Check:
Lab Manager:

Sample Number 111092-DH-009
Lab ID Number 9207340
Matrix LEACHATE
Type SAMPLE**

Date of Collection 11-10-92
Date of Receipt 11-11-92
Date of Extraction 11-22-92
Date of Analysis 12-01-92

Diesel ND
Post diesel ND
Pre diesel ND
Total TPH ND

** NOTES :
9207340*SAMPLE - TCLP EXTRACTION DATE - 11/18/92.

- Not Applicable
ND Non detected at stated limit
NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Spikes
 Total Petroleum Hydrocarbons By CA/LUFT-MODIFIED
 Results given in: mg/L

Report Date: 12-18-92 11:57
 Prepared By: *[Signature]*
 QA/QC Check: *[Signature]*
 Lab Manager: *[Signature]*

| Sample Number | 111092-DH-009 | 111092-DH-009 |
|--------------------|-----------------|-----------------|
| Lab ID Number | 9207340-SPIKE-1 | 9207340-SPIKE-1 |
| Matrix | LEACHATE | LEACHATE |
| Type | ADDED LEVEL | % RECOVERED 1 |
| Date of Collection | 11-10-92 | 11-10-92 |
| Date of Receipt | 11-11-92 | 11-11-92 |
| Date of Extraction | 11-22-92 | 11-22-92 |
| Date of Analysis | 12-01-92 | 12-01-92 |
| Diesel | 0.800 | 106 |
| Post diesel | - | - |
| Pre diesel | - | - |
| Total TPH | - | - |

** NOTES :

- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

Report Number: R-921401
 Project Number: 375-05-02-00
 Description: E T I/NAS - SOUTHSIDE - TCLP

Memphis Environmental Center
 QA/QC Report - Blanks
 Total Petroleum Hydrocarbons By CA/LUFT-MODIFIED
 Results given in: mg/L

Report Date: 12-18-92 11:57
 Prepared By: [Signature]
 QA/QC Check: [Signature]
 Lab Manager: [Signature]

| Sample Number | BLANK | BLANK | BLANK | BLANK | BLANK |
|--------------------|-----------------|------------------|-----------------|------------------|------------|
| Lab ID Number | 11-22-1 SPK ADD | 11-22-1 SPK RCV% | 11-22-2 SPK ADD | 11-22-2 SPK RCV% | 11-22-92-1 |
| Matrix | SYSTEM | SYSTEM | SYSTEM | SYSTEM | SYSTEM |
| Type | SAMPLE | SAMPLE | SAMPLE** | SAMPLE** | SAMPLE |
| Date of Collection | | | | | |
| Date of Receipt | | | | | |
| Date of Extraction | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 | 11-22-92 |
| Date of Analysis | 12-01-92 | 12-01-92 | 12-01-92 | 12-01-92 | 12-01-92 |
| Diesel | 0.800 | 99.8 | 0.800 | 96.1 | ND |
| Post diesel | - | - | - | - | ND |
| Pre diesel | - | - | - | - | ND |
| Total TPH | - | - | - | - | ND |

** NOTES :

BLANK 11-22-2 SPK ADD - TCLP BLANK SPIKE.
 BLANK 11-22-2 SPK RCV% - TCLP BLANK SPIKE.

| Sample Number | BLANK | LIMIT | LIMIT | SURROGATE |
|--------------------|------------|-----------|--------------|-----------|
| Lab ID Number | 11-22-92-2 | OF | OF | SPIKE |
| Matrix | SYSTEM | DETECTION | QUANTITATION | LEVELS |
| Type | SAMPLE** | | | |
| Date of Collection | | | | |
| Date of Receipt | | | | |
| Date of Extraction | 11-22-92 | | | |
| Date of Analysis | 12-01-92 | | | |
| Diesel | ND | 0.4 | - | - |
| Post diesel | ND | 0.4 | - | - |
| Pre diesel | ND | 0.4 | - | - |
| Total TPH | ND | - | - | - |

** NOTES :

BLANK 11-22-92-2 - TCLP BLANK.

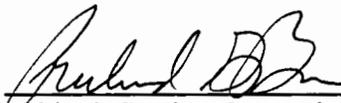
- Not Applicable
 ND Non detected at stated limit
 NA Not analyzed

[] - Below LOQ, Above LOD

CASE NARRATIVE FOR TCLP VOLATILE ANALYSIS
USING SW-846 METHOD 8240

Client: MEC
LSDG: 30159
Project: 375

- * All volatile organics were analyzed by GC/MS on Hewlett-Packard MSD 5970 Inst. ID. 7002, 7003 or HP MSD 5971 Inst. ID. 5971.
- * Chromatography was performed on a 2.4m x 2.0mm ID glass column packed with 1% SP 1000 Carbopack B and/or a 75m x 0.53mm DB-624 megabore column. Samples were purged via Tekmar LSC-2/ALS and/or OI 4460A/OIC MPM-16 onto traps composed of silica gel/charcoal/Tenax. Operating temperatures are 220°C, 250°C, 280°C respectively for the injector, jet separator, source/interface.
- * Sample purge size was 5 ml for the ZHE extract unless noted otherwise.
- * The reports of the target TCLP compounds identified and quantified in the samples are contained in the following sections of the data package. Also included are the appropriate calibration and quality control data where applicable. Data was obtained from HP RTE-A series computer with Aquarius software.
- * The following exceptions and/or considerations should be noted for the sample group contained within.
 - A method blank and a ZHE blank were analyzed with the sample group and found to be free of the TCLP target compounds.
 - Surrogate recoveries for all samples and blanks were within acceptable limits.
 - A matrix spike analysis was performed on sample 012993-TN-001. Recovery of all TCLP analytes was within acceptable limits



GC/MS Section Supervisor (designee)

2/2/93
Date

Volatiles TCLP Analytical Results
SW-846 Method 8240

Client: MEC
Lab Sample ID: 3015901
Matrix: Leachate
Dilution Factor: 1

Client Sample No.: 012993-TN-001
Client Reference No.: 375
Date Received: N/A
Date Analyzed: February 3, 1993

| CAS Number | Compound Name | Result mg/L | MCL mg/L | PQL mg/L | Note |
|------------|----------------------|-------------|----------|----------|------|
| 71432 | Benzene | BQL | 0.5 | 0.005 | |
| 56235 | Carbon Tetrachloride | BQL | 0.5 | 0.005 | |
| 108907 | Chlorobenzene | BQL | 100.0 | 0.005 | |
| 67663 | Chloroform | BQL | 6.0 | 0.005 | |
| 107062 | 1,2-Dichloroethane | BQL | 0.5 | 0.005 | |
| 75354 | 1,1-Dichloroethene | BQL | 0.7 | 0.005 | |
| 78933 | Methyl ethyl ketone | BQL | 200.0 | 0.100 | |
| 127184 | Tetrachloroethene | 0.003 | 0.7 | 0.005 | * |
| 79016 | Trichloroethene | BQL | 0.5 | 0.005 | |
| 75014 | Vinyl Chloride | BQL | 0.2 | 0.010 | |

MCL = Maximum Contaminant Level

PQL = Practical Quantitation Limit

BQL = Below Quantitation Limit

* = Indicates an estimated value when the mass spectral data indicate the presence of a compound that meets the identification criteria in which the result is less than the practical quantitation limit but greater than zero.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable contamination and warns the data user to take appropriate action.

Volatile Surrogate Recovery Data

Lab Sample ID: 3015901

Client Sample No.: 012993-TN-001

| <i>Surrogate Compound</i> | <i>% Recovery</i> | <i>QC Limits</i> | <i>Notes</i> |
|------------------------------|-------------------|------------------|--------------|
| <i>Toluene-d8</i> | <i>99</i> | <i>88-110</i> | |
| <i>Bromofluorobenzene</i> | <i>100</i> | <i>86-115</i> | |
| <i>1,2-Dichloroethane-d4</i> | <i>95</i> | <i>76-114</i> | |

D = Surrogate diluted out

**** = Surrogate recovery outside QC Limits*

Surrogates are compounds added to the sample prior to purging to monitor the purge efficiency. Lower surrogate recoveries may indicate possible matrix effect and/or lower purge efficiency.

Client: MEC

LSDG: 30159

Method: SW-846 8240

Client Reference No.: 375

Sample Receipt Date: February 1, 1993

Date of Collection: January 29, 1993

Date of Extraction: February 2, 1993

Date of Analysis: February 3, 1993

MATRIX SPIKE ANALYTICAL RESULTS
TCLP VOLATILES

Lab Sample ID: 3015901MS

Client Sample ID: 012993-TN-001

Dilution: 1

| Spike Compound | % Recovery QC Limits * | Spike Amount (mg/l) | Unspiked Sample Result (mg/l) | Spiked Sample Result (mg/l) (MS) | % Spike Recovery (MS) | Duplicate Spike Sample Result (mg/l) (MSD) | % Spike Recovery (MSD) | %RPD |
|----------------------|---------------------------|---------------------------|-------------------------------------|---|-----------------------------|---|------------------------------|------|
| Benzene | 37-151 | 0.050 | 0.000 | 0.055 | 111 | NA | NA | NA |
| Carbon Tetrachloride | 70-140 | 0.050 | 0.000 | 0.058 | 116 | NA | NA | NA |
| Chlorobenzene | 37-160 | 0.050 | 0.000 | 0.054 | 108 | NA | NA | NA |
| Chloroform | 51-138 | 0.050 | 0.000 | 0.054 | 109 | NA | NA | NA |
| 1,2-Dichloroethane | 49-155 | 0.050 | 0.000 | 0.050 | 100 | NA | NA | NA |
| 1,1-Dichloroethylene | D-234 | 0.050 | 0.000 | 0.050 | 100 | NA | NA | NA |
| Methyl ethyl ketone | NA | 0.050 | 0.000 | 0.047 | 94 | NA | NA | NA |
| Tetrachloroethylene | 64-148 | 0.050 | 0.003 | 0.056 | 107 | NA | NA | NA |
| Trichloroethylene | 71-157 | 0.050 | 0.000 | 0.053 | 106 | NA | NA | NA |
| Vinyl Chloride | D-251 | 0.050 | 0.000 | 0.067 | 135 | NA | NA | NA |

* QC limits based on SW-846 Method 8240 Table 6

Volatile TCLP Analytical Results
SW-846 Method 8240

Client: MEC Client Sample No.: Method Blank
 Lab Sample ID: VBLKW88 Client Reference No.: 375
 Matrix: Leachate Date Received: N/A
 Dilution Factor: 1 Date Analyzed: February 3, 1993

| CAS Number | Compound Name | Result mg/L | MCL mg/L | PQL mg/L | Note |
|------------|----------------------|-------------|----------|----------|------|
| 71432 | Benzene | BQL | 0.5 | 0.005 | |
| 56235 | Carbon Tetrachloride | BQL | 0.5 | 0.005 | |
| 108907 | Chlorobenzene | BQL | 100.0 | 0.005 | |
| 67663 | Chloroform | BQL | 6.0 | 0.005 | |
| 107062 | 1,2-Dichloroethane | BQL | 0.5 | 0.005 | |
| 75354 | 1,1-Dichloroethene | BQL | 0.7 | 0.005 | |
| 78933 | Methyl ethyl ketone | BQL | 200.0 | 0.100 | |
| 127184 | Tetrachloroethene | BQL | 0.7 | 0.005 | |
| 79016 | Trichloroethene | BQL | 0.5 | 0.005 | |
| 75014 | Vinyl Chloride | BQL | 0.2 | 0.010 | |

MCL = Maximum Contaminant Level

PQL = Practical Quantitation Limit

BQL = Below Quantitation Limit

* = Indicates an estimated value when the mass spectral data indicate the presence of a compound that meets the identification criteria in which the result is less than the practical quantitation limit but greater than zero.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable contamination and warns the data user to take appropriate action.

Volatile Surrogate Recovery Data

Lab Sample ID: VBLKW88

Client Sample No.: Method Blank

| <i>Surrogate Compound</i> | <i>% Recovery</i> | <i>QC Limits</i> | <i>Notes</i> |
|------------------------------|-------------------|------------------|--------------|
| <i>Toluene-d8</i> | <i>99</i> | <i>88-110</i> | |
| <i>Bromofluorobenzene</i> | <i>100</i> | <i>86-115</i> | |
| <i>1,2-Dichloroethane-d4</i> | <i>95</i> | <i>76-114</i> | |

D = Surrogate diluted out

**** = Surrogate recovery outside QC Limits*

Surrogates are compounds added to the sample prior to purging to monitor the purge efficiency. Lower surrogate recoveries may indicate possible matrix effect and/or lower purge efficiency.

Volatile TCLP Analytical Results
SW-846 Method 8240

| | |
|--------------------------------|--|
| <i>Client:</i> MEC | <i>Client Sample No.:</i> Leachate Blank |
| <i>Lab Sample ID:</i> Q1320204 | <i>Client Reference No.:</i> 375 |
| <i>Matrix:</i> Leachate | <i>Date Received:</i> N/A |
| <i>Dilution Factor:</i> 1 | <i>Date Analyzed:</i> February 3, 1993 |

| <i>CAS Number</i> | <i>Compound Name</i> | <i>Result mg/L</i> | <i>MCL mg/L</i> | <i>PQL mg/L</i> | <i>Note</i> |
|-------------------|----------------------|--------------------|-----------------|-----------------|-------------|
| 71432 | Benzene | BQL | 0.5 | 0.005 | |
| 56235 | Carbon Tetrachloride | BQL | 0.5 | 0.005 | |
| 108907 | Chlorobenzene | BQL | 100.0 | 0.005 | |
| 67663 | Chloroform | BQL | 6.0 | 0.005 | |
| 107062 | 1,2-Dichloroethane | BQL | 0.5 | 0.005 | |
| 75354 | 1,1-Dichloroethene | BQL | 0.7 | 0.005 | |
| 78933 | Methyl ethyl ketone | BQL | 200.0 | 0.100 | |
| 127184 | Tetrachloroethene | BQL | 0.7 | 0.005 | |
| 79016 | Trichloroethene | BQL | 0.5 | 0.005 | |
| 75014 | Vinyl Chloride | BQL | 0.2 | 0.010 | |

MCL = Maximum Contaminant Level

PQL = Practical Quantitation Limit

BQL = Below Quantitation Limit

* = Indicates an estimated value when the mass spectral data indicate the presence of a compound that meets the identification criteria in which the result is less than the practical quantitation limit but greater than zero.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable contamination and warns the data user to take appropriate action.

| <i>Volatile Surrogate Recovery Data</i> | | | |
|---|-------------------|--|--------------|
| <i>Lab Sample ID: Q1320204</i> | | <i>Client Sample No.: Leachate Blank</i> | |
| <i>Surrogate Compound</i> | <i>% Recovery</i> | <i>QC Limits</i> | <i>Notes</i> |
| <i>Toluene-d8</i> | <i>94</i> | <i>88-110</i> | |
| <i>Bromofluorobenzene</i> | <i>96</i> | <i>86-115</i> | |
| <i>1,2-Dichloroethane-d4</i> | <i>97</i> | <i>76-114</i> | |

D = Surrogate diluted out

**** = Surrogate recovery outside QC Limits*

Surrogates are compounds added to the sample prior to purging to monitor the purge efficiency.

Lower surrogate recoveries may indicate possible matrix effect and/or lower purge efficiency.

**CASE NARRATIVE FOR SEMI-VOLATILE ANALYSIS FOR TCLP COMPOUNDS
USING EPA SW-846 METHOD 8270 PROTOCOLS**

CLIENT: MEC
LSDG: 30159
PROJECT: 375

- * All semi-volatile organics were analyzed by GC/MS on Hewlett-Packard MSDs Inst. ID. 7001, Inst. ID 7004.
- * Chromatography was performed on a 30m J & W fused silica DB-5 capillary column.
- * Extraction was performed on an appropriate volume of the leachate solution to yield a detection level that is significantly below EPA's maximum allowable concentration limits for TCLP compounds unless stated otherwise.
- * Final extract concentration was performed by the nitrogen blowdown technique to a final volume of 2.0 ml unless stated otherwise.
- * The reports of the semi-volatile TCLP compounds identified and quantified in the samples are contained in the following sections of the data package.
- * Detection limits or practical quantitation limits (PQL's) are expressed in the final quantitation report as the minimum value that can be detected with confidence. PQLs are factored for initial sample volume and final extract volume along with any necessary dilution.
- * The following exceptions and/or considerations should be noted for the sample group contained within.

- Surrogate spike recoveries for all blanks were within acceptable QC limits. Acid surrogate recoveries for sample 012993-TN-001 were depressed probably due to a matrix effect. Sample 012993-TN-001 MS presented depressed acid surrogate and acid matrix spike recoveries substantiating a matrix effect conclusion.

- A leachate blank and a method blank were analyzed with the samples of this case and both were found to be free of all target analytes.

- A matrix spike analysis was performed on sample 012993-TN-001. Recoveries for all TCLP base-neutral target analytes were within acceptable limits. All TCLP acid matrix spike compound recoveries were depressed.



GC/MS Supervisor

2/8/93
Date

Semivolatile TCLP Analytical Results
40 CFR 261, June 29, 1990

Client: MEC
Lab Sample ID: 3015901
Matrix: Leachate
Dilution Factor: 1

Client Sample No.: 012993-TN-001
Client Reference No.: 375
Date Received: February 1, 1993
Date Extracted: February 4, 1993

| CAS Number | Compound Name | Result mg/l | PQL mg/l | MCL mg/l | Note |
|------------|-----------------------|-------------|----------|----------|------|
| 106467 | 1,4-Dichlorobenzene | BQL | 0.010 | 7.5 | |
| 95487 | 2-Methylphenol | BQL | 0.010 | 200 | |
| 108394 | 3-Methylphenol | BQL | 0.010 | 200 | |
| 106445 | 4-Methylphenol | BQL | 0.010 | 200 | |
| NA | Total-Methylphenol | BQL | 0.010 | 200 | |
| 67721 | Hexachloroethane | BQL | 0.010 | 3.0 | |
| 98953 | Nitrobenzene | BQL | 0.010 | 2.0 | |
| 87683 | Hexachlorobutadiene | BQL | 0.010 | 0.5 | |
| 88062 | 2,4,6-Trichlorophenol | BQL | 0.010 | 2.0 | |
| 95954 | 2,4,5-Trichlorophenol | BQL | 0.050 | 400 | |
| 121142 | 2,4-Dinitrotoluene | BQL | 0.010 | 0.13 | |
| 118741 | Hexachlorobenzene | BQL | 0.010 | 0.13 | |
| 87865 | Pentachlorophenol | BQL | 0.050 | 100 | |
| 110861 | Pyridine | BQL | 0.010 | 5.0 | |

MCL = Maximum Concentration Limit

PQL = Practical Quantitation Limit

BQL = Below Quantitation Limit

* = Indicates an estimated value when the mass spectral data indicate the presence of a compound that meets the identification criteria in which the result is less than the practical quantitation limit but greater than zero.

Semivolatile Surrogate Recovery Data

Lab Sample ID: 3015901

Client Sample No.: 012993-TN-001

| <i>Surrogate Compound</i> | <i>% Recovery</i> | <i>QC Limits</i> | <i>Notes</i> |
|-----------------------------|-------------------|------------------|--------------|
| <i>Nitrobenzene-d5</i> | <i>88</i> | <i>35-114</i> | |
| <i>2-Fluorobiphenyl</i> | <i>84</i> | <i>43-116</i> | |
| <i>Terphenyl-d14</i> | <i>99</i> | <i>33-141</i> | |
| <i>Phenol-d6</i> | <i>9</i> | <i>10- 94</i> | <i>***</i> |
| <i>2-Fluorophenol</i> | <i>5</i> | <i>21-100</i> | <i>***</i> |
| <i>2,4,6-Tribromophenol</i> | <i>15</i> | <i>10-123</i> | |

D = Surrogate diluted out

**** = Surrogate recovery outside QC Limits*

Surrogates are compounds added to the sample prior to extraction to monitor the extraction efficiency. Lower surrogate recoveries may indicate possible matrix effect on the extraction procedure.

Semivolatile TCLP QC Spike Data

40 CFR 261 June 29, 1990

*Client: MEC
Lab Sample ID: 301590IMS*

*Client Sample ID: 012993-TN-001
Client Reference No.: 375*

| <i>Compound</i> | <i>Matrix Spike % Recovery</i> | <i>Matrix Spike Duplicate % Recovery</i> | <i>% Recovery QC Limits *</i> | <i>Relative Percent Difference RPD</i> |
|------------------------------------|------------------------------------|--|---------------------------------------|--|
| <i>Total Cresol*, mg/L</i> | <i>33.6</i> | <i>N/A</i> | <i>NA</i> | <i>N/A</i> |
| <i>1,4-Dichlorobenzene, mg/L</i> | <i>83.1</i> | <i>N/A</i> | <i>37-106</i> | <i>N/A</i> |
| <i>2,4-Dinitrotoluene, mg/L</i> | <i>74.1</i> | <i>N/A</i> | <i>48-127</i> | <i>N/A</i> |
| <i>Hexachlorobenzene, mg/L</i> | <i>96.4</i> | <i>N/A</i> | <i>8-142</i> | <i>N/A</i> |
| <i>Hexachlorobutadiene, mg/L</i> | <i>81.7</i> | <i>N/A</i> | <i>38-102</i> | <i>N/A</i> |
| <i>Hexachloroethane, mg/L</i> | <i>81.2</i> | <i>N/A</i> | <i>55-100</i> | <i>N/A</i> |
| <i>Nitrobenzene, mg/L</i> | <i>82.9</i> | <i>N/A</i> | <i>54-158</i> | <i>N/A</i> |
| <i>Pentachlorophenol, mg/L</i> | <i>8.0</i> | <i>N/A</i> | <i>38-152</i> | <i>N/A</i> |
| <i>Pyridine, mg/L</i> | <i>74.3</i> | <i>N/A</i> | <i>NA</i> | <i>N/A</i> |
| <i>2,4,5-Trichlorophenol, mg/L</i> | <i>12.9</i> | <i>N/A</i> | <i>NA</i> | <i>N/A</i> |
| <i>2,4,6-Trichlorophenol, mg/L</i> | <i>11.1</i> | <i>N/A</i> | <i>52-129</i> | <i>N/A</i> |

** Based upon SW-846, Method 8270, Table 6*

D = Detected

NA = Not available

Semivolatile TCLP Analytical Results
40 CFR 261, June 29, 1990

Client: MEC Client Sample No.: Method Blank
 Lab Sample ID: Q1320403 Client Reference No.: 375
 Matrix: Water Date Received: N/A
 Dilution Factor: 1 Date Extracted: February 4, 1993

| CAS Number | Compound Name | Result mg/l | PQL mg/l | MCL mg/l | Note |
|------------|-----------------------|-------------|----------|----------|------|
| 106467 | 1,4-Dichlorobenzene | BQL | 0.005 | 7.5 | |
| 95487 | 2-Methylphenol | BQL | 0.005 | 200 | |
| 108394 | 3-Methylphenol | BQL | 0.005 | 200 | |
| 106445 | 4-Methylphenol | BQL | 0.005 | 200 | |
| NA | Total-Methylphenol | BQL | 0.005 | 200 | |
| 67721 | Hexachloroethane | BQL | 0.005 | 3.0 | |
| 98953 | Nitrobenzene | BQL | 0.005 | 2.0 | |
| 87683 | Hexachlorobutadiene | BQL | 0.005 | 0.5 | |
| 88062 | 2,4,6-Trichlorophenol | BQL | 0.005 | 2.0 | |
| 95954 | 2,4,5-Trichlorophenol | BQL | 0.025 | 400 | |
| 121142 | 2,4-Dinitrotoluene | BQL | 0.005 | 0.13 | |
| 118741 | Hexachlorobenzene | BQL | 0.005 | 0.13 | |
| 87865 | Pentachlorophenol | BQL | 0.025 | 100 | |
| 110861 | Pyridine | BQL | 0.005 | 5.0 | |

MCL = Maximum Concentration Limit

PQL = Practical Quantitation Limit

BQL = Below Quantitation Limit

* = Indicates an estimated value when the mass spectral data indicate the presence of a compound that meets the identification criteria in which the result is less than the practical quantitation limit but greater than zero.

| <i>Semivolatile Surrogate Recovery Data</i> | | | |
|---|-------------------|--|--------------|
| <i>Lab Sample ID: Q1320403</i> | | <i>Client Sample No.: Method Blank</i> | |
| <i>Surrogate Compound</i> | <i>% Recovery</i> | <i>QC Limits</i> | <i>Notes</i> |
| <i>Nitrobenzene-d5</i> | <i>71</i> | <i>35-114</i> | |
| <i>2-Fluorobiphenyl</i> | <i>49</i> | <i>43-116</i> | |
| <i>Terphenyl-d14</i> | <i>97</i> | <i>33-141</i> | |
| <i>Phenol-d6</i> | <i>33</i> | <i>10- 94</i> | |
| <i>2-Fluorophenol</i> | <i>48</i> | <i>21-100</i> | |
| <i>2,4,6-Tribromophenol</i> | <i>72</i> | <i>10-123</i> | |

D = Surrogate diluted out

**** = Surrogate recovery outside QC Limits*

Surrogates are compounds added to the sample prior to extraction to monitor the extraction efficiency. Lower surrogate recoveries may indicate possible matrix effect on the extraction procedure.

Semivolatile TCLP Analytical Results
 40 CFR 261, June 29, 1990

Client: MEC
 Lab Sample ID: Q1320106
 Matrix: Leachate
 Dilution Factor: 1

Client Sample No.: Leachate Blank
 Client Reference No.: 375
 Date Received: N/A
 Date Extracted: February 4, 1993

| CAS Number | Compound Name | Result mg/l | PQL mg/l | MCL mg/l | Note |
|------------|-----------------------|-------------|----------|----------|------|
| 106467 | 1,4-Dichlorobenzene | BQL | 0.005 | 7.5 | |
| 95487 | 2-Methylphenol | BQL | 0.005 | 200 | |
| 108394 | 3-Methylphenol | BQL | 0.005 | 200 | |
| 106445 | 4-Methylphenol | BQL | 0.005 | 200 | |
| NA | Total-Methylphenol | BQL | 0.005 | 200 | |
| 67721 | Hexachloroethane | BQL | 0.005 | 3.0 | |
| 98953 | Nitrobenzene | BQL | 0.005 | 2.0 | |
| 87683 | Hexachlorobutadiene | BQL | 0.005 | 0.5 | |
| 88062 | 2,4,6-Trichlorophenol | BQL | 0.005 | 2.0 | |
| 95954 | 2,4,5-Trichlorophenol | BQL | 0.025 | 400 | |
| 121142 | 2,4-Dinitrotoluene | BQL | 0.005 | 0.13 | |
| 118741 | Hexachlorobenzene | BQL | 0.005 | 0.13 | |
| 87865 | Pentachlorophenol | BQL | 0.025 | 100 | |
| 110861 | Pyridine | BQL | 0.005 | 5.0 | |

MCL = Maximum Concentration Limit

PQL = Practical Quantitation Limit

BQL = Below Quantitation Limit

* = Indicates an estimated value when the mass spectral data indicate the presence of a compound that meets the identification criteria in which the result is less than the practical quantitation limit but greater than zero.

Semivolatile Surrogate Recovery Data

Lab Sample ID: Q1320106

Client Sample No.: Leachate Blank

| <i>Surrogate Compound</i> | <i>% Recovery</i> | <i>QC Limits</i> | <i>Notes</i> |
|-----------------------------|-------------------|------------------|--------------|
| <i>Nitrobenzene-d5</i> | <i>71</i> | <i>35-114</i> | |
| <i>2-Fluorobiphenyl</i> | <i>73</i> | <i>43-116</i> | |
| <i>Terphenyl-d14</i> | <i>99</i> | <i>33-141</i> | |
| <i>Phenol-d6</i> | <i>33</i> | <i>10- 94</i> | |
| <i>2-Fluorophenol</i> | <i>47</i> | <i>21-100</i> | |
| <i>2,4,6-Tribromophenol</i> | <i>70</i> | <i>10-123</i> | |

D = Surrogate diluted out

**** = Surrogate recovery outside QC Limits*

Surrogates are compounds added to the sample prior to extraction to monitor the extraction efficiency. Lower surrogate recoveries may indicate possible matrix effect on the extraction procedure.

CASE NARRATIVE FOR METALS ANALYSIS
Method SW-846

Client: MEC

Case: 375

LSDG: 30159

- **Analysis** - Metals analysis was performed on one TCLP extract sample. The sample was prepared and analyzed according to SW-846. The following methods and instruments were used for analysis:

| <u>Analysis</u> | <u>Instrument</u> | <u>Method</u> |
|-----------------|-------------------|---------------|
| ICP | TJA ICAP 61E | 6010 |
| CVAA | TJA SH-22 | 7470 |

- **QA/QC** - All appropriate QC data was within acceptable control limits with the following exceptions:
 - The sample TCLP matrix spike's percent recovery for Silver was outside of the 75 - 125% control limits. A predigestion spike performed with the batch showed acceptable recovery for Silver.
- **General Discussion** - Instrument problems necessitated a reanalysis for Mercury resulting in a limited sample volume. Due to this limited sample volume, Mercury reanalysis was performed on a ten-fold dilution of the sample. The detection limit for Mercury will still be significantly below the regulatory limit.

Approved: _____

(Section supervisor or designated alternative)

Date: 2/9/53

*Trace Metals Analytical Results - TCLP
Method SW-846*

Client: MEC

Lab Sample ID: 3015901

Client Reference No.: 375

Date Received: February 2, 1993

Client Sample No.: 012993-TN-001

Matrix: TCLP Extract

| <i>Analyte</i> | <i>Date Analyzed</i> | <i>Reg Limit mg/L</i> | <i>Result mg/L</i> | <i>Detection Limit mg/L</i> | <i>Note</i> |
|-----------------|----------------------|-----------------------|--------------------|-----------------------------|-------------|
| <i>Arsenic</i> | <i>2/5/93</i> | <i>5</i> | <i><0.014</i> | <i>0.014</i> | |
| <i>Barium</i> | <i>2/5/93</i> | <i>100</i> | <i>0.31</i> | <i>0.0010</i> | |
| <i>Cadmium</i> | <i>2/5/93</i> | <i>1</i> | <i>0.0054</i> | <i>0.0030</i> | |
| <i>Chromium</i> | <i>2/5/93</i> | <i>5</i> | <i><0.0030</i> | <i>0.0030</i> | |
| <i>Lead</i> | <i>2/5/93</i> | <i>5</i> | <i>1.9</i> | <i>0.018</i> | |
| <i>Mercury</i> | <i>2/6/93</i> | <i>0.2</i> | <i><0.00050</i> | <i>0.00050</i> | |
| <i>Selenium</i> | <i>2/5/93</i> | <i>1</i> | <i><0.030</i> | <i>0.030</i> | |
| <i>Silver</i> | <i>2/5/93</i> | <i>5</i> | <i><0.0030</i> | <i>0.0030</i> | <i>N</i> |

B = The analyte was observed in the preparation blank.

** = The sample matrix duplicate's relative percent difference, RPD, was above the 0 - 20% control limits.*

N = The TCLP matrix spike's percent recovery was outside of the 75 - 125% control limits.

E = The ICP serial dilution sample's percent difference was above the 0 - 10% control limits.

| <i>Trace Metals Analytical Results</i> <i>Duplicate and TCLP Matrix Spike Results</i> | | | | | | | |
|--|--------------------|-----------------------|--------------|--|-------------------------|-------------------|-------------|
| <i>Client: MEC</i> | | | | <i>Lab Sample ID: 3015901</i> | | | |
| <i>Client Reference No.: 375</i> | | | | <i>Date Received: February 2, 1993</i> | | | |
| <i>Client Sample No.: 012993-TN-001</i> | | | | <i>Matrix: TCLP Extract</i> | | | |
| <i>Analyte</i> | <i>Sample mg/l</i> | <i>Duplicate mg/l</i> | <i>% RPD</i> | <i>Spike Result mg/l</i> | <i>Spike Added mg/l</i> | <i>% Recovery</i> | <i>Note</i> |
| <i>Arsenic</i> | <i><0.014</i> | <i><0.014</i> | <i>NA</i> | <i>5.0158</i> | <i>5</i> | <i>100.3</i> | |
| <i>Barium</i> | <i>0.31</i> | <i>0.31</i> | <i>0.6</i> | <i>19.2630</i> | <i>20</i> | <i>94.8</i> | |
| <i>Cadmium</i> | <i>0.0054</i> | <i>0.0064</i> | <i>17.3</i> | <i>0.9713</i> | <i>1</i> | <i>96.6</i> | |
| <i>Chromium</i> | <i><0.0030</i> | <i><0.0030</i> | <i>NA</i> | <i>4.5663</i> | <i>5</i> | <i>91.3</i> | |
| <i>Lead</i> | <i>1.9</i> | <i>1.9</i> | <i>1.4</i> | <i>6.4200</i> | <i>5</i> | <i>90.4</i> | |
| <i>Mercury</i> | <i><0.00050</i> | <i><0.00050</i> | <i>NA</i> | <i>0.1870</i> | <i>0.2</i> | <i>93.5</i> | |
| <i>Selenium</i> | <i><0.030</i> | <i><0.030</i> | <i>NA</i> | <i>1.0741</i> | <i>1</i> | <i>107.4</i> | |
| <i>Silver</i> | <i><0.0030</i> | <i><0.0030</i> | <i>NA</i> | <i>2.6586</i> | <i>5</i> | <i>53.2</i> | <i>N</i> |

* = The sample matrix duplicate's relative percent difference, RPD, was above the 0 - 20% control limits.

N = The sample matrix spike's percent recovery was outside of the 75 - 125% control limits.

NA = Not Applicable

CASE NARRATIVE FOR GENERAL CHEMISTRY

Client: MEC

LSDG: 30027

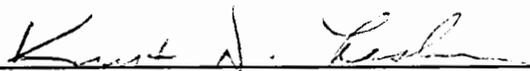
* Total Organic Carbon, SW 846 Method 9060

In this method, organic carbon is converted to carbon dioxide by catalytic combustion and then measured directly by an infrared detector. The results are calculated by the instrument and reported as mg/l TOC.

* All QA/QC requirements were acceptable for these analyses.

* Analysis of 9 of the 10 samples in this sample delivery group were discontinued due to the following:

Prior to analysis, all samples in this group were observed to have an oil matrix which is usually indicative of high hydrocarbon levels. The samples visually containing the lowest amounts of oil were prepped according to the above procedure. A TOC high standard, blank, and check standard were run prior to any samples to insure proper operating conditions. Sample 9207341 (3002704) was run first because this sample visually appeared to contain less oil than the other samples. Due to the oily nature of the sample matrix, analysis for TOC was discontinued after sample 9207341 (3002704) contaminated the TOC Analyzer. The instrument result for the above sample was 23.3 % TOC. This result is by no means qualified but in light of the sample matrix all samples associated with this LSDG contain no less than 10 % TOC.


General Chemistry Supervisor or Designee

11/12/93
Date

*General Chemistry
 Total Organic Carbon*

*Client: MEC
 LSDG: 30027
 Method: EPA 415.1*

*Client Reference No.: 337
 Date Received: 1/7/93
 Date Analyzed: 1/14/93*

| <i>Lab Sample ID</i> | <i>Client ID</i> | <i>Date Analyzed</i> | <i>Matrix</i> | <i>Units</i> | <i>Dilution Factor</i> | <i>Result</i> | <i>Detection Limit</i> | <i>Note</i> |
|----------------------|------------------|----------------------|---------------|--------------|------------------------|---------------|------------------------|-------------|
| 3002701 | 9207334 | NA | Sludge | % | NA | > 10 | NA | |
| 3002702 | 9207335 | NA | Sludge | % | NA | > 10 | NA | |
| 3002703 | 9207338 | NA | Sludge | % | NA | > 10 | NA | |
| 3002704 | 9207341 | 1/14/93 | Sludge | % | NA | > 10 | NA | |
| 3002705 | 9207656 | NA | Sludge | % | NA | > 10 | NA | |
| 3002706 | 9207660 | NA | Sludge | % | NA | > 10 | NA | |
| 3002707 | 9207664 | NA | Sludge | % | NA | > 10 | NA | |
| 3002708 | 9207666 | NA | Powder | % | NA | > 10 | NA | |
| 3002709 | 9207670 | NA | Sludge | % | NA | > 10 | NA | |
| 3002710 | 112592-DH-015 | NA | Sludge | % | NA | > 10 | NA | |

NA = Not Applicable, Please refer to the Case narrative.

ATTACHMENT F
HAZARDOUS WASTE
PROFILE SHEETS

HAZARDOUS WASTE PROFILE SHEET

PART I

A. GENERAL INFORMATION

WASTE PROFILE NO. _____

Method #1 - Southside

1. GENERATOR NAME

Naval Air Station Memphis

2. FACILITY ADDRESS

Public Works Environmental Division

Building South 236

Millington TN

5. ZIP CODE

38054

3. GENERATOR USEPA ID

TN 2170022600

4. GENERATOR STATE ID
6. TECHNICAL CONTACT

Mr. James Heide

7. TITLE

General Engineer

PHONE

(901) 873-5461

B. 1. NAME OF WASTE Drummed Spent Material
2. USEPA/STATE WASTE CODE(S) See part II, Section 2 - Toxicity Characteristic
3. PROCESS GENERATING WASTE Collected as a result of previous operations at Facility
4. PROJECTED ANNUAL VOLUME/UNITS 1555 / gal
5. MODE OF COLLECTION Drums
6. IS THIS WASTE A DIOXIN LISTED WASTE AS DEFINED IN 40 CFR 261.31 (e.g., F020, F021, F022, F023, F026, F027, OR F028)? YES NO

7. IS THIS WASTE RESTRICTED FROM LAND DISPOSAL (40 CFR 268)? YES NO

 HAS AN EXEMPTION BEEN GRANTED? YES NO

 DOES THE WASTE MEET APPLICABLE TREATMENT STANDARDS? YES NO REFERENCE STANDARDS _____

PART II

1. MATERIAL CHARACTERIZATION
(OPTIONAL-NOT REQUIRED DATA)

 COLOR _____
 DENSITY 0.9087 BTU/LB 13100
 TOTAL SOLIDS 5620 ppm ASH CONTENT < 1%
 LAYERING: MULTILAYERED BILAYERED SINGLE PHASE

2. RCRA CHARACTERISTICS

 PHYSICAL STATE: SOLID LIQUID SEMI-SOLID
 GAS OTHER
 TREATMENT GROUP: WASTEWATER NON-WASTEWATER
 IGNITABLE (D001) REACTIVE (D003)
 FLASH POINT (F) _____
 HIGH TOC (> 10%) WATER REACTIVE
 LOW TOC (< 10%) CYANIDE REACTIVE
 CORROSIVE (D002) TOXICITY CHARACTERISTIC
 pH _____ (SEE REVERSE FOR LISTING)
 CORRODES STEEL

3. CHEMICAL COMPOSITION (ppm or mg/L)

 COPPER _____ PHENOLICS _____
 NICKEL _____ TOTAL HALOGENS < 140 ppm
 ZINC _____ VOLATILE ORGANICS _____
 CHROMIUM-HEX _____ PCBs < 25 ppm
 (OTHER) _____

NOTE: EXPLOSIVES, SHOCK SENSITIVE, PYROPHORIC, RADIOACTIVE, AND ETIOLOGICAL WASTE NORMALLY ARE NOT ACCEPTED BY THE DRMO.
4. MATERIAL COMPOSITION

| COMPONENT | CONCENTRATION | RANGE |
|--------------|---------------|--------|
| water | | 80-90% |
| oil | | 10-20% |
| total solids | | 3-5% |
| | | |
| | | |
| | | |
| TOTAL | 100% | |

5. SHIPPING INFORMATION

 DOT HAZARDOUS MATERIAL? YES NO

 PROPER SHIPPING NAME Hazardous Waste, liquid, n.o.s.

 HAZARD CLASS ORM-E U.N. or N.A. NO. NA9189

 ADDITIONAL DESCRIPTION _____
 METHOD OF SHIPMENT BULK DRUM OTHER: _____
 CERCLA REPORTABLE QUANTITY (RQ) 1 lb (hexachlorobutadiene, toxaphene)
 EMERGENCY RESPONSE GUIDE PAGE _____
 DOT PUBLICATION 5800.4 PAGE NO. _____ EDITION (YR) _____
 SPECIAL HANDLING INFORMATION _____

6. GENERATOR CERTIFICATION
BASIS FOR INFORMATION

-
- CHEMICAL ANALYSIS (ATTACH TEST RESULTS)
-
-
- USER KNOWLEDGE (ATTACH SUPPORTING DOCUMENTS - Explain how and why these documents comply with RCRA requirements)

I, _____, HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS TO THE BEST OF MY KNOWLEDGE AN ACCURATE REPRESENTATION OF THE WASTE TURNED IN TO THE DRMO. ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED.

SIGNATURE OF GENERATOR'S REPRESENTATIVE

DATE

TOXICITY CHARACTERISTIC LIST

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|--|------------|--------|---|------------|--------|
| <input checked="" type="checkbox"/> ARSENIC | D004 | < 9.55 | <input checked="" type="checkbox"/> HEXACHLORO-1,3.-BUTADIENE | D033 | < 1190 |
| <input checked="" type="checkbox"/> BARIUM | D005 | < 191 | <input checked="" type="checkbox"/> HEXACHLOROETHANE | D034 | < 1190 |
| <input checked="" type="checkbox"/> BENZENE | D018 | < 10 | <input checked="" type="checkbox"/> LEAD | D008 | < 47.8 |
| <input checked="" type="checkbox"/> CADMIUM | D006 | < 4.78 | <input checked="" type="checkbox"/> LINDANE | D013 | < 2.39 |
| <input checked="" type="checkbox"/> CARBON TETRACHLORIDE | D019 | < 10 | <input type="checkbox"/> MERCURY | D009 | |
| <input checked="" type="checkbox"/> CHLORDANE | D020 | < 23.9 | <input type="checkbox"/> METHOXYCHLOR | D014 | |
| <input type="checkbox"/> CHLOROBENZENE | D021 | | <input type="checkbox"/> METHYL ETHYL KETONE | D035 | |
| <input type="checkbox"/> CHLOROFORM | D022 | < 10 | <input checked="" type="checkbox"/> NITROBENZENE | D036 | < 1190 |
| <input checked="" type="checkbox"/> CHROMIUM | D007 | < 9.55 | <input checked="" type="checkbox"/> PENTACHLOROPHENOL | D037 | < 2390 |
| <input type="checkbox"/> O-CRESOL | D023 | | <input checked="" type="checkbox"/> PYRIDINE | D038 | < 2390 |
| <input type="checkbox"/> M-CRESOL | D024 | | <input checked="" type="checkbox"/> SELENIUM | D010 | < 4.78 |
| <input type="checkbox"/> P-CRESOL | D025 | | <input checked="" type="checkbox"/> SILVER | D011 | < 19.2 |
| <input checked="" type="checkbox"/> CRESOL | D026 | < 2390 | <input checked="" type="checkbox"/> TETRACHLOROETHYLENE | D039 | < 10 |
| <input type="checkbox"/> 2,4-D | D016 | | <input checked="" type="checkbox"/> TOXOPHENE | D015 | < 298 |
| <input checked="" type="checkbox"/> 1,4-DICHLOROBENZENE | D027 | < 10 | <input checked="" type="checkbox"/> TRICHLOROETHYLENE | D040 | < 10 |
| <input checked="" type="checkbox"/> 1,2-DICHLOROETHANE | D028 | < 10 | <input checked="" type="checkbox"/> 2,4,5-TRICHLOROPHENOL | D041 | < 2390 |
| <input checked="" type="checkbox"/> 1,1-DICHLOROETHYLENE | D029 | < 10 | <input checked="" type="checkbox"/> 2,4,6-TRICHLOROPHENOL | D042 | < 2390 |
| <input checked="" type="checkbox"/> 2,4-DINITROTOLUENE | D030 | < 1190 | <input type="checkbox"/> 2,45-TP (SILVEX) | D017 | |
| <input checked="" type="checkbox"/> ENDRIN | D012 | < 2.39 | <input checked="" type="checkbox"/> VINYL CHLORIDE | D043 | < 20 |
| <input checked="" type="checkbox"/> HEPTACHLOR (AND ITS HYDROXIDE) | D031 | < 2.39 | | | |
| <input checked="" type="checkbox"/> HEXACHLOROBENZENE | D032 | < 1190 | | | |

PART III

FOR DRMO USE ONLY

DRMO VERIFICATION

1. DATE VERIFIED _____

2. RESULTS ATTACHED

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

TOXICITY CHARACTERISTIC LIST

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|--|------------|--------|---|------------|--------|
| <input checked="" type="checkbox"/> ARSENIC | D004 | <9.39 | <input checked="" type="checkbox"/> HEXACHLORO-1,3,-BUTADIENE | D033 | < 1170 |
| <input checked="" type="checkbox"/> BARIUM | D005 | <188 | <input checked="" type="checkbox"/> HEXACHLOROETHANE | D034 | < 1170 |
| <input checked="" type="checkbox"/> BENZENE | D018 | < 50 | <input checked="" type="checkbox"/> LEAD | D008 | < 16.8 |
| <input checked="" type="checkbox"/> CADMIUM | D006 | <4.68 | <input checked="" type="checkbox"/> LINDANE | D013 | < 2.35 |
| <input checked="" type="checkbox"/> CARBON TETRACHLORIDE | D019 | < 50 | <input type="checkbox"/> MERCURY | D009 | |
| <input type="checkbox"/> CHLORDANE | D020 | <23.5 | <input type="checkbox"/> METHOXYCHLOR | D014 | |
| <input type="checkbox"/> CHLOROBENZENE | D021 | | <input type="checkbox"/> METHYL ETHYL KETONE | D035 | |
| <input checked="" type="checkbox"/> CHLOROFORM | D022 | < 50 | <input checked="" type="checkbox"/> NITROBENZENE | D036 | < 1170 |
| <input checked="" type="checkbox"/> CHROMIUM | D007 | <9.39 | <input checked="" type="checkbox"/> PENTACHLOROPHENOL | D037 | < 2350 |
| <input type="checkbox"/> O-CRESOL | D023 | | <input checked="" type="checkbox"/> PYRIDINE | D038 | < 2350 |
| <input type="checkbox"/> M-CRESOL | D024 | | <input checked="" type="checkbox"/> SELENIUM | D010 | < 4.69 |
| <input type="checkbox"/> P-CRESOL | D025 | | <input checked="" type="checkbox"/> SILVER | D011 | < 18.9 |
| <input type="checkbox"/> CRESOL | D026 | <2350 | <input checked="" type="checkbox"/> TETRACHLOROETHYLENE | D039 | < 50 |
| <input type="checkbox"/> 2,4-D | D016 | | <input checked="" type="checkbox"/> TOXOPHENE | D015 | < 117 |
| <input checked="" type="checkbox"/> 1,4-DICHLOROENZENE | D027 | < 50 | <input checked="" type="checkbox"/> TRICHLOROETHYLENE | D040 | < 50 |
| <input checked="" type="checkbox"/> 1,2-DICHLOROETHANE | D028 | < 50 | <input checked="" type="checkbox"/> 2,4,5-TRICHLOROPHENOL | D041 | < 2350 |
| <input checked="" type="checkbox"/> 1,1-DICHLOROETHYLENE | D029 | < 50 | <input checked="" type="checkbox"/> 2,4,6-TRICHLOROPHENOL | D042 | < 2350 |
| <input checked="" type="checkbox"/> 2,4-DINITROTOLUENE | D030 | <1170 | <input type="checkbox"/> 2,45-TP (SILVEX) | D017 | |
| <input checked="" type="checkbox"/> ENDRIN | D012 | <2.35 | <input checked="" type="checkbox"/> VINYL CHLORIDE | D043 | < 100 |
| <input checked="" type="checkbox"/> HEPTACHLOR (AND ITS HYDROXIDE) | D031 | <2.35 | | | |
| <input checked="" type="checkbox"/> HEXACHLOROENZENE | D032 | <1170 | | | |

PART III

FOR DRMO USE ONLY

DRMO VERIFICATION

1. DATE VERIFIED _____

2. RESULTS ATTACHED

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

HAZARDOUS WASTE PROFILE SHEET

PART I

A. GENERAL INFORMATION

METHOD #3 - Southside

WASTE PROFILE NO. _____

1. GENERATOR NAME

Naval Air Station Memphis

2. FACILITY ADDRESS

Public Works Environmental Division

Building South 236

 5. ZIP CODE
38054

3. GENERATOR USEPA ID

TN 2170022600

4. GENERATOR STATE ID
6. TECHNICAL CONTACT

Mr. James Heide

7. TITLE

General Engineer

PHONE

(901) 873-5461

B. 1. NAME OF WASTE Drummed Spent Material

 2. USEPA/STATE WASTE CODE(S) See Part II, Section 2, Toxicity Characteristic

 3. PROCESS GENERATING WASTE Collected as a result of previous operations at Facility

 4. PROJECTED ANNUAL VOLUME/UNITS 160 / gal 5. MODE OF COLLECTION Drums

 6. IS THIS WASTE A DIOXIN LISTED WASTE AS DEFINED IN 40 CFR 261.31 (e.g., F020, F021, F022, F023, F026, F027, OR F028)? YES NO

 7. IS THIS WASTE RESTRICTED FROM LAND DISPOSAL (40 CFR 268)? YES NO

 HAS AN EXEMPTION BEEN GRANTED? YES NO

 DOES THE WASTE MEET APPLICABLE TREATMENT STANDARDS? YES NO REFERENCE STANDARDS _____

PART II

1. MATERIAL CHARACTERIZATION
(OPTIONAL-NOT REQUIRED DATA)

 COLOR _____
 DENSITY 0.8884 BTU/LB 18900
 TOTAL SOLIDS 4592 ppm ASH CONTENT <1%
 LAYERING: MULTILAYERED BILAYERED SINGLE PHASE

2. RCRA CHARACTERISTICS

 PHYSICAL STATE: SOLID LIQUID SEMI-SOLID
 GAS OTHER

 TREATMENT GROUP: WASTEWATER NON-WASTEWATER

 IGNITABLE (D001) REACTIVE (D003)

 FLASH POINT (F) 116°F WATER REACTIVE

 HIGH TOC (> 10%) CYANIDE REACTIVE

 LOW TOC (< 10%) SULFIDE REACTIVE

 CORROSIVE (D002) TOXICITY CHARACTERISTIC
 pH _____ (SEE REVERSE FOR LISTING)

 CORRODES STEEL

3. CHEMICAL COMPOSITION (ppm or mg/L)

COPPER _____ PHENOLICS _____

 NICKEL _____ TOTAL HALOGENS < 232 PPM

ZINC _____ VOLATILE ORGANICS _____

 CHROMIUM-HEX _____ PCBs < 50 ppm

(OTHER) _____

NOTE: EXPLOSIVES, SHOCK SENSITIVE, PYROPHORIC, RADIOACTIVE, AND ETIOLOGICAL WASTE NORMALLY ARE NOT ACCEPTED BY THE DRMO.

4. MATERIAL COMPOSITION

| COMPONENT | CONCENTRATION | RANGE |
|-----------|---------------|----------|
| Oil | | 100-110% |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| TOTAL | 100% | |

5. SHIPPING INFORMATION

 DOT HAZARDOUS MATERIAL? YES NO

 PROPER SHIPPING NAME Hazardous Waste
liquid, N.O.S.

 HAZARD CLASS ORM - E U.N. or N.A. NO. NA9189

ADDITIONAL DESCRIPTION _____

 METHOD OF SHIPMENT BULK DRUM OTHER: _____

 CERCLA REPORTABLE QUANTITY (RQ) 1 lb (hexachlorobutadiene,
toxophene)

EMERGENCY RESPONSE GUIDE PAGE _____

DOT PUBLICATION 5800.4 PAGE NO. _____ EDITION (YR) _____

SPECIAL HANDLING INFORMATION _____

6. GENERATOR CERTIFICATION
BASIS FOR INFORMATION
 CHEMICAL ANALYSIS (ATTACH TEST RESULTS)

 USER KNOWLEDGE (ATTACH SUPPORTING DOCUMENTS - Explain how and why these documents comply with RCRA requirements)

I, _____, HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL

(Print or Type Name)

ATTACHED DOCUMENTS IS TO THE BEST OF MY KNOWLEDGE AN ACCURATE REPRESENTATION OF THE WASTE TURNED IN TO THE DRMO. ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED.

SIGNATURE OF GENERATOR'S REPRESENTATIVE

DATE

TOXICITY CHARACTERISTIC LIST

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|--|------------|--------|---|------------|---------|
| <input checked="" type="checkbox"/> ARSENIC | D004 | <9.43 | <input checked="" type="checkbox"/> HEXACHLORO-1,3,-BUTADIENE | D033 | <1180 |
| <input checked="" type="checkbox"/> BARIUM | D005 | <189 | <input checked="" type="checkbox"/> HEXACHLOROETHANE | D034 | <1180 |
| <input checked="" type="checkbox"/> BENZENE | D018 | <25 | <input checked="" type="checkbox"/> LEAD | D008 | <47.1 |
| <input checked="" type="checkbox"/> CADMIUM | D006 | <4.71 | <input checked="" type="checkbox"/> LINDANE | D013 | <2.36 |
| <input checked="" type="checkbox"/> CARBON TETRACHLORIDE | D019 | <25 | <input type="checkbox"/> MERCURY | D009 | |
| <input checked="" type="checkbox"/> CHLORDANE | D020 | <23.6 | <input type="checkbox"/> METHOXYCHLOR | D014 | |
| <input type="checkbox"/> CHLOROBENZENE | D021 | | <input checked="" type="checkbox"/> METHYL ETHYL KETONE | D035 | < 250 |
| <input checked="" type="checkbox"/> CHLOROFORM | D022 | <25 | <input checked="" type="checkbox"/> NITROBENZENE | D036 | <1180 |
| <input checked="" type="checkbox"/> CHROMIUM | D007 | <9.43 | <input checked="" type="checkbox"/> PENTACHLOROPHENOL | D037 | < 23.60 |
| <input type="checkbox"/> O-CRESOL | D023 | | <input checked="" type="checkbox"/> PYRIDINE | D038 | < 2360 |
| <input type="checkbox"/> M-CRESOL | D024 | | <input checked="" type="checkbox"/> SELENIUM | D010 | < 4.71 |
| <input type="checkbox"/> P-CRESOL | D025 | | <input checked="" type="checkbox"/> SILVER | D011 | < 19.0 |
| <input checked="" type="checkbox"/> CRESOL | D026 | <2360 | <input checked="" type="checkbox"/> TETRACHLOROETHYLENE | D039 | < 25 |
| <input checked="" type="checkbox"/> 2,4-D | D016 | 1.28 | <input checked="" type="checkbox"/> TOXOPHENE | D015 | < 294 |
| <input type="checkbox"/> 1,4-DICHLOROBENZENE | D027 | <25 | <input checked="" type="checkbox"/> TRICHLOROETHYLENE | D040 | < 25 |
| <input type="checkbox"/> 1,2-DICHLOROETHANE | D028 | <25 | <input checked="" type="checkbox"/> 2,4,5-TRICHLOROPHENOL | D041 | < 2360 |
| <input type="checkbox"/> 1,1-DICHLOROETHYLENE | D029 | <25 | <input checked="" type="checkbox"/> 2,4,6-TRICHLOROPHENOL | D042 | < 2360 |
| <input checked="" type="checkbox"/> 2,4-DINITROTOLUENE | D030 | <1180 | <input checked="" type="checkbox"/> 2,45-TP (SILVEX) | D017 | 0.529 |
| <input checked="" type="checkbox"/> ENDRIN | D012 | <2.36 | <input checked="" type="checkbox"/> VINYL CHLORIDE | D043 | < 50 |
| <input checked="" type="checkbox"/> HEPTACHLOR (AND ITS HYDROXIDE) | D031 | <4.71 | | | |
| <input checked="" type="checkbox"/> HEXACHLOROBENZENE | D032 | <1180 | | | |

PART III

FOR DRMO USE ONLY

DRMO VERIFICATION

1. DATE VERIFIED _____

2. RESULTS ATTACHED

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

TOXICITY CHARACTERISTIC LIST

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|--|------------|--------|---|------------|--------|
| <input checked="" type="checkbox"/> ARSENIC | D004 | < 9.04 | <input checked="" type="checkbox"/> HEXACHLORO-1,3.-BUTADIENE | D033 | < 1130 |
| <input checked="" type="checkbox"/> BARIUM | D005 | < 182 | <input checked="" type="checkbox"/> HEXACHLOROETHANE | D034 | < 1130 |
| <input type="checkbox"/> BENZENE | D018 | | <input checked="" type="checkbox"/> LEAD | D008 | < 45.2 |
| <input checked="" type="checkbox"/> CADMIUM | D006 | < 4.52 | <input checked="" type="checkbox"/> LINDANE | D013 | < 2.26 |
| <input type="checkbox"/> CARBON TETRACHLORIDE | D019 | | <input type="checkbox"/> MERCURY | D009 | |
| <input type="checkbox"/> CHLORDANE | D020 | < 22.6 | <input type="checkbox"/> METHOXYCHLOR | D014 | |
| <input type="checkbox"/> CHLOROBENZENE | D021 | | <input type="checkbox"/> METHYL ETHYL KETONE | D035 | |
| <input type="checkbox"/> CHLOROFORM | D022 | | <input checked="" type="checkbox"/> NITROBENZENE | D036 | < 1130 |
| <input checked="" type="checkbox"/> CHROMIUM | D007 | < 9.04 | <input checked="" type="checkbox"/> PENTACHLOROPHENOL | D037 | < 2260 |
| <input type="checkbox"/> O-CRESOL | D023 | | <input checked="" type="checkbox"/> PYRIDINE | D038 | < 2260 |
| <input type="checkbox"/> M-CRESOL | D024 | | <input checked="" type="checkbox"/> SELENIUM | D010 | < 4.52 |
| <input type="checkbox"/> P-CRESOL | D025 | | <input checked="" type="checkbox"/> SILVER | D011 | < 18.3 |
| <input checked="" type="checkbox"/> CRESOL | D026 | < 2260 | <input type="checkbox"/> TETRACHLOROETHYLENE | D039 | |
| <input checked="" type="checkbox"/> 2,4-D | D016 | < 2260 | <input checked="" type="checkbox"/> TOXOPHENE | D015 | < 113 |
| <input type="checkbox"/> 1,4-DICHLOROENZENE | D027 | | <input type="checkbox"/> TRICHLOROETHYLENE | D040 | |
| <input type="checkbox"/> 1,2-DICHLOROETHANE | D028 | | <input checked="" type="checkbox"/> 2,4,5-TRICHLOROPHENOL | D041 | < 2260 |
| <input type="checkbox"/> 1,1-DICHLOROETHYLENE | D029 | | <input checked="" type="checkbox"/> 2,4,6-TRICHLOROPHENOL | D042 | < 2260 |
| <input checked="" type="checkbox"/> 2,4-DINITROTOLUENE | D030 | < 1130 | <input checked="" type="checkbox"/> 2,45-TP (SILVEX) | D017 | < 4.52 |
| <input checked="" type="checkbox"/> ENDRIN | D012 | < 2.27 | <input checked="" type="checkbox"/> VINYL CHLORIDE | D043 | < 1 |
| <input checked="" type="checkbox"/> HEPTACHLOR (AND ITS HYDROXIDE) | D031 | < 2.27 | | | |
| <input checked="" type="checkbox"/> HEXACHLOROENZENE | D032 | < 1130 | | | |

PART III

**FOR DRMO USE ONLY
DRMO VERIFICATION**

1. DATE VERIFIED _____

2. RESULTS ATTACHED

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

HAZARDOUS WASTE PROFILE SHEET

PART I

A. GENERAL INFORMATION

WASTE PROFILE NO. _____

METHOD #5 - Southside

1. GENERATOR NAME

Naval Air Station Memphis

2. FACILITY ADDRESS

Public Works Environmental Division

Building South 236

Millington TN

5. ZIP CODE
38054

3. GENERATOR USEPA ID

TN 2170022600

4. GENERATOR STATE ID
6. TECHNICAL CONTACT

Mr. James Heide

7. TITLE

General Engineer

PHONE

(901) 873-5461

B. 1. NAME OF WASTE

Drummed Spent Material

2. USEPA/or/STATE WASTE CODE(S) D018 D019 D008

3. PROCESS GENERATING WASTE Collected as a result of previous operations at Facility

4. PROJECTED ANNUAL VOLUME/UNITS 5 / gal. **5. MODE OF COLLECTION** Drum

6. IS THIS WASTE A DIOXIN LISTED WASTE AS DEFINED IN 40 CFR 261.31 (e.g., F020, F021, F022, F023, F026, F027, OR F028)? YES NO

7. IS THIS WASTE RESTRICTED FROM LAND DISPOSAL (40 CFR 268)? YES NO

 HAS AN EXEMPTION BEEN GRANTED? YES NO

 DOES THE WASTE MEET APPLICABLE TREATMENT STANDARDS? YES NO REFERENCE STANDARDS _____

PART II

1. MATERIAL CHARACTERIZATION (OPTIONAL-NOT REQUIRED DATA)

COLOR _____

DENSITY _____ BTU/LB _____

TOTAL SOLIDS _____ ASH CONTENT _____

 LAYERING: MULTILAYERED BILAYERED SINGLE PHASE

2. RCRA CHARACTERISTICS

 PHYSICAL STATE: SOLID LIQUID SEMI-SOLID
 GAS OTHER

 TREATMENT GROUP: WASTEWATER NON-WASTEWATER

 IGNITABLE (D001) REACTIVE (D003)
 FLASH POINT (F) _____
 HIGH TOC (> 10%) WATER REACTIVE
 LOW TOC (< 10%) CYANIDE REACTIVE
 SULFIDE REACTIVE

 CORROSIVE (D002) TOXICITY CHARACTERISTIC (SEE REVERSE FOR LISTING)
 pH _____
 CORRODES STEEL

3. CHEMICAL COMPOSITION (ppm or mg/L)

COPPER _____ PHENOLICS _____

NICKEL _____ TOTAL HALOGENS _____

ZINC _____ VOLATILE ORGANICS _____

CHROMIUM-HEX _____ PCBs _____

(OTHER) _____

NOTE: EXPLOSIVES, SHOCK SENSITIVE, PYROPHORIC, RADIOACTIVE, AND ETIOLOGICAL WASTE NORMALLY ARE NOT ACCEPTED BY THE DRMO.

4. MATERIAL COMPOSITION

| COMPONENT | CONCENTRATION | RANGE |
|------------------|---------------|--------|
| Yellow Paint | | 90-95% |
| Waxy White Solid | | 5-10% |
| | | |
| | | |
| | | |
| | | |
| TOTAL | 100% | |

5. SHIPPING INFORMATION

 DOT HAZARDOUS MATERIAL? YES NO

 PROPER SHIPPING NAME
 Hazardous Waste, liquid, N.O.S.

HAZARD CLASS ORM - E U.N. or N.A. NO. NA9189

ADDITIONAL DESCRIPTION _____

 METHOD OF SHIPMENT BULK DRUM OTHER: _____

CERCLA REPORTABLE QUANTITY (RQ) 1 lb (lead)

EMERGENCY RESPONSE GUIDE PAGE _____

DOT PUBLICATION 5800.4 PAGE NO. _____ EDITION (YR) _____

SPECIAL HANDLING INFORMATION _____

6. GENERATOR CERTIFICATION
BASIS FOR INFORMATION
 CHEMICAL ANALYSIS (ATTACH TEST RESULTS)

 USER KNOWLEDGE (ATTACH SUPPORTING DOCUMENTS - Explain how and why these documents comply with RCRA requirements) _____

I, _____, HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL

(Print or Type Name)

ATTACHED DOCUMENTS IS TO THE BEST OF MY KNOWLEDGE AN ACCURATE REPRESENTATION OF THE WASTE TURNED IN TO THE DRMO. ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED.

SIGNATURE OF GENERATOR'S REPRESENTATIVE

DATE

TOXICITY CHARACTERISTIC LIST

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|--|------------|--------|--|------------|--------|
| <input type="checkbox"/> ARSENIC | D004 | _____ | <input type="checkbox"/> HEXACHLORO-1,3,-BUTADIENE | D033 | _____ |
| <input type="checkbox"/> BARIUM | D005 | _____ | <input type="checkbox"/> HEXACHLOROETHANE | D034 | _____ |
| <input checked="" type="checkbox"/> BENZENE | D018 | 0.806 | <input checked="" type="checkbox"/> LEAD | D008 | 9.37 |
| <input type="checkbox"/> CADMIUM | D006 | _____ | <input type="checkbox"/> LINDANE | D013 | _____ |
| <input checked="" type="checkbox"/> CARBON TETRACHLORIDE | D019 | 0.833 | <input type="checkbox"/> MERCURY | D009 | _____ |
| <input type="checkbox"/> CHLORDANE | D020 | _____ | <input type="checkbox"/> METHOXYCHLOR | D014 | _____ |
| <input type="checkbox"/> CHLOROBENZENE | D021 | _____ | <input type="checkbox"/> METHYL ETHYL KETONE | D035 | _____ |
| <input type="checkbox"/> CHLOROFORM | D022 | _____ | <input type="checkbox"/> NITROBENZENE | D036 | _____ |
| <input type="checkbox"/> CHROMIUM | D007 | _____ | <input type="checkbox"/> PENTACHLOROPHENOL | D037 | _____ |
| <input type="checkbox"/> O-CRESOL | D023 | _____ | <input type="checkbox"/> PYRIDINE | D038 | _____ |
| <input type="checkbox"/> M-CRESOL | D024 | _____ | <input type="checkbox"/> SELENIUM | D010 | _____ |
| <input type="checkbox"/> P-CRESOL | D025 | _____ | <input type="checkbox"/> SILVER | D011 | _____ |
| <input type="checkbox"/> CRESOL | D026 | _____ | <input type="checkbox"/> TETRACHLOROETHYLENE | D039 | _____ |
| <input type="checkbox"/> 2,4-D | D016 | _____ | <input type="checkbox"/> TOXOPHENE | D015 | _____ |
| <input type="checkbox"/> 1,4-DICHLOROENZENE | D027 | _____ | <input type="checkbox"/> TRICHLOROETHYLENE | D040 | _____ |
| <input type="checkbox"/> 1,2-DICHLOROETHANE | D028 | _____ | <input type="checkbox"/> 2,4,5-TRICHLOROPHENOL | D041 | _____ |
| <input type="checkbox"/> 1,1-DICHLOROETHYLENE | D029 | _____ | <input type="checkbox"/> 2,4,6-TRICHLOROPHENOL | D042 | _____ |
| <input type="checkbox"/> 2,4-DINITROTOLUENE | D030 | _____ | <input type="checkbox"/> 2,45-TP (SILVEX) | D017 | _____ |
| <input type="checkbox"/> ENDRIN | D012 | _____ | <input type="checkbox"/> VINYL CHLORIDE | D043 | _____ |
| <input type="checkbox"/> HEPTACHLOR (AND ITS HYDROXIDE) | D031 | _____ | | | |
| <input type="checkbox"/> HEXACHLOROENZENE | D032 | _____ | | | |

PART III

FOR DRMO USE ONLY

DRMO VERIFICATION

1. DATE VERIFIED _____

2. RESULTS ATTACHED

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

TOXICITY CHARACTERISTIC LIST

EFFECTIVE 25 SEP 90 - LARGE QUANTITY GENERATORS
29 MAR 91 - SMALL QUANTITY GENERATORS

| CONTAMINANT | EPA HW No. | (mg/L) | CONTAMINANT | EPA HW No. | (mg/L) |
|---|------------|--------|--|------------|--------|
| <input type="checkbox"/> ARSENIC | D004 | _____ | <input type="checkbox"/> HEXACHLORO-1,3,-BUTADIENE | D033 | _____ |
| <input type="checkbox"/> BARIUM | D005 | _____ | <input type="checkbox"/> HEXACHLOROETHANE | D034 | _____ |
| <input type="checkbox"/> BENZENE | D018 | _____ | <input type="checkbox"/> LEAD | D008 | _____ |
| <input type="checkbox"/> CADMIUM | D006 | _____ | <input type="checkbox"/> LINDANE | D013 | _____ |
| <input type="checkbox"/> CARBON TETRACHLORIDE | D019 | _____ | <input type="checkbox"/> MERCURY | D009 | _____ |
| <input type="checkbox"/> CHLORDANE | D020 | _____ | <input type="checkbox"/> METHOXYCHLOR | D014 | _____ |
| <input type="checkbox"/> CHLOROBENZENE | D021 | _____ | <input type="checkbox"/> METHYL ETHYL KETONE | D035 | _____ |
| <input type="checkbox"/> CHLOROFORM | D022 | _____ | <input checked="" type="checkbox"/> NITROBENZENE | D036 | 2.59 |
| <input type="checkbox"/> CHROMIUM | D007 | _____ | <input type="checkbox"/> PENTACHLOROPHENOL | D037 | _____ |
| <input type="checkbox"/> O-CRESOL | D023 | _____ | <input type="checkbox"/> PYRIDINE | D038 | _____ |
| <input type="checkbox"/> M-CRESOL | D024 | _____ | <input type="checkbox"/> SELENIUM | D010 | _____ |
| <input type="checkbox"/> P-CRESOL | D025 | _____ | <input type="checkbox"/> SILVER | D011 | _____ |
| <input type="checkbox"/> CRESOL | D026 | _____ | <input type="checkbox"/> TETRACHLOROETHYLENE | D039 | _____ |
| <input type="checkbox"/> 2,4-D | D016 | _____ | <input type="checkbox"/> TOXOPHENE | D015 | _____ |
| <input type="checkbox"/> 1,4-DICHLOROBENZENE | D027 | _____ | <input type="checkbox"/> TRICHLOROETHYLENE | D040 | _____ |
| <input type="checkbox"/> 1,2-DICHLOROETHANE | D028 | _____ | <input type="checkbox"/> 2,4,5-TRICHLOROPHENOL | D041 | _____ |
| <input type="checkbox"/> 1,1-DICHLOROETHYLENE | D029 | _____ | <input type="checkbox"/> 2,4,6-TRICHLOROPHENOL | D042 | _____ |
| <input type="checkbox"/> 2,4-DINITROTOLUENE | D030 | _____ | <input type="checkbox"/> 2,45-TP (SILVEX) | D017 | _____ |
| <input type="checkbox"/> ENDRIN | D012 | _____ | <input type="checkbox"/> VINYL CHLORIDE | D043 | _____ |
| <input type="checkbox"/> HEPTACHLOR (AND ITS HYDROXIDE) | D031 | _____ | | | |
| <input type="checkbox"/> HEXACHLOROBENZENE | D032 | _____ | | | |

PART III

**FOR DRMO USE ONLY
DRMO VERIFICATION**

1. DATE VERIFIED _____

2. RESULTS ATTACHED

pH _____ FLASH POINT _____ SPECIFIC GRAVITY _____ HALIDES (TOX) _____

REACTIVITY: WATER REACTIVITY _____ CYANIDES _____ SULFIDES _____

TCLP _____

ATTACHMENT G
TDEC SPECIAL WASTE PERMIT APPLICATIONS



SPECIAL WASTE APPROVAL FEE
DIVISION OF SOLID WASTE MANAGEMENT
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

| | | | | |
|--|---|--------|-----------|----------|
| <p>(1) Generator's Name and Address: Naval Air Station Memphis Public Works Environmental Division Building South 236 Millington, TN 38054</p> | <p>(2) Applicant's I.D. #: TN 2170022600</p> <p>(3) Date of Application: 3/25/93</p> <p>(4) Phone #: (901) 873-5461</p> <p>(5) Waste Stream #</p> <p>(6) Fee Paid \$ 250.00</p> | | | |
| <p>(7) Waste Type or Name: Hardened paint-like material</p> | <p>(8) Is This Application <input checked="" type="checkbox"/> New or a <input type="checkbox"/> Renewal</p> | | | |
| <p>(9) Name, Address and I.D. Number of Disposal Facility: BFI North Shelby County Landfill 7111 Old Millington Rd. Millington, TN 38053 SNL 791060224</p> | <p>(10) Amount to be Disposed <u>5 lbs (one-time)</u> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Annually <input type="checkbox"/></p> | | | |
| <p>(11) If This Waste Previously Approved, Have Any of the Items Below Changed?</p> <p>a. Generation Rate <input type="checkbox"/> Yes <input type="checkbox"/> No New Rate _____</p> <p>b. Generation Process <input type="checkbox"/> Yes <input type="checkbox"/> No New Process _____</p> <p>c. Physical or Chemical Characteristic <input type="checkbox"/> Yes <input type="checkbox"/> No New _____</p> <p>d. Disposal Site <input type="checkbox"/> Yes <input type="checkbox"/> No New Site I.D.# _____</p> <p>e. Transporter <input type="checkbox"/> Yes <input type="checkbox"/> No New Transporter _____</p> <p>(If additional space is needed for answer, place the item number and answer in box (12) below.)</p> | | | | |
| <p>(12)</p> | | | | |
| <p>Field Office Use Only Below This Line.</p> | | | | |
| <p>(13) Approved By:</p> | <p>(14) Date of Approval:</p> | | | |
| <p>(15) Field Office Comment:</p> | | | | |
| <p>Central Office Use Only Below Line.</p> | | | | |
| CD Number | Date Rec'd | Amount | Receipt # | Comments |
| | | | | |

SPECIAL WASTE DATA COLLECTION FORM

I. Generator Information

Facility Name and Location

01 Name: **Naval Air Station**

I.D.#: **TN2170022600** 02City: **Millington**

03 Street: **Public Works Environmental Division
Building South 236**

04 County: **Shelby**

05 Number of Employees:

05 Zip Code: **38054**

Responsible Official

06 Name: **Mr. Jim Heide**

07 Title: **General Engineer**

08 Telephone: **(901) 578-5461**

Mailing Address (If different from Location)

09 Street:

10 City:

11 State:

12 Zip Code:

Generation Source (If more space is needed, please use back)

13 Narrative and Flow Diagram of the Manufacturing of Treatment Process which creates the waste:

5-gallon bucket, approximately half full of hardened paint-like material, collected as a result of previous operations at facility

14 Nature of Business: **Naval facility**

Generation Rate

15 Quantity (lbs, CY): **5 lbs**

16 Frequency (per day, week): **one-time**

17 Date generation started:

II. Waste Characteristics

Chemical Constituents or Compounds (% of dry weight)

01 **hardened paint-100%** 02 03

04 05 06

Chemical Analysis (mg/kg/dry weight) or (mg/1 Extract)

07 08 09

10 11 12

13 14 15

16 pH (units): **7.31**

Physical Characteristics

16 Percentage Moisture:

17 State (*solid, liquid or sludge*): **Solid**

18 Color: **Brown & White**

19 Density:

*Hazardous Characteristics (If applicable) Rule 1200-1-11-.02(3)

20 Ignitable: 21 Corrosive:

22 Flammable: 23 EP Toxic:

24 Reactive: 25 Subject to F solvent Restrictions (*yes or no*):

III. Proposed Disposal Site

01 Site Name: **BFI N. Shelby Co. Landfill** 02 County: **Shelby**

03 Operator's Name: **Browning-Ferris Industries**

04 Describe Delivery Schedule and Handling Procedures:

IV. Proposed Transporter

01 Name:

02 Address:

03 Telephone:

V. Facility Geographic Location

Clearly delineate all existing structures, storage, treatment and disposal areas. Include scale drawing of facility floor plan with respect to bordering streets.

Located at the Southside of the Naval Air Station Memphis

VI. Disposal

Describe how waste is presently being disposed of. **Waste is presently stored at facility and awaiting acceptance into the BFI North Shelby County Landfill.**

VII. Signature

This form will not be processed without the preparer's signature.

A. Signature: _____

Printed Name: _____

B. Date Signed: _____

*Rule 1200-1-11-.03(1)(b) - A person who generates a waste must determine if that waste is a hazardous waste.

RETURN THIS FORM TO:

Tennessee Department of Environment and Conservation
Division of Solid Waste Management
2500 Mount Moriah Road, Suite E-645
Memphis, TN 38115-1511



WCD No. AA 65814

BROWNING-FERRIS INDUSTRIES

BFI WASTE CODE

WASTE EVALUATION REQUEST

BFI to complete this area.

BFI Initiator
Location
Company Number
Date
Telephone Number
Action Requested:
New Waste Approval
Up-Date Approval
Priority
Other

Previous Laboratory Number
Management Method Requested:
Landfill
Hauling
Other
Disposal Site Requested
Company Number
P.O. Number
Analyses Requested:
TCLP
RCI
Other
Analyses To Follow:
TCLP
Other

WASTE CHARACTERIZATION DATA

Special Waste

IMPORTANT: THIS FORM IS TO BE COMPLETED BY A REPRESENTATIVE OF THE WASTE GENERATOR. PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM. THIS FORM IS TO BE USED ONLY ONE TIME, AND MUST BE TYPEWRITTEN OR LEGIBLY PRINTED IN INK, AND SIGNED.

1. GENERATOR INFORMATION

a) Generator's Name: Naval Air Station Memphis
b) Generating Facility Address: Public Works Env Div, Bldg S-236
City: Millington State: TN Zip: 38054
c) Company Representative: Mr. James Heide
Title: General Engineer
d) Emergency Contact: Ms. Tonya Barker
Title: Environmental Engineer, Division Supervisor
e) Local Registration No.
Generator's EPA Id. No. TN2170022600
f) Telephone No. (901) 873-5461
After Hours No.
Emergency No.

2. GENERAL WASTE STREAM INFORMATION

a) Description of The Waste: Soil contaminated with lube oil
b) Process Generating Waste: Clean-up of facility
c) Is this a treatment residue of a waste which was previously a restricted characteristically hazardous waste?
d) Is this a "Hazardous Waste" as defined by State or local Regulations?
e) Is this a "Special Waste", an "Industrial Process Waste", or a "Pollution Control Waste" as defined by State or local Regulations?
f) Recommended personal protection equipment and special handling procedures: Not applicable
g) Anticipated Volume:
Per:
To be transported in:
h) Is a representative sample included?

3. WASTE PROPERTIES @ 72°F

a) Physical State:
Solid
Semi-solid
Powder
Liquid
Combination
b) Odor:
Describe
None
Mild
Strong
c) Flash Point, °F:
≤72
73-100
101-140
141-200
≥201
N/A
N/D
d) Layers:
Single Phase
Bi-layered
Multi-layered
e) Density Range:
N/D
lbs./gal.
g./cc.
lbs./yd.³
Other
f) Color(s):
Describe brown soil color
g) pH:
≤2.0
2.1-5.0
5.1-9.0
9.1-12.4
≥12.5
N/A
N/D

4. REACTIVITY

Note if the waste exhibits any of the following reactive properties:
Water Reactive
Alkaline Reactive
Pyrophoric
Thermally Sensitive
Acid Reactive
Autopolymerizable
Explosive
Shock Sensitive
None of the above



SPECIAL WASTE APPROVAL FEE
DIVISION OF SOLID WASTE MANAGEMENT
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

| | | | | |
|--|---|--------|-----------|----------|
| (1) Generator's Name and Address: Naval Air Station Memphis Public Works Environmental Division Building South 236 Millington, TN 38054 | (2) Applicant's I.D. #: TN 2170022600 | | | |
| | (3) Date of Application: 3/25/93 | | | |
| | (4) Phone #: (901) 873-5461 | | | |
| | (5) Waste Stream # | | | |
| | (6) Fee Paid \$ 250.00 | | | |
| (7) Waste Type or Name: Soil/Lube Oil | (8) Is This Application <input checked="" type="checkbox"/> New or a <input type="checkbox"/> Renewal | | | |
| (9) Name, Address and I.D. Number of Disposal Facility: BFI North Shelby County Landfill 7111 Old Millington Rd. Millington, TN 38053 SNL791060224 | (10) Amount to be Disposed: 1 cy (one-time) Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Annually <input type="checkbox"/> | | | |
| (11) If This Waste Previously Approved, Have Any of the Items Below Changed? a. Generation Rate <input type="checkbox"/> Yes <input type="checkbox"/> No New Rate _____ b. Generation Process <input type="checkbox"/> Yes <input type="checkbox"/> No New Process _____ c. Physical or Chemical Characteristic <input type="checkbox"/> Yes <input type="checkbox"/> No New _____ d. Disposal Site <input type="checkbox"/> Yes <input type="checkbox"/> No New Site I.D. # _____ e. Transporter <input type="checkbox"/> Yes <input type="checkbox"/> No New Transporter _____ (If additional space is needed for answer, place the item number and answer in box (12) below.) | | | | |
| (12) | | | | |
| Field Office Use Only Below This Line. | | | | |
| (13) Approved By: | (14) Date of Approval: | | | |
| (15) Field Office Comment: | | | | |
| Central Office Use Only Below Line. | | | | |
| CD Number | Date Rec'd | Amount | Receipt # | Comments |
| | | | | |

IV. Proposed Transporter

- 01 Name:
- 02 Address:
- 03 Telephone:

V. Facility Geographic Location

Clearly delineate all existing structures, storage, treatment and disposal areas. Include scale drawing of facility floor plan with respect to bordering streets.

Drums are located at the Southside of the Naval Air Station Memphis

VI. Disposal

Describe how waste is presently being disposed of. **Soil is presently stored in drums at the site and awaiting acceptance into the BFI North Shelby County Landfill.**

VII. Signature

This form will not be processed without the preparer's signature.

A. Signature: _____

Printed Name: _____

B. Date Signed: _____

**Rule 1200-1-11-.03(1)(b) - A person who generates a waste must determine if that waste is a hazardous waste.*

RETURN THIS FORM TO:

Tennessee Department of Environment and Conservation
Division of Solid Waste Management
2500 Mount Moriah Road, Suite E-645
Memphis, TN 38115-1511

WASTE EVALUATION REQUEST

BFI to complete this area.

BFI Initiator _____
 Location _____
 Company Number _____ Date _____
 Telephone Number () _____
 Action Requested: New Waste Approval
 Up-Date Approval Priority
 Other _____

Previous Laboratory Number _____
 Management Method Requested: Landfill Hauling
 Other _____
 Disposal Site Requested _____
 Company Number _____ P.O. Number _____
 Analyses Requested: TCLP RCI
 Other _____
 Analyses To Follow: TCLP Other _____

WASTE CHARACTERIZATION DATA

Special Waste

IMPORTANT: THIS FORM IS TO BE COMPLETED BY A REPRESENTATIVE OF THE WASTE GENERATOR. PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM. THIS FORM IS TO BE USED ONLY ONE TIME, AND MUST BE TYPEWRITTEN OR LEGIBLY PRINTED IN INK, AND SIGNED.

1. GENERATOR INFORMATION

a) Generator's Name: Naval Air Station Memphis e) Local Registration No. _____
 b) Generating Facility Address: Public Works Env Div-Bldg S-236 Generator's EPA Id. No. TN 2170022600
 City: Millington State: TN Zip: 38054
 c) Company Representative: Mr. James Heide f) Telephone No. (901) 873-5461
 Title: General Engineer After Hours No. () _____
 d) Emergency Contact: Ms. Tonya Barker Emergency No. () _____
 Title Environmental Engineer, Division Supervisor

2. GENERAL WASTE STREAM INFORMATION

a) Description of The Waste: 5-gallon bucket, approximately 1/2 full of hardened paint-like material
 b) Process Generating Waste: Clean-up of facility
 c) Is this a treatment residue of a waste which was previously a restricted characteristically hazardous waste? Yes No
 d) Is this a "Hazardous Waste" as defined by State or local Regulations? Yes No
 If yes, enter the Waste Identification Number if one has been assigned: _____
 e) Is this a "Special Waste", an "Industrial Process Waste", or a "Pollution Control Waste" as defined by State or local Regulations?
 Yes No If yes, enter Waste Identification Number: _____
 f) Recommended personal protection equipment and special handling procedures: Not applicable
 g) Anticipated Volume: 2 Gallons Tons Cubic Yards Other _____
 Per: Day Week Month Year One Time, or Other _____
 To be transported in: Bulk Drums (type/size) _____ Other 5-gallon bucket
 h) Is a representative sample included? Yes No - If yes, complete the RSC found on the reverse side.

3. WASTE PROPERTIES @ 72°F

a) Physical State:
 Solid Semi-solid
 Powder Liquid
 Combination _____
 b) Odor:
 Describe _____
 None Mild Strong
 c) Flash Point, °F:
 ≤ 72 73-100 101-140
 141-200 ≥ 201 N/A N/D
 d) Layers:
 Single Phase Bi-layered Multi-layered
 e) Density Range: _____ to _____
 N/D lbs./gal. g./cc.
 lbs./yd.³ Other _____
 f) Color(s):
 Describe brown & white solid
 g) pH:
 ≤ 2.0 2.1-5.0 5.1-9.0
 9.1-12.4 ≥ 12.5 N/A N/D

4. REACTIVITY

Note if the waste exhibits any of the following reactive properties: Water Reactive Alkaline Reactive Pyrophoric Thermally Sensitive
 Acid Reactive Autopolymerizable Explosive Shock Sensitive None of the above

5. THIS WASTE CONTAINS

Note if the waste contains any of the following:

| | | | |
|---------------------------------------|---|---|--|
| <input type="checkbox"/> Free Liquids | <input type="checkbox"/> Dioxins | <input type="checkbox"/> Etiological Agents | <input type="checkbox"/> Radioactive Materials |
| <input type="checkbox"/> Free Cyanide | <input type="checkbox"/> Organic Solvents | <input type="checkbox"/> Pathogens | <input type="checkbox"/> PCBs not regulated by TSCA 40 CFR 761 |
| <input type="checkbox"/> Free Sulfide | <input type="checkbox"/> Used Oils | <input type="checkbox"/> OSHA Substances | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> Free Ammonia | <input type="checkbox"/> Virgin Oils | <input type="checkbox"/> Biological Materials | |

If any of the above are checked "Yes", specify type (if applicable) and include its concentration as part of the waste composition, Section 6.

6. COMPLETE WASTE COMPOSITION

Concentration ranges are suggested, but total must equal 100%. Units must be identified and are to be in parts per million (ppm) and/or percentages (%). Attach additional pages if necessary.

| Components | Range Min. / Max. | Components | Range Min. / Max. |
|-------------|----------------------|------------|----------------------|
| Dried paint | 100% | | |
| | | | |
| | | | |
| | | | |

7. TRANSPORTATION INFORMATION

If the waste is a DOT Hazardous Material, complete the following:
 Proper USDOT Shipping Name: _____
 USDOT Hazard Class: _____ UN or NA Number: _____ CERCLA Reportable Quantity: _____

8. SUPPLEMENTAL INFORMATION

None
 MSD Sheets
 Analytical Data
 Memo/Letter
 Waste Composition
 Other - describe _____ No. of Pages _____

9. GENERATOR'S CERTIFICATION

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omissions of composition or properties exists, that all known or suspected hazards have been disclosed, and that the waste is not designated a Hazardous Waste by the USEPA or contains PCBs regulated by TSCA 40 CFR 761.

GENERATOR'S AUTHORIZED SIGNATORY:

| | | | | |
|------|------------|-----------|-------|----------|
| DATE | PRINT NAME | SIGNATURE | TITLE | INITIALS |
|------|------------|-----------|-------|----------|

REPRESENTATIVE SAMPLE CERTIFICATE

This Section is to be completed by the person obtaining the sample of the above described waste, preferably a representative of the generator. **DO NOT COLLECT OR SUBMIT SAMPLES THAT ARE RADIOACTIVE, SHOCK SENSITIVE, EXPLOSIVE, OR PYROPHORIC.**

I certify that the sample identified below that is being forwarded to BFI for evaluation is representative of the waste described above. I also understand that, should the waste material described herein not be acceptable for management by BFI Waste Systems, the sample(s) may be returned to the generator.

| | |
|--|---|
| Collector's Name: <u>Karla L. Jenkins</u> | (Peel Off Label) |
| Signature: <u><i>Karla L. Jenkins</i></u> | Generator's Name: <u>Naval Air Station Memphis</u> |
| Company: <u>Memphis Environmental Center, Inc.</u> | Waste Description: <u>Dried paint-like material</u> |
| Title: <u>Environmental Engineer</u> | Date Collected: _____ WCD No. AA: <u>61135</u> |
| Telephone Number: (901) <u>345-1788</u> | Date at BFI Lab: _____ BFI Lab No. _____ |