N00639 AR 000325
MILLINGTON SUPPACT
5090.3a

1D-00607

DRAFT CONFIRMATORY SAMPLING INVESTIGATION REPORT NAVAL SUPPORT ACTIVITY MEMPHIS

ASSEMBLY D

CTO-094
CONTRACT NUMBER: N62467-89-D-0318

Volume II

Attachments 1-4

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June 1996

Attachment 1
Discussion of Dieldrin Risk Issues Memorandum

DISCUSSION OF DIELDRIN RISK MANAGEMENT ISSUES

Chlorinated pesticides (specifically dieldrin) were used extensively in the 1950s and 1960s during a white fringed beetle quarantine. NAS Memphis has record that the agents were applied aerially for their intended purpose over the majority of the base. During the RCRA Facility Investigation, dieldrin and other chlorinated pesticides were detected in most surface soil and some vadose soil samples collected at specific SWMUs and background locations. Due to the ubiquitous presence of dieldrin in site soils, the following assessment was performed to support risk management decisions to be made by the BCT.

Figure 1 shows reported surface (0-1 ft.) soil dieldrin concentrations across the northern portion of the base. As shown in the figure, levels at SWMUs ranged from below quantitation limits to 609 μg/kg (average of duplicate results at SWMU 5, boring 4). At background locations, concentrations ranged from below quantitation limits to 311 μg/kg with a mean of 131 μg/kg.
In order to provide an evaluation of the significance of the reported levels, standard risk assessment methods were employed. Default assumptions for residential and occupational exposure scenarios were used to project dieldrin-related carcinogenic risk through incidental ingestion and dermal contact soil pathways. For each exposure scenario, risk was computed using the maximum and mean SWMU-specific dieldrin concentrations. The results of this process are provided in the attached table.

As shown in the table, SWMU 5 had the highest projected soil pathway risk associated with dieldrin at maximum concentrations (2.2E-5). The SWMU 5 risk estimate was approximately twice that of the corresponding background. When mean concentrations were used as the exposure point concentration, SWMU 8 dieldrin risk was found to be the highest although it did not differ appreciably from background. In no instance (onsite or background) did dieldrin risk projections exceed 1E-4. This finding indicates that dieldrin levels found at each SWMU do not necessitate remedial action in the absence of other significant carcinogenic risk contributors. USEPA's generally acceptable range for carcinogenic risk is 1E-4 to 1E-6.

Soil dieldrin is not expected to pose a substantial threat to shallow groundwater at any SWMU or background location. This conclusion is based on the strong soil binding properties of the compound as well as empirical data for vadose soils which show no significant vertical migration has occurred.

A historical use discussion is also helpful to provide a frame of reference for evaluating reported soil dieldrin (and other chlorinated pesticide) concentrations. Information provided by NAS Memphis states that chlorinated pesticides (primarily chlordane) were previously used until the late 1980's for termite control around buildings. Although chlordane was used as a single active ingredient application, mixtures including dieldrin, aldrin and heptachlor

were also common in the pest control trade. Standard application rates resulted in soil concentrations of 500 to 1,000 mg/kg total chlorinated pesticides (or 500,000 μg/kg to 1,000,000 μg/kg). For comparison, a 10:1 chlordane:dieldrin mixture used for general subterranean termite control would have resulted in residual soil dieldrin concentration of 50 to 100 mg/kg. These residual application levels are 50 to 100 times higher than the maximum soil dieldrin concentration reported in the RFI.

It should be mentioned that Aroclor-1260 (a polychlorinated biphenyl or PCB) was detected in four soil samples collected at SWMU 5 and one sample from SWMU 7. In each instance, dieldrin was also detected although no strong concentration correlation was observed. Concentrations at SWMU 5 ranged from non-detect to 223 μg/kg. The single hit reported at SWMU 7 was 20,000 μg/kg in the boring 7 surface soil sample. Boring 7 at SWMU 7 is actually closer to Building N-16. As a result, the RFI workplan for N-16 should include provisions for further delineating the soil PCB contamination.

This memo was intended to provide a risk-based framework for decision making regarding how the dieldrin issue is resolved. Although standard risk assessment techniques were applied, final resolution of this issue will require a consensus risk management decision. Of paramount importance is the determination of what level of risk is acceptable in light of the extent of the dieldrin. EnSafe/Allen & Hoshall as the contractor can only provide the facts and suggestions for a viable risk management strategy. The following paragraph outlines suggestions based on currently available information and the preceding risk evaluation.

Due to the ubiquitous presence and documented proper historical use, institutional controls are considered the most appropriate means of dealing with the dieldrin issue from a human health perspective. These controls may include (but are not limited to) public/worker awareness, access restrictions and maintenance of adequate vegetative cover to minimize contact. The focus of future investigative efforts should center around prevention of further migration (i.e. surface runoff) and evaluation of sensitive ecological receptor points (i.e. terrestrial habitats, drainage systems, streams, lakes and pond). These areas should be emphasized as little control can be exercised over the animals who use them.

NAS-Memphis Dieldrin Risk Projections

Location	Maximum Dieldrin (mg/kg)	Mean Dieldrin (mg/kg)	Residential @ Max	Residential @Mean	Industrial @ Max	Industrial @Mean
SWMU 1	0.192	NA	7.04E-06	NA	1.12E-06	NA
SWMU 3	0.023	0.0072	8.43E-07	2.64E-07	1.34E-07	4.19E-08
SWMU 5	0.609	0.126	2.23E-05	4.62E-06	3.54E-06	7.33E-07
SWMU 7	0.055	0.0095	2.02E-06	3.48E-07	3.2E-07	5.52E-08
SWMU 8	0.471	0.144	1.73E-05	5.28E-06	2.74E-06	8.37E-07
SWMU 60	0.069	0.0155	2.53E-06	5.68E-07	4.01E-07	9.01E-08
Background	0.311	0.131	1.14E-05	4.8E-06	1.81E-06	7.62E-07

Oral Slope Factor (mg/kg-d)-1	16

Attachment 2
Assembly D Data Validation Report

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1.0 INTRODUCTION

This report presents the analytical data collected during the Resource Conservation Recovery Act (RCRA) Facility Investigation (RFI) of Naval Support Activity (NSA) Memphis Assembly D Solid Waste Management Units (SWMUs) 11, 42, 44, 50, 51, 52, 53, and 64 and the quality assurance/quality control (QA/QC) evaluation of those data. The data evaluation verifies that the QC requirements of the data set have been met and characterizes the weakness of any questionable data.

The Assembly D soil samples were collected at NSA Memphis between October and December 1995; submitted to National Environmental Testing, Inc., laboratory in Bedford, Massachusetts; and reported using U.S. Environmental Protection Agency (USEPA) Data Quality Objectives (DQO) Level III and Level IV equivalents. The analytical methods and DQO laboratory deliverables are summarized in Table 1-1.

Table 1-1
NSA Memphis Analytical Program

Analytical Method	Data Quality Level	Method Reference
	Full Scan	
Volatile Organic Compounds (VOCs)	IV	SW-846 8240
Semivolatile Organic Compounds (SVOCs)	IV	SW-846 8270
Pesticides/Polychlorinated Biphenyls (Pest/PCBs)	IV	SW-846 8080
Chlorinated Herbicides	IV	SW-846 8150
Organophosphorus Pesticides (OP Pest)	IV	SW-846 8140
Total Petroleum Hydrocarbons (TPH)	III	USEPA 418.1
Metals	IV	40 CFR Part 264 Appendix IX (SW-846 6010/7060/7421/7471/7740/7841)
Cyanide	III	SW-846 9010

Table 1-1
NSA Memphis Analytical Program

Analytical Method	Data Quality Level	Method Reference
Gasoline Range Organics (GRO)	III	Modified 8015/TN GRO, 8020
Diesel Range Organics (DRO)	III	Modified 8015/TN DRO

Notes:
CFR = Code of Federal Regulations

The references for the methods listed in Table 1-1 were obtained from the following sources:

- USEPA Office of Solid Waste and Emergency Response (OSWER), *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846), Third Edition, revised July 1992.

- USEPA Environmental Monitoring and Support Laboratory, *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020, revised March 1983).

- USEPA *Title 40 Code of Federal Regulations Part 264, Appendix IX* [*52 Federal Register 25947,* July 1987].

Data were validated using the following documents (as appropriate):

- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* February 1994 (EPA-540/R-94/012). OSWER.

- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,* February 1994, (EPA-540/R-94/013). OSWER.

The NSA Memphis data were validated by EnSafe/Allen and Hoshall's (E/A&H) subcontractor Heartland Environmental Services, Inc., of St. Charles, Missouri. Ninety-five percent of the data were validated at Level III while 5% were validated at Level IV. The data validation findings are summarized separately for each sample delivery group (SDG). Each SDG usually contains 20 samples of one matrix type, i.e., either solid (soil and/or sediment) or water (groundwater and/or surface water) samples, except for QC samples. Full validation narratives are included in Appendix A to this document while the data summary tables for each SWMU are included in Appendix B.

The following sections discuss the significant data validation findings for each Assembly D SWMU and their analytical parameters.

Data Validation Summary of the Investigative Samples:

Section 2	Pesticide/PCB and Metals Data	SWMU 11
Section 3	Organic, DRO, GRO, Dioxin, and Metals Data	SWMU 36
Section 4	Organic and Metals Data	SWMUs 42 and 53
Section 5	Organic, DRO, GRO, and Metals Data	SWMU 44
Section 6	Organic, DRO, GRO, and Metals Data	SWMUs 50, 51, and 52
Section 7	Organic and Metals Data	SWMU 64

1.1 Organic Evaluation Criteria

The USEPA methods described in the following define QC criteria that the laboratory must meet:

- *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*
- *Methods for Chemical Analysis of Water and Wastes*

These methods do not address data evaluation from a user's perspective. Evaluation criteria are available in *USEPA Contract Laboratory National Functional Guidelines for Organic Data Review* (Organic Functional Guidelines), February 1994, which was used throughout the data evaluation process when the analytical methods did not address data usability.

Data evaluation for samples collected at NSA Memphis included the following parameters:

- Holding times
- Gas chromatograph/mass spectrometry (GC/MS) instrument performance checks
- Surrogate spike recoveries
- Instrument calibration
- Matrix spike and matrix spike duplicates (MS/MSD)
- Blank analysis
- Internal standard performance
- Compound quantitation
- Field duplicate precision

According to Organic Functional Guidelines, when the QC parameters do not fall within the specific method guidelines, the data evaluator annotates or "flags" the corresponding compounds where deficiencies were found. NSA Memphis data were evaluated using this approach. The following flags were used to annotate data with laboratory and/or field deficiencies or problems:

U **Undetected** — The analyte was analyzed for but not detected or was also found in an associated blank, but at a concentration less than 10 times the blank concentration for common laboratory constituents (contaminants) or five times the blank concentration for other constituents; the associated value shown is the quantitation limit. The quantitation limit is the minimum level of detection acceptable under the contract Statement of Work.

J **Estimated Value** — One or more QC parameters were outside control limits or the concentration of the analyte was less than the Practical Quantitation Limit (PQL).

UJ **Undetected and Estimated** — The analyte was analyzed for but not detected above the listed estimated quantitation limit; the quantitation limit is estimated because at least one QC parameter was outside control limits.

D **Diluted Result** — The compound was reanalyzed at a secondary dilution factor. If at least one compound was outside the calibration range during an initial analysis, the laboratory flags the analyte "E." When diluted, the sample results will be flagged "D." Generally, values from the initial analysis will be used except where the value exceeded the calibration range. Values exceeding the calibration range in the initial analysis will be substituted by the diluted value to ensure the most representative data. The "D" flag will remain on the value to alert the data user that the secondary dilution value was used.

R/UR **Unusable Data** — At least one QC parameter grossly exceeded control limits.

These validation flags were applied to data where deficiencies were noted. Appendix B includes tables of all qualified data.

1.1.1 Holding Times

Acceptable technical holding times are specified in the analytical methods. The sample holding time depends on the type of analysis and whether the sample was preserved. For water samples, the holding time for preserved volatile organic compounds (VOC) and gasoline range organic (GRO) analysis is 14 days from the collection date. Semivolatile organic compound (SVOC), pesticide/polychlorinated biphenyl (PCB), organophosphorus (OP) pesticide, and chlorinated herbicide water samples must be extracted within seven days (14 days for diesel range organic [DRO]) and analyzed within 40 days after extraction. Holding times for soil matrices are not

specified in SW-846. Therefore, data reviewers can apply the water sample holding times criteria to soil at their discretion.

1.1.2 GC/MS Mass Calibration (Instrument Performance Checks)

Tuning and performance criteria are established to ensure that the data produced by the instrument may be correctly interpreted according to the requirements of the method being used. These criteria are not sample specific; conformance is determined using standard materials. Therefore, these criteria must be met in all circumstances. The performance standards for VOC (bromofluorobenzene [BFB]) and SVOC (decafluorotriphenylphosphine [DFTPP]) analyses are evaluated to determine if the data produced by the instrument may be correctly interpreted according to the method requirements. Performance standards must be analyzed within 12 hours of sample analysis, and the results must be within the established criteria.

1.1.3 Surrogate Spike Recoveries

Surrogate compounds are added to samples and laboratory blanks before extraction and sample preparation to evaluate the effect of the sample matrix on extraction and measurement procedures. Surrogates are organic compounds which are chemically similar to analytes of interest but not normally found in environmental samples. Three surrogate compounds are added to samples for VOC analysis, eight are added to samples for SVOC analysis, two are added to pesticide/PCB samples, and one is added to both OP pesticides and chlorinated herbicides. Percent recovery (%R) of the surrogates is calculated by comparing the amount of the compound recovered by the analysis to the amount added to the sample.

Below is a list of surrogate compounds recommended by the SW-846 methods.

VOC Surrogates

Toluene-d8 (TOL)

BFB

1,2-Dichloroethane (DCE)

Pesticide/PCB Surrogates

Tetrachloro-m-xylene (TCMX)

Decachlorobiphenyl (DCB)

SVOC Surrogates

Nitrobenzene-d5 (NBZ)

2-Fluorobiphenyl (FBP)

Terphenyl-d14 (TPH)

2,4,6-Tribromophenol (TBP)

Phenol-d5 (PHL)

2-Chlorophenol-d4 (2CP)

1,2-Dichlorobenzene-d4 (DCB)

Herbicide Surrogate

DCAA

Organophosphorus Pesticide Surrogate

4-Chloro-3-Nitrobenzotrifluoride (CNBT)

1.1.4 Instrument Calibration

Instruments are initially and continually calibrated with standard solutions to verify that they are capable of producing acceptable quantitative data for the compounds.

Initial calibration (GC/MS): The instrument is initially calibrated at the beginning of the analytical run to check its performance and to establish a linear five-point calibration curve. The initial calibration is verified by calculating the relative response factor (RRF) and the percent relative standard deviation (%RSD) for each compound. An RRF less than 0.05 or a %RSD greater than 30% is outside the QC limits for the initial calibration.

Continuing calibration (GC/MS): Standard solutions are run periodically to check the daily performance of the instrument and to establish the 12-hour RRF on which the sample quantitations are based. The continuing calibration is verified by calculating the RRF and the percent difference (%D) for each compound. An RRF less than 0.05 or a %D greater than 25% is outside the QC limits for the continuing calibration.

Initial calibration (GC): For single-component pesticides, two separate standard mixes are used, five-point calibrations are analyzed, and calibration factors (CF) are established. The CF for single-component pesticides must be less than or equal to 20%.

The multicomponent pesticide toxaphene and all PCBs (or Aroclors) are analyzed separately. Retention times and CFs are determined for three to five primary peaks. The only review criteria for multicomponent compounds is to verify these steps were taken.

A five-point initial calibration is analyzed for GRO, DRO, herbicides, and OP pesticides. Two methods for calibration may be used: response factor or linear regression methods. For the external method, the initial calibration may be verified by calculating the RRF and the %RSD for each compound. An RRF less than 0.05 or a %RSD greater than 20% is outside the QC limits for the initial calibration. If linear regression is used, the correlation coefficient must meet or exceed 0.995 before the samples can be analyzed.

Continuing calibration (GC): To confirm the calibration and evaluate instrument performance for single-component pesticides, calibration verification consisting of instrument blank, performance evaluation mixtures (PEM), and the midpoint concentration of the two standard mixes are analyzed. The %D between the calculated amount and the true amount must not exceed 15% on the primary column.

Multicomponent compounds do not require continuing calibration.

For GRO, DRO, herbicides, and OP pesticides, the continuing calibration is verified by calculating the RRF and the %D for each compound. An RRF less than 0.05 or a %D greater than 15% is outside the QC limits for the continuing calibration.

For NSA Memphis, only positive results were flagged when the %RSDs and %D were outside control limits but were less than 50%. If the %RSD or %D exceeded 50%, both the positive and nondetected results were flagged. Based on professional judgment, the results were flagged in this manner because the risk would be in reporting results with a high bias rather than a low bias.

1.1.5 Matrix Spikes/Matrix Spike Duplicates

The MS, which is used to determine the accuracy of the analysis for a given matrix, consists of a known quantity of stock solution added to the sample before its preparation and analysis. Evaluating the MS data involves two calculations. First, the %R is calculated by comparing the amount of the compound recovered by the analysis to the amount added to the sample. In addition, the relative percent difference (RPD) between the MS and the MSD samples is calculated and assessed. No specific requirements have been established for qualifying MS/MSD data. However, guidelines to aid in applying professional judgment are discussed in Organic Functional Guidelines.

1.1.6 Laboratory Control Samples and Laboratory Duplicates

Some GC methods may require that a laboratory control sample (LCS) and laboratory duplicate analysis be performed with each SDG. The LCS monitors the overall performance of each step during analysis, including sample preparation. All aqueous LCS %R results must fall within the control limits established by the laboratory. Laboratory duplicate samples are used to demonstrate acceptable method precision at the time of analysis. The RPD between the sample and the duplicate sample is calculated. Although no guidelines are established for organic laboratory duplicates, sample qualification is left up to professional judgment.

1.1.7 Blank Analysis

Laboratory method blanks are used to assess the existence and magnitude of potential contamination introduced during analysis. Additionally, *field blanks* may be collected to assess any contamination introduced while collecting samples. When chemicals are found both in samples and laboratory blanks analyzed within the same 12-hour period **and/or** field-derived blanks, the usability of the data depends on the reviewer's judgment and the blank's origin. According to Organic Functional Guidelines, a sample result should not be considered positive unless the concentration of the compound in the sample exceeds 10 times the amount in **any** blank for common laboratory contaminants (i.e., methylene chloride, acetone, 2-butanone, and

common phthalate esters), or five times the amount for other constituents. These amounts are referred to as *action levels* (ALs). Because blank samples may not be prepared using the same weight, or volume of sample or dilution, these variables also should be considered when using these blank criteria. The specific actions to be taken are as follows:

- If a chemical is found in the blank but not the sample, no action is taken.
- If the sample concentration is less than the quantitation limit and less than the AL, the quantitation limit is reported.
- If the sample concentration is between the quantitation limit and the AL, the concentration is reported as nondetect "U."
- If the sample concentration is greater than the AL, the concentration may be used unqualified.

Field-Derived Blanks

For this project, three types of field-derived blanks were collected: the *field blank*, the *equipment rinsate blank* (also called a *rinsate blank*), and the *trip blank*. The field blank is a sample of the source water used onsite, primarily to decontaminate equipment. The equipment rinsate blank is a sample of runoff water from one or more pieces of the decontaminated equipment used to collect samples. The trip blank is a 40-milliliter (ml) volatile organic analysis (VOA) vial filled at the laboratory with certifiable water to assess cross-contamination during VOC sample container shipment and handling both before and after the samples are collected.

The frequencies for collecting these QC samples were defined in Section 4 of the *NAS Memphis Comprehensive RFI Work Plan* (E/A&H, October 1994) as follows:

- *Field blanks* — one source water per sampling event.

- *Rinsate blank* — one per sampling event.

- *Trip blank* — one per shipment containing samples for VOAs.

For data validation purposes, each trip blank is associated only with the samples from the same shipment/cooler. The field blanks and the rinsate blanks apply to a larger amount of samples because only one is collected per sampling event. Because field-derived blanks are used with method blanks to assess potential cross-contamination of field investigative samples, no action was taken if contamination was detected in the method blanks associated with the field-derived blanks.

1.1.8 Internal Standard Performance

GC/MS internal standards (IS) are added to samples to check the stability of the instrument's sensitivity and response during each analytical VOC and SVOC run. Internal standard area counts for samples and blanks must not vary more than a factor of two (-50% to +100%) from the associated calibration standard. If an internal standard area count is outside this window, action should be taken.

Listed below are the internal standard compounds recommended by the methods.

VOC IS Compounds

Bromochloromethane (BCM)
1,4-Difluorobenzene (DFB)
Chlorobenzene-d5 (CBZ)

SVOC IS Compounds

1,4-Dichlorobenzene-d4 (DCB)
Naphthalene-d8 (NPT)
Acenaphthene-d10 (ANT)
Phenanthrene-d10 (PHN)
Chrysene-d12 (CRY)
Perylene-d12 (PRY)

1.1.9 Field Duplicate Precision

One field duplicate was collected at NSA Memphis for each 10 soil samples collected. Field duplicate samples are analyzed to evaluate data precision, which measures the reproducibilty of the analysis.

For the NSA Memphis RFI, RPDs between the samples and duplicates were calculated during the validation processes for sample results above the PQL. If the results for any compounds did not meet RPD criteria of less than 50% for soil, the positive results for that compound were flagged as estimated for the sample and duplicate only. If one value was nondetected and the other value was above the PQL, the positive result was flagged as estimated "J," and the nondetected result as estimated "UJ."

1.2 Inorganic Evaluation Criteria

The USEPA methods described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* and *Title 40 Code of Federal Regulations Part 264, Appendix IX* define QC criteria that the laboratory must meet, but the methods do not address data evaluation from a user's perspective. Evaluation criteria are available in *USEPA Contract Laboratory National Functional Guidelines for Inorganic Data Review* (Inorganic Functional Guidelines), February 1994, which was used throughout the data evaluation process when the analytical methods did not address data usability.

Data evaluation for samples collected at NSA Memphis included the following parameters:

- Holding times
- Instrument calibration
- MS results
- Laboratory duplicates
- Blank analysis

- Inductively Coupled Plasma (ICP) interference check samples
- ICP serial dilutions
- LCS results
- Atomic Absorption (AA) duplicate injections and postdigestion spike recoveries
- Field duplicate precision

According to the Inorganic Functional Guidelines, when the QC parameters do not fall within the specific method guidelines, the data evaluator annotates or "flags" the corresponding deficient compounds. The data from NSA Memphis were evaluated using this approach. The following flags were used to annotate data exhibiting laboratory and/or field deficiencies or problems:

U **Undetected** — The analyte was analyzed for but not detected above the instrument detection limit (IDL) or was also found in an associated blank at a concentration less than five times the blank concentration. The IDL is described as the lowest possible concentration at which an instrument can detect a particular analyte. The IDL is determined by multiplying by three the standard deviation obtained for the analysis of a standard solution at a concentration of 3X to 5X IDL on three nonconsecutive days with seven consecutive measurements per day.

J **Estimated Value** — At least one QC parameter was outside control limits or the analyte's concentration was less than the PQL.

UJ **Undetected and Estimated** — The analyte was analyzed for but not detected above the listed estimated IDL; the IDL is estimated because at least one QC parameter was outside control limits.

R/UR **Unusable Data** — One or more QC parameters grossly exceeded control limits.

1.2.1 Holding Times

Acceptable technical holding times are specified in the analytical methods. For aqueous samples, the holding time for cyanide analysis is 14 days, and metals analysis is six months, except for mercury, which is 28 days from the date of collection. Holding times for soil samples are not specified in the methods. Therefore, data reviewers can apply the water sample holding times criteria to soil at their discretion.

1.2.2 Instrument Calibration

Initial and continuing calibrations of the instruments with standard solutions are used to check that the instrument is capable of producing acceptable qualitative and quantitative data for the analytes on the Appendix IX list.

An initial calibration is conducted to check the performance of the instrument at the beginning of the analytical run and to establish a linear calibration curve. Calibration standard solutions are analyzed periodically to check the performance of the instrument and confirm that the initial calibration curve is still valid. Calibrations are verified by calculating the %R and comparing the amount of the analyte recovered by analysis to the known amount of standard. The %R for metals should fall between 90% and 110%. The %R for mercury should fall between 80% and 120%, and the %R for cyanide should fall between 85% and 115%.

1.2.3 Blank Analysis

Laboratory method blanks are used to assess the existence and magnitude of potential contamination introduced during analysis. Additionally, *field blanks* may be collected to assess the potential contamination introduced during sample collection. When chemicals are found in samples and laboratory blanks, the usability of the data depends on the reviewer's judgment and the blank's origin. According to Inorganic Functional Guidelines, a sample result should not be considered positive unless the compound concentration in the sample exceeds five times the amount in **any** blank, as with the previously mentioned ALs. Because blank samples may not

be prepared using the same weight, volume of sample or dilution, these variables also should be considered when using these blank criteria. The specific actions to be taken are as follows:

- If a chemical is found in the blank but not the sample, no action is taken.
- If the sample concentration is between the IDL, and less than the AL, the concentration is reported as "U."
- If the sample concentration is greater than the AL, the concentration may be used unqualified.

1.2.4 ICP Interference Check Samples

The ICP interference check sample is used to confirm the laboratory instrument's inter-element and background correction factors. Interference samples should be run at the beginning and end of each sample analysis run or at least twice per eight-hour working shift. The %R for the interference check sample should fall between 80% and 120%.

1.2.5 Laboratory Control Samples

LCSs are used to monitor the overall performance of steps in the analysis, including the sample preparation. All aqueous LCS %R results must fall within the control limits of 80% to 120%, except for antimony and silver for which control limits have not been established. Soil LCS standards are generally provided by the USEPA (or state agency or private laboratory). Control limits are established for each soil LCS standard prepared.

1.2.6 MS Analysis

Samples are spiked with known quantities of analytes to evaluate the effect of the sample matrix on digestion and measurement procedures. The %R should be within 75% to 125%. However,

when the sample concentration exceeds the spike concentration by a factor of four or more, spike recovery criteria are not applicable.

1.2.7 Laboratory Duplicates

Laboratory duplicate samples are analyzed to evaluate data precision, a measure of the reproducibilty of the analysis. The RPD between the sample and the duplicate sample is calculated. A control limit of 20 RPD for aqueous samples and 35% for soil or sediment samples should not be exceeded for analyte values greater than the quantitation limit or two times the quantitation limit, respectively.

1.2.8 ICP Serial Dilutions

ICP serial dilutions assess whether matrix interference occurred. One sample from each set of similar matrix type is chosen for the serial dilution (a five-fold dilution). For an analyte concentration that is at least a factor of 10 times above the instrument detection limit, the measured concentrations of the undiluted sample and the diluted sample should agree within 10%.

1.2.9 AA Duplicate Injections and Post digestion Spike Recoveries

During AA analysis, duplicate injections and postdigestion spikes are used to assess precision and accuracy of the laboratory analysis. The %RSD of duplicate injections must agree within 20%. Percent recovery of the postdigestion spike sample should fall between 85% and 115%.

1.2.10 Field Duplicate Precision

One field duplicate was collected for each 10 soil samples collected. Field duplicate samples are analyzed to evaluate data precision, which measures the reproducibilty of the analysis. For the NSA Memphis RFI, RPDs between the samples and duplicates were calculated during the validation processes for sample results above the PQL. If the results for any compounds did not meet RPD criteria of <30% for water and <50% for soil or sediment, the positive results for

that compound were flagged as estimated for the sample and duplicate only. If one value was nondetected and the other value was above the PQL, the positive result was flagged as estimated "J," and the nondetected result as estimated "UJ."

2.0 DATA VALIDATION RESULTS — SWMU 11

All samples were received by the laboratory intact and with the proper documentation. Table 2-1 summarizes the samples that were included in SWMU 11.

Table 2-1
SWMU 11 Sample IDs

Sample ID	Pest/PCB	Metals & CN
011S000101	X	X
011S000201	X	X
011S000401	X	X
011S000601	X	X
011S000901	X	X
011S001401	X	X

Six investigative samples were analyzed for SWMU 11 in SDG 1565. Full validation reports for SDG 1565 and data tables can be found in Appendices A and B, respectively, of this document.

2.1 Data Quality

The overall data quality of the analytical work performed for NSA Memphis at SWMU 11 was considered satisfactory and usable for site remediation and risk assessment unless noted in the following sections. Results that were outside QA/QC requirements were flagged as estimated "J," indicating that the data could be biased either high or low. Although the data are qualified as estimated, they remain dependable for use in risk assessment and site remediation.

2.2 Unusable Data

One element in six samples was rendered unusable because the samples grossly exceeded QC parameters. Table 2-2 summarizes the unusable data and explains the qualification.

Table 2-2
SWMU 1 Unusable Data

Sample ID	Fraction	Elements	Reason
011S000101 011S000201 011S000401 011S000601 011S000901 011S001401	Metals	Antimony	MS percent recovery below 30%

2.3 Blanks

Lead, zinc, and tin were detected in the preparation blank for SWMU 1. The blanks were examined during the validation process and sample results for lead, zinc, and tin that were believed to be from blank contamination were nullified.

3.0 DATA VALIDATION RESULTS — SWMU 36

All samples were received by the laboratory intact and with the proper documentation. Table 3-1 summarizes the samples that were included in SWMU 36.

Table 3-1
SWMU 36 Sample IDs

Sample ID	VOC	SVOC	Pest/PCB	DRO	GRO	Metals	Dioxin
036S000101		X	X			X	X
036S000201		X	X			X	X
0036000301		X	X			X	X
036S000401		X	X			X	X

Table 3-1

SWMU 36 Sample IDs

Sample ID	VOC	SVOC	Pest/PCB	DRO	GRO	Metals	Dioxin
036S000501		X	X			X	X
036C000501		X	X			X	X
036G200643	X						
036S000110				X	X		
036S000211				X	X		
036S000310				X	X		
036S000410				X	X		

Ten investigative samples and one field duplicate were analyzed for SWMU 36 in SDGs 1564, 1592, and 1596. Full validation reports for these SDGs and data tables can be found in Appendices A and B, respectively, of this document.

3.1 Data Quality

The overall data quality of the analytical work performed for NSA Memphis at SWMU 36 was considered satisfactory and usable for site remediation and risk assessment unless noted in the following section. Results that were outside QA/QC requirements were flagged as estimated "J," indicating that the data could be biased either high or low. Although the data are qualified as estimated, they remain dependable for use in risk assessment and site remediation.

3.2 Blanks

Acetone, bis(2-ethylhexyl)phthalate, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,6,7,8-HpCDD, OCDD, OCDF, lead, selenium, silver, and tin were detected in the various blanks for SWMU 36. The blanks were examined during the validation process and sample results for acetone, bis(2-ethylhexyl)phthalate, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,6,7,8-HpCDD, OCDD, OCDF, lead, selenium, silver, and tin that were believed to be from blank contamination were nullified.

4.0 DATA VALIDATION RESULTS — SWMUs 42 and 53

All samples were received by the laboratory intact and with the proper documentation. Table 4-1 summarizes the samples that were included in SWMUs 42 and 53.

Table 4-1
SWMUs 42 & 53 Sample IDs

Sample ID	VOC	SVOC	Pest/PCB	Herbicide	OP Pesticide	Metals	Cyanide
042S000101	X	X	X			X	
042S000103	X	X				X	
0426000201	X	X	X			X	
042S000203	X	X				X	
042S000301	X	X	X			X	
042S000303	X	X				X	
053S000101	X	X	X			X	
053C000101	X	X	X			X	
053S000201	X	X	X			X	
053S000301	X	X	X			X	
053S000303	X	X				X	
053S000401	X	X	X			X	
053S000403	X	X				X	
053S000501	X	X	X			X	
053S000503	X	X				X	
053E100295 (Rinsate Blank)	X	X	X	X	X	X	X

Fourteen investigative samples and one field duplicate were analyzed for SWMUs 42 and 53 in SDGs T536 and 1541. Full validation reports for these SDGs and data tables can be found in Appendices A and B, respectively, of this document.

4.1 Data Quality

The overall data quality of the analytical work performed for NSA Memphis at SWMUs 42 and 53 was considered satisfactory and usable for site remediation and risk assessment unless noted in the following section. Results that were outside QA/QC requirements were flagged as estimated "J," indicating that the data could be biased either high or low. Although the data are qualified as estimated, they remain dependable for use in risk assessment and site remediation.

4.2 Blanks

Di-n-butylphthalate, diethylphthalate, bis(2-ethylhexyl)phthalate, and methylene chloride were detected in the various blanks for SWMUs 42 and 53. The blanks were examined during the validation process and sample results for di-n-butylphthalate, diethylphthalate, bis(2-ethylhexyl)phthalate, and methylene chloride that were believed to be from blank contamination were nullified.

5.0 DATA VALIDATION RESULTS — SWMU 44

All samples were received by the laboratory intact and with the proper documentation. Table 5-1 summarizes the samples that were included in SWMU 44.

Table 5-1
SWMU 44 Sample IDs

Sample ID	SVOC	PCB	DRO	GRO	Metals
044S000101		X			X
044S000103		X			X
0446000201		X			X
044S000203		X			X
044S000301	X	X	X	X	X
044S000303	X	X	X	X	X
044S000401		X			X
044S000403		X			X
044C000403		X			X

Eight investigative samples and one field duplicate were analyzed for SWMU 44 in SDG T534. Full validation reports for SDG T534 and data tables can be found in Attachments A and B, respectively, of this document.

5.1 Data Quality

The overall data quality of the analytical work performed for NSA Memphis at SWMU 44 was considered satisfactory and usable for site remediation and risk assessment unless noted in the following section. Results that were outside QA/QC requirements were flagged as estimated "J," indicating that the data could be biased either high or low. Although the data are qualified as estimated, they remain dependable for use in risk assessment and site remediation.

5.2 Blanks

Di-n-butylphthalate, diethylphthalate, DRO, and tin were detected in the preparation blank for SWMU 44. The blanks were examined during the validation process and sample results for di-n-butylphthalate, diethylphthalate, DRO, and tin that were believed to be from blank contamination were nullified.

6.0 DATA VALIDATION RESULTS — SWMUs 50, 51, and 52

All samples were received by the laboratory intact and with the proper documentation. Table 6-1 summarizes the samples that were included in SWMUs 50, 51, and 52.

Table 6-1
SWMUs 50, 51, & 52 Sample IDs

Sample ID	VOC	SVOC	Pest/PCB	DRO	GRO	Metals
050S000101	X	X	X			X
050C000101	X	X	X			X
0506000102	X	X				X
050S000201	X	X	X			X
050S000202	X	X				X
050S000301	X	X	X			X
050S000302	X	X				X

Table 6-1
SWMUs 50, 51, & 52 Sample IDs

Sample ID	VOC	SVOC	Pest/PCB	DRO	GRO	Metals
050S000401	X	X	X	X	X	X
050C000401	X	X	X	X	X	X
050S000402	X	X		X	X	X
050S000501	X	X	X			X
050S000502	X	X		X	X	X
050S000601	X	X	X			X
050S000602	X	X				X
050S000701	X	X	X			X
050S000702	X	X				X
050S000801	X	X	X			X
050S000802	X	X				X
050S000901	X	X	X			X
050S000902	X	X				X
050S001001	X	X	X			X
050C001001	X	X	X			X
050S001002		X				X
051S000101	X	X	X			X
051S000102	X	X				X
051S000201	X	X	X			X
051C000201	X	X	X			X
051S000202		X				X
051S000301	X	X	X			X
051S000302	X	X				X
051S000401	X	X	X			X
051S000402		X				X

Twenty-eight investigative samples and four field duplicates were analyzed for SWMUs 50, 51, and 52 in SDGs 1551, 1552, and 1606. Full validation reports for these SDGs and data tables can be found in Attachments A and B, respectively, of this document.

6.1 Data Quality

The overall data quality of the analytical work performed for NSA Memphis at SWMUs 50, 51, and 52 was considered satisfactory and usable for site remediation and risk assessment unless noted in the following sections. Results that were outside QA/QC requirements were flagged as estimated "J," indicating that the data could be biased either high or low. Although the data are qualified as estimated, they remain dependable for use in risk assessment and site remediation.

6.2 Unusable Data

One element in 12 samples was rendered unusable because the samples grossly exceeded QC parameters. Table 6-2 summarizes the unusable data and explains the qualification.

Table 6-2
SWMUs 50, 51, & 52 Unusable Data

Sample ID	Fraction	Elements	Reason
050S000902			
050S001001			
050S001002			
051S000101			
051S000102			
051S000201	Metals	Tin	MS percent recovery below 30%
051C000201			
051S000202			
051S000301			
051S000302			
051S000401			
051S000402			

6.3 Blanks

Acetone, methylene chloride, 1,1,2,2-tetrachloroethane, DRO, arsenic, selenium, and tin were detected in the preparation blank for SWMUs 50, 51, and 52. The blanks were examined during the validation process and sample results for acetone, methylene chloride, 1,1,2,2-tetrachloroethane, DRO, arsenic, selenium, and tin that were believed to be from blank contamination were nullified.

7.0 DATA VALIDATION RESULTS — SWMU 64

All samples were received by the laboratory intact and with the proper documentation. Table 7-1 summarizes the samples that were included in SWMU 64.

Table 7-1
SWMU 64 Sample IDs

Sample ID	VOC	SVOC	Pest/PCB	Herbicide	OP Pesticide	Metals	Cyanide	TPH
064S000101	X	X	X			X		
064S000103	X	X	X			X		
064S000201		X	X			X		
064S000203		X	X			X		
064S000301	X	X	X			X		
064C000301	X	X	X			X		
064S000303		X	X			X		
064S000401	X	X	X			X		
064S000403		X	X			X		
064S000501	X	X	X			X		
064S000503		X	X			X		
064S000601	X	X	X			X		
064S000603		X	X			X		
064S000701	X	X	X			X		
064S000703		X	X			X		
064S000801		X	X			X		

Table 7-1
SWMU 64 Sample IDs

Sample ID	VOC	SVOC	Pest/PCB	Herbicide	OP Pesticide	Metals	Cyanide	TPH
064S000803		X	X			X		
064S000901	X	X	X			X		
064S000903	X	X	X			X		
064S200201	X							
064S200203	X							
064S200303	X							
064S200403	X							
064S200503	X							
064S200603	X							
064S200703	X							
064S200801	X							
064S200803	X							
064E100695 (Rinsate Blank)	X	X	X	X	X	X	X	X
064F100695 (Field Blank)	X	X	X	X	X	X	X	X

Twenty-seven investigative samples, two field QC samples and one field duplicate were analyzed for SWMU 64 in SDGs 1549 and 1592. Full validation reports for these SDGs and data tables can be found in Attachments A and B, respectively, of this document.

7.1 Data Quality

The overall data quality of the analytical work performed for NSA Memphis at SWMU 64 was considered satisfactory and usable for site remediation and risk assessment unless noted in the following sections. Results that were outside QA/QC requirements were flagged as estimated

"J," indicating that the data could be biased either high or low. Although the data are qualified as estimated, they remain dependable for use in risk assessment and site remediation.

7.2 Unusable Data

One element in 16 samples was rendered unusable because the samples grossly exceeded QC parameters. Table 7-2 summarizes the unusable data and explains the qualification.

Table 7-2
SWMU 64 Unusable Data

Sample ID	Fraction	Elements	Reason
064S000101			
064S000103			
064S000201			
064S000203			
064S000301			
064S000303			
064S000401			
064S000403	Metals	Antimony	MS percent recovery below 30%
064S000501			
064S000503			
064S000601			
064S000603			
064S000701			
064S000703			
064S000801			
064S000803			

7.3 Blanks

Acetone, 2-butanone, methylene chloride, vinyl chloride di-n-butylphthalate, butylbenzylphthalate, bis(2-ethylhexyl)phthalate, tin, and thallium were detected in the preparation blank for SWMU 64. The blanks were examined during the validation process and sample results for acetone, 2-butanone, methylene chloride, vinyl chloride di-n-butylphthalate, butylbenzylphthalate, bis(2-ethylhexyl)phthalate, tin, and thallium that were believed to be from blank contamination were nullified.

Appendix A

Validation Narratives

SWMU 11

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1565

A validation was performed on the Pesticide/Aroclor Data from SDG 1565. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

Analyte Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 25%.

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 25% are qualified as estimated, J.

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
ALL	ALL P >25%	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS AND CYANIDE

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1565

A validation was performed on the Metals Data from SDG 1565. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions
*	●	MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Lead	0.41 mg/kg	no impact
Zinc	2.58 mg/kg	no impact
Tin	4.95 mg/kg	all soil samples below 24.8 mg/kg

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U". The field or DI water blanks exhibited contamination but had no impact on the data.

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Thallium	-0.54 mg/kg	all soil samples below 5.4 mg/kg

This reviewer qualifies all samples results below ten times the negative bias as estimated, "J" or "UJ".

Matrix Spike Recovery

Specific Finding

The Matrix Spike recovery for soils for Antimony (25%) was below 30%. All non-detect results are rejected and all positive results are qualfied as estimated, "J".

The Matrix Spike recovery for soils for Silver (57%) was below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
011-S-0001-01 and 038-0016-01.	Sn.	+	U
all soil samples	Tl.	+/U	J/UJ
all soil samples	Sb.	+	J
		U	R
all soil samples	Ag.	+/U	J/UJ
All "B" results	all analytes	B	J

SWMU 36

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 8270; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1564

A validation was performed on the Semivolatile Data from SDG 1564. The data was evaluated based on the following parameters.

- * Data Completeness
- * Holding Times
- * GC/MS Tuning
- * Calibrations
- * Internal Standard Performance
- Blanks
- * Surrogate Recoveries
- * Laboratory Control Sample
- * Field Duplicates
- * Compound Identification /Quantitation

* - All criteria were met for this parameter

Method Blanks

Associated blank	Compound	Concentration	Action Level
SBLK102295F	bis(2ethylhexyl)phthalate	52J	520
SBLK102295J	bis(2ethylhexyl)phthalate	54J	540

Samples	Compound	Qualification
059S000101	bis(2ethylhexyl)phthalate	CRQL
059S000201		
036C000501		

Method Blanks (continued)

Samples	Compound	Qualification
036S000301	bis(2ethylhexyl)phthalate	CRQL
036S000401		
059C000101		
036S000101		

Rinseate Blanks

Associated blank	Compound	Concentration	Action Level
059E101295	bis(2ethylhexyl)phthalate	5J	50

Samples	Compound	Qualification
014M000201	bis(2ethylhexyl)phthalate	CRQL
014M000202		
036S000101		
059S000201		
036S000301		
036S000401		
036C000501		
059S000101		
059C000101		
059S000201		

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 10% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
059S000101	bis(2ethylhexyl)phthalate	+	CRQL
059S000201			
036C000501			
036S000101			
036S000301			
036S000401			
014M000201			
014M000202			
059C000101			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1564

A validation was performed on the Pesticide/Aroclor Data from SDG 1564. The data was evaluated based on the following parameters:

*	•	Data Completeness
	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

Holding Times

The analysis holding time was exceeded for two (2) samples.

Specific Finding

The analysis holding time for two (2) samples was exceeded by 4 days. It is the professional opinion of the data validator that the positive results should be qualified as estimated, J.

059C000101DL
059S000101DL

Field Duplicates

The field duplicate pairs of samples 036S000501/036C000501, 059S000101DL/059C000101DL, and 014M000101DL/014N000101DL exhibited positive results and non-compliant RPDs.

Specific Finding

The field duplicate pair of samples 036S000501 and 036C000501 exhibited positive results and a non-compliant RPD for 4,4-DDT. The positive results are qualified as estimated, J.

036S000501	4,4-DDT (53.7%)
036C000501	

The field duplicate pair of samples 059S000101DL and 059C000101DL exhibited positive results and a non-compliant RPD for five (5) compounds. The positive results are qualified as estimated, J.

059S000101DL	Heptachlor (89%)
059C000101DL	Aldrin (60%)
	Alpha Chlordane (51%)
	Gamma Chlordane (54%)
	Technical Chlordane (57%)

Field Duplicates, Continued

Specific Finding, Continued

The field duplicate pair of samples 014M000101DL and 014N000101DL exhibited positive results and a non-compliant RPD for 4,4-DDT. The positive results are qualified as estimated, J.

014M000101DL	4,4-DDT (188%)
014N000101DL	

Analyte Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 25%. Three (3) samples required dilutions or further dilutions.

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 25% are qualified as estimated, J.

For the following samples reject the E flagged compounds in favor of the results from the dilution analysis of the sample. For the DL samples reject all other compounds.

036S000301
059S000101DL (50X)
059C000101DL (50X)

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
059C000101DL 059S000101DL	ALL	+	J
036S000501 036C000501	4,4-DDT	+	J
059S000101DL 059C000101DL	Heptachlor Aldrin Alpha Chlordane Gamma Chlordane Technical Chlordane	+	J
014M000101DL 014N000101DL	4,4-DDT	+	J
ALL	ALL P >25%	+	J
036S000301 059S000101DL (50X) 059C000101DL (50X)	ALL E FLAGGED	+	D
036S000301DL 059S000101DL (100X) 059C000101DL (100X)	ALL OTHERS	+/-	UR

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS AND CYANIDE

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1564

A validation was performed on the Metals Data from SDG 1564. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions
	•	MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Lead	0.45 mg/kg	no impact
Selenium	1.05 ug/l	no impact
Silver	5.11 ug/l	no impact
Tin	20.2 ug/l	no impact

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U". The field or DI water blanks exhibited contamination but had results were enough to have no impact on the data.

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Nickel	-7.81 mg/kg	all soil samples below 78.1 mg/kg
Thallium	-0.56 mg/kg	all soil samples below 5.6 mg/kg
Nickel	-28.9 ug/l	no impact

This reviewer qualifies all samples results below ten times the negative bias as estimated, "J" or "UJ".

Matrix Spike Recovery

Specific Finding

The Matrix Spike recoveries for soils for Antimony (73%) and Silver (67%) were below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

The Matrix Spike recovery for soils for Chromium (157%) was above the upper control limits. All positive results are qualified as erstimated, "J".

Duplicate Analysis

Specific Finding

The Duplicate analysis for soils for Mercury (73%) was outside the control limits. All positive results are qualified as estimated, "J". The Field duplicate results were all less than 50% and will not be qualified.

MSAs

Specific Finding

The post digestion spike recovery for GFAA was below the lower control limits. All positive and non-detect results for the listed samples below are qualified as estimated, "J" or "UJ".

Element	Sample IDs	% recoveries
Selenium	014M000101	80

Selenium	014M000102	77
Selenium	014M000201	84
Selenium	036S000101	76
Selenium	036S000501	81
Selenium	036C000501	82
Selenium	059S000101	78
Selenium	059C000101	80
Thallium	036S000101	49

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All soil samples	Ni and Tl.	+/U	J/UJ
All soil samples	Sb and Ag.	+/U	J/UJ
All soil samples	Cr.	+	J
All soil samples	Hg.	+	J
014M000101, 102 and 201.	Se.	+/U	J/UJ
036S000101, 501 and C501.			
059S000101 and C101.			
036S000101.	Tl.		
All "B" results	all analytes	B	J

DATA ASSESSMENT NARRATIVE
DIOXIN/FURANS - 8280

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, internal standard recoveries, clean-up standard recoveries, matrix spike recoveries, GC/MS high resolution performance, tuning results, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. SW-846 Method 8280; the National Functional Guidelines for Organic Data Review, where applicable; and EPA DQO Level IV requirements. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG# 1564 - Assembly A

A validation was performed on the Dioxin/Furan Data from SDG 23708. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Column Performance
*	•	Calibrations
*	•	Internal Standard Recovery
	•	Blanks
*	•	Laboratory Control Samples
NA	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Congener Identification/Quantitation

* - All criteria were met for this parameter.

Method Blanks

One (1) of the two (2) method blanks exhibited contamination for 2,3,7,8-substituted congeners.

Action Level 1X * = EMPC	1,2,3,4,6,,8-HpCDF 0.0039 µg/Kg *	1,2,3,4,6,7,8-HpCDD 0.0081 µg/Kg *	OCDD 0.0152 µgKg	OCDF 0.0056 µg/Kg
036C000501	U	NA	NA	
036S000501	U		NA	
036S000101		NA	NA	U

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	CONGENER ID	DL	QL	SPECIFIC FINDINGS
136606	See Method Blanks	+JB	U/NA	
136607				
136608				

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

GASOLINE RANGE ORGANICS - GRO

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, calibration results, matrix spike recoveries and GC performance. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. SW-846 Method 8015 modified for gasoline range organics; the National Functional Guidelines for Organic Data Review, where applicable; and EPA DQO Level IV requirements. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG# 1592

A validation was performed on the GRO from SDG 1592. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Column Performance
*	•	Calibrations
*	•	Blanks
*	•	Surrogates
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Identification/Quantitation

* - All criteria were met for this parameter.

Overall Performance

Overall performance was acceptable. The data did not require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

NO QUALIFICATIONS WERE REQUIRED

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

DIESEL RANGE ORGANICS - DRO

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, calibration results, matrix spike recoveries and GC performance. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. SW-846 Method 8015 modified for diesel range organics; the National Functional Guidelines for Organic Data Review, where applicable; and EPA DQO Level IV requirements. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG# 1592

A validation was performed on the DRO from SDG 1592. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Column Performance
*	•	Calibrations
*	•	Blanks
*	•	Surrogates
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Identification/Quantitation

* - All criteria were met for this parameter.

Overall Performance

Overall performance was acceptable. The data reviewer estimates than less than 5% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

No qualifications are required.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 8240; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG # 1596

A validation was performed on the Volatile Data from SDG 1596. The data was evaluated based on the following parameters.

- * Data Completeness
- * Holding Times
- * GC/MS Tuning
- * Calibrations
- * Internal Standard Performance
- Blanks
- * Surrogate Recoveries
- * Laboratory Control Samples
- * Field Duplicates
- * Compound Identification /Quantitation

* - All criteria were met for this parameter

Rinseate Blank

Associated blank	Compound	Concentration	Action Level
065E102995	Acetone	24	240

Samples	Compound	Qualification
065G200413 065G200437 065G200538	acetone	CRQL
036G200643 065G000118 065G000140 065G000240 065G000340 065G200638 065G200715 065G201015 065G201315 065G201515 065G201815 065G202115 065G202215 065G202315 065G202415	acetone	U

System Performance and Overall Assessment

The Overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors or percent moisture as the associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria to the field samples.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
065G200413	acetone	+	CRQL
065G200437			
065G200538			
036G200643	acetone	+	U
065G000118			
065G000140			
065G000240			
065G000340			
065G200638			
065G200715			
065G201015			
065G201315			
065G201515			
065G201815			
065G202115			
065G202215			
065G202315			
065G202415			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

SWMUs 42 & 53

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP , 3/90 SOW; the National Functional Guidelines for Organic Data Review, June 1991, and DQO Level III. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG # 1536

A validation was performed on the Volatile Data from SDG 1536. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Laboratory Control Samples
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL

No qualifications are required.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1536

A validation was performed on the Volatile Data from SDG 1536. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Method Blanks

Associated blank	Compound	Conc.	Action Level
SBLK100395F	di-n-butylphthalate	640	6400
	diethylphthalate	140	1400

Samples	Compound	Qualification
060C002901	diethylphthalate	CRQL
060C002901	di-n-butylphthalate	CRQL

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
060C002901	diethylphthalate	+	CRQL
060C002901	di-n-butylphthalate	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # T536

A validation was performed on the Pesticide/Aroclor Data from SDG T536. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	GPC and Florisil Clean-up Procedures
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

Analyte Identification/Quantitation

Sample 042S000101 required dilution (1:10) due to the presence of matrix interferences. Sample 060C002901 required dilution (1:20) due to the presence of high levels of target compounds. The CRQLs were adjusted accordingly . Several samples exhibited column quantitation %Ds greater than 25%.

Specific Findings

The positive results reported in all samples which exhibited column quantitations differences greater than 25% are qualified as estimated, J.

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
ALL	ALL P >25%	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS AND CYANIDE

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements for all samples. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # T536

A validation was performed on the Metals Data from SDG T536. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions
	•	MSAs

* - All criteria were met for this parameter.

Blanks

Specfic Findings

The preparation blank exhibited negative bias for Silver (-0.54 mg/kg). All sample values were qualified as estimated, "J" or "UJ" below 5.4 mg/kg.

Matrix Spike Recovery

Specific Finding

The Matrix Spike recovery for Lead (45%) was below the lower control limits. All positive and non-detect results for all soil sample are qualified as estimated, "J" or "UJ".

MSAs

Specific Findings

The following samples exhibted a low recovery for the GFAA post digestion spiking. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Analyte	Sample Ids	% recovery
Lead	042-S-0002-03	79

Several samples exhibited a high recovery but the sample values were non-detect. T herefore no qualification is required.

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All soil samples	Ag.	+/U	J/UJ
All soil samples	Pb.	+/U	J/UJ
042-S-0002-03	Pb.	+/U	J/UJ
All soil samples	all analytes	B	J

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90 SOW; the National Functional Guidelines for Organic Data Review, June 1991, and DQO Level III. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG # 1541

A validation was performed on the Volatile Data from SDG 1541. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Internal Standards

All internal standard EICP areas did not meet the internal standard EICP area QA/QC criteria.

Specific Finding:

The Samples listed below, exhibited low internal standard areas. Qualify all associated positive results as estimated (J) and all non detects as estimated (UJ).

053S000101	bromochloromethane 1,4-difluorobenzene chlorobenzene-d_5

Trip Blanks

Associated blank	Compound	Conc.	Action Level
053T100295	methylene chloride	1J ug/L	10 ug/L

Samples	Compound	Qualification
053C000301	methylene chloride	CRQL

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
053S000101	All associated analytes bromochloromethane 1,4-difluorobenzene chlorobenzene-d_5	+/-	J/UJ
053C000301	methylene chloride	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1541

A validation was performed on the Volatile Data from SDG 1541. The data was evaluated based on the following parameters.

- * Data Completeness
- * Holding Times
- * GC/MS Tuning
- * Calibrations
- * Internal Standard Performance
- Blanks
- * Surrogate Recoveries
- * Matrix Spike/Matrix Spike Duplicate
- * Field Duplicates
- * Compound Identification /Quantitation

* - All criteria were met for this parameter

Method Blanks

Associated blank	Compound	Conc.	Action Level
SBLK10095F	di-n-butylphthalate	320J	3200

Samples	Compound	Qualification
053S000501	di-n-butylphthalate	CRQL

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ANALYSIS

Rinseate Blanks

Associated blank	Compound	Conc.	Action Level
053E100295	bis(2-ethylhexyl)phthalate	2J	20

Samples	Compound	Qualification
053C000301	bis(2-ethylhexyl)phthalate	CRQL

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
053S000501	di-n-butylphthalate	+	CRQL
053C000301	bis(2-ethylhexyl)phthalate	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1541

A validation was performed on the Pesticide/Aroclor Data from SDG 1541. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

Continuing Calibrations

One (1) continuing calibration standard associated with the reported samples exhibited a %D above the QC limits.

Specific Findings

The continuing calibration of 10/23/95 (10:22) contained a compound with a %D greater than 15% but less than 50%. For the sample and the non-compliant compound listed below, the positive results are qualified as estimated, J.

053S000201	Aroclor 1260 (31.8%)

Analyte Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 25%.

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 25% are qualified as estimated, J.

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
053S000201	Aroclor 1260	+	J
ALL	ALL P >25%	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS AND TPH

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1541

A validation was performed on the Metals Data from SDG 1541. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions
*	●	MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Tin	-5.46 mg/kg	all samples below 54.6 mg/kg

The USEPA requires that the reviewer estimated the impact from negative bias. This reviewer requires that all positive and non-detect results below ten times the negative bias will be qualified as estimated, "J" or "UJ".

Matrix Spike Analysis

Specific Finding

The Matrix Spike recoveries for soils for Antimony (36%), Arsenic (70%), Silver (32%) and Selenium (59%) were below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

The Matrix Spike recovery for soils for Lead (144%) was above the upper control limits. All positive results are qualified as estimated, "J".

Duplicate Analysis

Specific Finding

The RPDs for Lead and Chromium were not greater than 35% and will not be qualified. The field duplicate RPDs were less than 50% and will not be qualified.

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All samples	Sn.	+/U	J/UJ
All samples	Sb, As, Se and Ag.	+/U	J/UJ
All samples	Pb.	+	J
All "B" results	all analytes	B	J

SWMU 44

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # T534

A validation was performed on the Volatile Data from SDG T534. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
	•	Internal Standard Performance
	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Internal Stadards

All internal standard EICP areas did not meet the internal standard EICP area QA/QC criteria.

Internal Standards (continued)

Specific Finding:

The Samples listed below, exhibited low internal standard areas. Qualify all associated positive results as estimated (J) and all non detects as estimated (UJ).

044S000303	1,4-dichlorobenzene-d_4 naphthalene-d_8 acenaphthene-d_{10}
044S000301	naphthalene-d_8 perylene-d_{12}

Method Blanks

Associated blank	Compound	Conc.	Action Level
SBLK100395F	di-n-butylphthalate	640	6400
	diethylphthalate	140	1400

Samples	Compound	Qualification
044S000301 044S000301RE	diethylphthalate	CRQL
044S000301	di-n-butylphthalate	U
044S000303		U
044S000301RE		U
044S000303DL		CRQL

Surrogates

Surrogate recoveries for all samples and blanks did not meet QA/QC criteria.

Specific Finding:

Sample 044S000303, exhibited two acid surrogate recoveries that exceeded the QA/QC limit. Qualify all positive results associated with the acid fraction as estimated (J).

Sample ID	Surrogate	% Recovery
044S000303	phenol-d_5	136%
	2-fluorophenol	128%

Compound Identification/Quantitation

Specific Finding:

Reject all results (R) for sample 044S000301, due to non compliant internal standard areas.

For sample 044S000303, reject all E-flagged results in favor of the D-flagged results in the diluted sample. For the diluted sample 044S000303DL, reject all results except for the D-flagged results with corresponding E-flagged results in the original sample analysis.

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
044S000303	All associated analytes 1,4-dichlorobenzene-d_4 naphthalene-d_8 acenaphthene-d_{10}	+/-	J/UJ
044S000301	naphthalene-d_8 perylene-d_{12}		
044S000301 044S000301RE	diethylphthalate	+	CRQL
044S000301 044S000303 044S000301RE 044S000303DL	di-n-butylphthalate	+	U U U CRQL
044S000303	All analytes acid fraction	+	J
044S000301	All analytes	+/-	R
044S000303	All E-flagged results	+	R
044S000303DL	All results except for D-flagged results	+/-	R

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # T534

A validation was performed on the Pesticide/Aroclor Data from SDG T534. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	GPC and Florisil Clean-up Procedures
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

Surrogate Recoveries

One (1) sample exhibited a non-compliant TCX recovery.

Specific Finding

The sample listed below exhibited a high TCX recovery (186%). The positive results are qualified as estimated, J.

044S000401

Analyte Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 25%.

Specific Findings

The positive results reported in all samples which exhibited column quantitations differences greater than 25% are qualified as estimated, J.

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
044S000401	ALL	+	J
ALL	ALL P >25%	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE

GASOLINE RANGE ORGANICS (GRO)

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the Tennessee TPH Method; the National Functional Guidelines for Organic Data Validation, June 1991, where applicable; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # T534

A validation was performed on the GRO Data from SDG T534. The data was evaluated based on the following parameters:

*	•	Data Completeness
	•	Holding Times
	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Holding Times

Two (2) samples and the MS/MSD pair were analyzed three (3) days outside holding time.

Specific Finding

The following samples were analyzed three (3) days outside the holding time. It is the professional opinion of the data validator that the positive results be qualifed as estimated, J.

044S000301
044S000303

Continuing Calibrations

The continuing calibrations that were analyzed by the laboratory for these samples were not acceptable for all compound %Ds.

Specific Finding

The continuing calibration standard, 1006_012.D contained a compound with a %Ds greater than 15%. For the samples and non-compliant compound listed below, the positive results are qualified as estimated, J.

060S002301	GRO (23.2%)
060S002601	

Surrogate Recoveries

Seven (7) samples required qualification due to non-compliant surrogate recoveries.

Specific Finding

The following samples exhibited a surrogate recovery below the QC limits. All positive and non-detect results are qualified as estimated, J/UJ.

Samples	Surrogate	% Recoveries
060S002301	a,a,a-trifluorotoluene	37
060S002401		33
060S002501		40
060S002601		48
060S002701		38
060S002201		35

The following sample exhibited a surrogate recovery above the QC limits. All positive results are qualified as estimated, J.

Samples	Surrogate	% Recoveries
044S000303	a,a,a-trifluorotoluene	249

System Performance and Overall Assessment

Overall performance was acceptable. The reviewer estimates that 80% of the data required qualifications. However, none of the data was rejected.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
044S000301 044S000303	GRO	+	J
060S002301 060S002601	GRO	+	J
060S002301 060S002401 060S002501 060S002601 060S002701 060S002201	GRO	+/-	J/UJ
044S000303	GRO	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

DIESEL RANGE ORGANICS (DRO)

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the Tennessee TPH Method; the National Functional Guidelines for Organic Data Validation, June 1991, where applicable; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # T534

A validation was performed on the DRO Data from SDG T534. The data was evaluated based on the following parameters:

- * Data Completeness
- * Holding Times
- * Calibration
- Blanks
- Surrogate Recoveries
- * Matrix Spike/Matrix Spike Duplicates
- * Field Duplicates
- * Compound Identification
- Compound Quantitation

* - All criteria were met for this parameter.

Field Blanks

The associated field blank exhibited contamination for DRO.

	060F002801
DRO	2700 μg/Kg

Field Blanks, continued

Specific Finding

Samples	Compound	Action Level	Qualification
060S002101	DRO	13500 μg/Kg	U
060C002101			U

Surrogate Recoveries

Two (2) samples required qualification due to surrogate recoveries above the QC limits.

Specific Finding

The following samples exhibited surrogate recoveries above the QC limits. All positive results are qualified as estimated, J.

Sample	Surrogate	% Recovery
060S002301	ortho-terphenyl	205%
060S002501		405%

Compound Quantitation

Two (2) samples required dilution to bring the target compound within the calibration range.

Specific Finding

For the following samples all E flagged results are rejected in favor of the corresponding D flagged results reported from the dilution analysis. All other results reported from the dilution analysis are rejected, UR, in favor of the results reported from the undiluted sample analysis.

044S000301
044S000303

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL	
060S002101 060C002101	DRO	+	U	
060S002301 060S002501	DRO	+	J	
044S000301 044S000303	All E flagged		+	R

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level IV requirements for all samples. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # T534

A validation was performed on the Metals Data from SDG T534. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions
*	●	MSAs

* - All criteria were met for this parameter.

Blanks

Specfic Findings

The preparation blank exhibited contamination for Tin (13.7 mg/kg). All positive results below 68.5 mg/kg wre qualified as non-detect, "U".

The preparation blank exhibited negative bias for Silver (-1.17 mg/kg). All sample values were qualified as estimated, "J" or "UJ" for samples below 11.7 mg/kg for Silver.

Matrix Spike Recovery

Specific Finding

The Matrix Spike recovery for Antimony (50%) was below the lower control limits. All positive and non-detect results for all soil samples are qualified as estimated, "J" or "UJ".

The Matrix Spike recovery for Lead (144%) was above the upper control limits. All positive results are qualified as estimated, "J".

MSAs

Specific Findings

Several samples exhibited a high recovery but the sample values were non-detect. Therefore no qualification is required.

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All soil samples	Sn.	+	U
All soil samples	Ag.	+/U	J/UJ
All soil samples	Sb.	+/U	J/UJ
All soil samples	Pb.	+	J
All soil samples	all analytes	B	J

SWMUs 50, 51, & 52

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP OLM01.8 Method; the National Functional Guidelines for Organic Data Validation, June 1991, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1551

A validation was performed on the Volatile Data from SDG 1551. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibration
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Internal Standard Performance
	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Method Blanks

Several of the method blanks that were analyzed exhibited contamination for acetone.

	VBLK10-1295H	VBLK10-1395H	VBLK10-1495G	VBLK10-2095H
acetone	4 µg/Kg	3 µg/Kg	6 µg/Kg	2 µg/Kg

Specific Finding

	Samples	Compound	Action Level	Qualification
VBLK101295H	050C000101 050S000501	acetone	40 µg/Kg	CRQL

Field QC Blanks

Qualifications were required based on contamination in two (2) of the associated field QC blanks.

	000T100995	064E100695
methylene chloride	1 µg/L	NA
acetone	6 µg/L	20 µg/L

Specific Finding

	Samples	Compound	Action Level	Qualification
000T100995	050S000302	acetone	60 µg/Kg	U

Field QC Blanks, continued

Specific Finding

	Samples	Compound	Action Level	Qualification
064E100695	050S000101 050S000102 050S000201 050S000202 050S000601 050S000602 050S000702 050C001001	acetone	200 μg/Kg	U

Compound Identification

According to the laboratory, one (1) sample was re-analyzed as a 1 gram aliquot due to the high concentration of acetone present in the 5 gram aliquot analysis. However, the 5 gram analysis of the sample does not give an acetone result which is greater than, or even approaching the calibration range. Therefore, the RE sample is rejected in favor of the original analysis of the sample.

Specific Finding

The following sample is rejected, R, in favor of the original analysis of the sample.

050C01001RE

Compound Quantitation

Two (2) samples exhibited acetone results above the calibration range. The laboratory did not reanalyze the samples. Therefore, the reported results required qualifications.

Specific Finding

The positive results reported for acetone in the following samples are qualified as estimated, J, because they were greater than the range of the calibration curve.

050S000301
050S000901

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
050C000101 050S000501	acetone	+B	CRQL
050S000302	acetone	+	U
050S000101 050S000102 050S000201 050S000202 050S000601 050S000602 050S000702 050C001001	acetone	+	U
050C01001RE	All compounds	+/-	R
050S000301 050S000901	acetone	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1551

A validation was performed on the Volatile Data from SDG 1551. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibrations
*	•	Internal Standard Performance
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Continuing calibrations

The continuing calibrations that were analyzed with this data package exhibited %Ds that were not within %D continuing calibration criteria. All RRFs were within calibration criteria.

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, F459, contained compounds with %Ds greater than 25%, but less than 50%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J).

050C001001	bis (2-ethylhexyl)phthalate (31.4)

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
050C001001	bis (2-ethylhexyl)phthalate (31.4)	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1551

A validation was performed on the Pesticide/Aroclor Data from SDG 1551. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

Continuing Calibrations

Several continuing calibration standards associated with the reported samples exhibited %Ds above the QC limits.

Specific Findings

The continuing calibration of 11/08/95 (03:47/04:41) contained compounds with %Ds greater than 15% but less than 50%. For the samples and the non-compliant compounds listed below, the positive results are qualified as estimated, J.

050S000701	4,4'-DDD (20.6%)
	4,4'-DDE (16.2%)

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
050S000701	4,4'-DDD	+	J
	4,4'-DDE		

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1551

A validation was performed on the Metals Data from SDG 1551. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions
	•	MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Selenium	0.24 mg/kg	all samples below 1.2 mg/kg
Tin	6.22 mg/kg	all samples below 31.1 mg/kg

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U". The field or DI water blanks exhibited contamination but had no impact on the data.

Matrix Spike Analysis

Specific Finding

The Matrix Spike recovery for soils for Lead (0%) was below 30%. The non-detect results are rejected and all positive results are qualified as estimated, "J".

The Matrix Spike recoveries for soils for Antimony 36%), Selenium (71%) and Silver (52%) were below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Duplicate Analysis

The RPDs for field duplicates are within the 50% control limits.

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All samples	Se and Sn.	+	U
All samples	Pb.	+	J
		U	R
all samples	Sb, Se and Ag.	+/U	J/UJ
All "B" results	all analytes	B	J

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP OLM01.8 Method; the National Functional Guidelines for Organic Data Validation, June 1991, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1552

A validation was performed on the Volatile Data from SDG 1552. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibration
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Internal Standard Performance
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Method Blanks

Several of the method blanks that were analyzed exhibited contamination for acetone.

	VBLK10-1395H	VBLK10-1595H	VBLK10-1995H
1,1,2,2-tetrachloroethane	----	----	0.2 µg/Kg
acetone	3 µg/Kg	2 µg/Kg	----

Specific Finding

	Samples	Compound	Action Level	Qualification
VBLK101395H	050S001001	acetone	30 µg/Kg	U
VBLK101595H	051C000201 051S000201	acetone	20 µg/Kg	CRQL

Field QC Blanks

Qualifications were required based on contamination in two (2) of the associated field QC blanks.

	000T100995	064E100695
methylene chloride	1 µg/L	NA
acetone	6 µg/L	20 µg/L

Specific Finding

	Samples	Compound	Action Level	Qualification
000T100995	051S000101 051S000102 051S000302	acetone	60 µg/Kg	U

Field QC Blanks, continued

Specific Finding

	Samples	Compound	Action Level	Qualification
064E100695	051S000401	acetone	200 μg/Kg	U

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates that 5% of data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
050S001001	acetone	+B	U
051C000201 051S000201	acetone	+B	CRQL
051S000101 051S000102 051S000302	acetone	+	U
051S000401	acetone	+	U

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1552

A validation was performed on the Volatile Data from SDG 1552. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibrations
*	•	Internal Standard Performance
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Continuing calibrations

The continuing calibrations that were analyzed with this data package exhibited %Ds that were not within %D continuing calibration criteria. All RRFs were within calibration criteria.

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, F493, contained compounds with %Ds greater than 25%, but less than 50%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J).

051S000102	bis (2-ethylhexyl)phthalate (29.7)

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
051S000102	bis (2-ethylhexyl)phthalate (29.7)	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1552

A validation was performed on the Pesticide/Aroclor Data from SDG 1552. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

Analyte Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 25%.

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 25% are qualified as estimated, J.

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
ALL	ALL P >25%	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1552

A validation was performed on the Metals Data from SDG 1552. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions
	•	MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Arsenic	-0.41 mg/kg	no impact (4.1mg/kg)

The USEPA requires that the reviewer estimated the impact from negative bias. This reviewer requires that all positive and non-detect results below ten times the negative bias will be qualified as estimated, "J" or "UJ".

Matrix Spike Analysis

Specific Finding

The Matrix Spike recovery for soils for Tin (0%) was below 30%. The non-detect results are rejected and all positive results are qualified as estimated, "J".

The Matrix Spike recoveries for soils for Antimony (60%) and Silver (60%) were below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

MSAs

Specific Finding

The post digestion spike recovery for GFAA was above the upper control limits. All positive results for the listed samples below are qualified as estimated, "J".

Element	Sample IDs	% recoveries
Thallium	051S000102	116
Thallium	051S000202	117

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All samples	Sn.	+	J
		U	R
All samples	Sb and Ag.	+/U	J/UJ
051S000102 and 202.	Tl.	+	J
All "B" results	all analytes	B	J

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 8240; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG # 1606

A validation was performed on the Volatile Data from SDG 1606. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Laboratory Control Samples
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Rinseate Blank

Associated blank	Compound	Concentration	Action Level
059E102795	Acetone	16	160

Samples	Compound	Qualification
050S000401	acetone	U
050C000401		
050S000402		
050S000502		

Rinseate Blank (continued)

Associated blank	Compound	Concentration	Action Level
059E102795	Acetone	16	160

Samples	Compound	Qualification
050S000801 050S000902	acetone	U

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors or percent moisture as the associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria to the field samples.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
050S000401	acetone	+	U
050C000401			
050S000402			
050S000502			
050S000801			
050S000902			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1606

A validation was performed on the Semivolatile Data from SDG 1606. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibrations
*	•	Internal Standard Performance
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Continuing calibrations

The continuing calibrations that were analyzed with this data package exhibited %Ds that were not within %D continuing calibration criteria. All RRFs were within calibration criteria.

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, F679, contained compounds with %Ds greater than 50%, but less than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

050C000401	hexachlorocyclopentadiene	(55.7%)
050S000401		
050S000402		
050S000502		

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
050C000401	hexachlorocyclopentadiene	+/-	J/UJ
050S000401			
050S000402			
050S000502			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080 modified for TCLP methodology and target compound list; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1606

A validation was performed on the Pesticide/Aroclor Data from SDG 1606. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for Aroclors 1221, 1232, 1242, 1248, 1254, and toxaphene. No positive results were reported for the compounds analyzed with a single point calibration, therefore the data did not require qualification.

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL

NO QUALIFICATIONS ARE REQUIRED.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE

GASOLINE RANGE ORGANICS - GRO

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, calibration results, matrix spike recoveries and GC performance. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. SW-846 Method 8015 modified for gasoline range organics; the National Functional Guidelines for Organic Data Review, where applicable; and EPA DQO Level III requirements. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG# 1606

A validation was performed on the GRO from SDG 1606. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Column Performance
	•	Calibrations
*	•	Blanks
*	•	Surrogates
*	•	Matrix Spike/Matrix Spike Duplicate
	•	Field Duplicates
*	•	Identification/Quantitation

* - All criteria were met for this parameter.

Initial Calibrations

The initial calibration for gasoline range organics did not meet the 20% %RSD criteria.

Specific Finding

The initial calibration for gasoline range organics exceeded the 20% RSD criteria. All positive results are qualified as estimated, J.

All Samples	gasoline (22.6%)

DATA ASSESSMENT NARRATIVE
GASOLINE RANGE ORGANICS - GRO

Continuing Calibrations

The continuing calibration standards did not always meet the 15% difference criteria.

Specific Findings

The continuing calibration standard 1113_006.D exhibited a %D greater than 15% but less than 50%. All positive results in the following samples are qualified as estimated, J.

050C000401	GRO (20.2%)
050S000401	
050S000402	

Field Duplicates

Specific Finding

The following field duplicate pair exhibited non-compliant precision results (66%). The reported positive results are qualified as estimated, J.

050S000401
050C000401

Overall Performance

Overall performance was acceptable. The data reviewer estimates than less than 5% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
ALL SAMPLES	GRO	+	J
050C000401 050S000401 050S000402	GRO	+	J
050S000401 050C000401	GRO	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

DIESEL RANGE ORGANICS - DRO

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, calibration results, matrix spike recoveries and GC performance. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. SW-846 Method 8015 modified for diesel range organics; the National Functional Guidelines for Organic Data Review, where applicable; and EPA DQO Level III requirements. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG# 1606

A validation was performed on the DRO from SDG 1606. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Column Performance
*	•	Calibrations
*	•	Blanks
*	•	Surrogates
*	•	Matrix Spike/Matrix Spike Duplicate
	•	Field Duplicates
*	•	Identification/Quantitation

* - All criteria were met for this parameter.

Field Duplicates

The field duplicate pair required qualification because of non-compliant precision results (86%).

Specific Finding

The following field duplicate pair exhibited non-compliant precision results. The reported positive results are qualified as estimated, J.

050S000401
050C000401

DATA ASSESSMENT NARRATIVE
DIESEL RANGE ORGANICS - DRO

Overall Performance

Overall performance was acceptable. The data reviewer estimates that less than 5% of the data required qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
050S000401	DRO	+	J
050C000401			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS AND CYANIDE

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1606

A validation was performed on the Metals Data from SDG 1606. The data was evaluated based on the following parameters.

- * Data Completeness
- * Holding Times
- * Calibrations
- Blanks
- * Interferences
- Matrix Spike Recovery
- Matrix Duplicates
- Field Duplicates
- * Laboratory Control Samples
- * Serial Dilutions
- * MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Tin	6.32 mg/kg	all soil samples below 31.6 mg/kg

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U". The field or DI water blanks exhibited contamination but had no impact on the data.

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Thallium	-0.53 mg/kg	all soil samples below 5.3 mg/kg

This reviewer qualifies all samples results below ten times the negative bias as estimated, "J" or "UJ".

Matrix Spike Recovery

Specific Finding

The Matrix Spike recoveries for soils for Antimony (34%), Arsenic (52%) and Silver (69%) were below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Duplicate Analysis

Specific Finding

The laboratory duplicate RPD for Zinc (44%) was greater than 35% and all positive results for soils are qualified as estimated, "J". The RPDs for Chromium and Lead were below 35% and will not be qualified. The field duplicate results for Lead (134%) were greater than 50% and all positive results will be qualified as estimated, "J" for all soil samples.

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
050S000401 and C000401.	Sn.	+	U
all soil samples	Tl.	+/U	J/UJ
all soil samples	Sb, As and Ag.	+/U	J/UJ
all soil samples	Pb and Zn.	+	J
All "B" results	all analytes	B	J

SWMU 64

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90 SOW; the National Functional Guidelines for Organic Data Review, June 1991, and DQO Level III. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG # 1549

A validation was performed on the Volatile Data from SDG 1549. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Method Blanks

Associated blank	Compound	Conc.	Action Level
VBLK101195C	acetone	3J ug/Kg	30 ug/Kg

Samples	Compound	Qualification
064S000301	acetone	CRQL
064S000701	acetone	U

Field Blanks

Associated blank	Compound	Conc.	Action Level
065F100695	2-butanone	6J ug/L	60 ug/L

Samples	Compound		Qualification
064S000103	2-butanone		CRQL

Rinseate Blanks

Associated blank	Compound	Conc.	Action Level
065E100695	acetone	20 ug/L	200 ug/L

Samples	Compound		Qualification
064S000101 064S000401 064S000501	acetone		CRQL
064S000103 064S000601	acetone		U

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
064S000301	acetone	+	CRQL
064S000701	acetone	+	U
064S000103	2-butanone	+	CRQL
064S000101 064S000401 064S000501	acetone	+	CRQL
064S000103 064S000601	acetone	+	U

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1549

A validation was performed on the Volatile Data from SDG 1549. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Continuing calibrations

The continuing calibrations that were analyzed with this data package exhibited %Ds that were not within %D continuing calibration criteria. All RRFs were within calibration criteria.

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, F410, contained compounds with %Ds greater than 25%, but less than 50%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J).

064S000103 bis (2-ethylhexyl)phthalate (27.5)

The continuing calibration, F440, contained compounds with %Ds greater than 50%, but less than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

064C000301 butylbenzylphthalate (53.2)
064S000201
064S000203
064S000301
064S000303
064S000501
064S000401

Method Blanks

Associated blank	Compound	Conc.	Action level
SBLK101395F	di-n-butylphthalate	650	6500
	butylbenzylphthalate	85J	850
	bis(2-ethylhexyl)phthalate	130J	1300

Samples	Compound	Qualification
064S000203	di-n-butylphthalate	CRQL
064S000303		
064S000401		
064S000603		
064S000803		
064S000403		
064S000301		

Method Blanks (continued)

Associated blank	Compound	Conc.	Action Level
SBLK101395F	di-n-butylphthalate	650	6500
	butylbenzylphthalate	85J	850
	bis(2-ethylhexyl)phthalate	130J	1300

Samples	Compound	Qualification
064S000203 064S000303 064S000403	butylbenzylphthalate	CRQL
064S000203 064S000303 064S000803 064S000403	bis(2-ethylhexyl)phthalate	CRQL

Rinseate Blanks

Associated blank	Compound	Conc.	Action Level
E100695	bis(2-ethylhexyl)phthalate	2J	20

Samples	Compound	Qualification
064S000103	bis(2-ethylhexyl)phthalate	CRQL

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
064S000103	bis (2-ethylhexyl)phthalate (27.5)	+	J
064C000301	butylbenzylphthalate (53.2)	+/-	J/UJ
064S000201			
064S000203			
064S000301			
064S000303			
064S000501			
064S000401			
064S000203	di-n-butylphthalate	+	CRQL
064S000303			
064S000401			
064S000603			
064S000803			
064S000403			
064S000301			
064S000203	butylbenzylphthalate	+	CRQL
064S000303			
064S000403			
064S000203	bis(2-ethylhexyl)phthalate	+	CRQL
064S000303			
064S000803			
064S000403			
064S000103	bis(2-ethylhexyl)phthalate	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1549

A validation was performed on the Pesticide/Aroclor Data from SDG 1549. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors 1221, 1232, 1242, 1248, and 1254. The data did not require qualification because no positive results were reported for the aroclors analyzed with a single point calibration.

Surrogate Recoveries

Several samples exhibited non-compliant DCB recoveries.

Specific Finding

The samples listed below exhibited high DCB recoveries. The positive results are qualified as estimated, J.

Sample ID	Surrogate	% Recovery
064S000101	DCB	246%/238%
064S000401	DCB	176%

Analyte Identification/Quantitation

Several samples required dilution to accurately quantitate target compounds. Several samples exhibited column quantitation %Ds greater than 25%. It is the professional opinion of the data reviewer that single component pesticides reported in the samples with high concentrations of aroclors should be considered suspect.

Specific Findings

For the following samples and compounds, the results for the original analysis are replaced with the corresponding results from the dilution analysis. All other results from the dilution are rejected, UR, in favor of the results reported from the undiluted analysis.

064S000201	Aroclor 1260
064S000401	Dieldrin 4,4'-DDT Alpha-Chlordane Gamma-Chlordane Aroclor 1260
064S000301	Dieldrin
064C000301	Aroclor 1260

Analyte Identification/Quantitation, Continued

The positive results reported in all samples which exhibited column quantitation differences greater than 25% are qualified as estimated, J.

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates less than 10% of the data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
064S000101 064S000401	ALL	+	J
064S000201	Aroclor 1260	+	D
064S000201DL	ALL OTHERS	+/-	UR
064S000401	Dieldrin 4,4'-DDT Alpha-Chlordane Gamma-Chlordane Aroclor 1260	+	D
064S000401DL	ALL OTHERS	+/-	UR
064S000301 064C000301	Dieldrin Aroclor 1260	+	D
064S000301DL 064C000301DL	ALL OTHERS	+/-	UR
ALL	ALL P >25%	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS, CYANIDE AND TPH

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1549

A validation was performed on the Metals Data from SDG 1549. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions
	●	MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Thallium	-0.95 mg/kg	all samples below 9.5 mg/kg

The USEPA requires that the reviewer estimated the impact from negative bias. This reviewer requires that all positive and non-detect results below ten times the negative bias will be qualified as estimated, "J" or "UJ".

Matrix Spike Analysis

Specific Finding

The Matrix Spike recovery for soils for Antimony (27%) was below 30%. The non-detect results are rejected and all positive results are qualified as estimated, "J".

The Matrix Spike recoveries for soils for Arsenic (69%), Silver (60%) and Selenium (71%) were below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

The Matrix Spike recovery for soils for Mercury (242%) was above the upper control limits. All positive results are qualified as estimated, "J".

Duplicate Analysis

Specific Finding

The field duplicate RPDs were less than 50% and will not be qualified.

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All samples	Tl.	+/U	J/UJ
All samples	Sb.	+	J
		U	R
All samples	As, Se and Ag.	+/U	J/UJ
All samples	Hg.	+	J
All "B" results	all analytes	B	J

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 8240; the National Functional Guidelines for Organic Data Review, and DQO Level IV. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualifications table.

SDG # 1592

A validation was performed on the Volatile Data from SDG 1592. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Laboratory Control Samples
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Method Blank

Associated blank	Compound	Concentration	Action Level
VBLK110195H	methylene chloride	1J	10

Samples	Compound	Qualification
064S200801	methylene chloride	CRQL

Rinseate Blank

Associated blank	Compound	Concentration	Action Level
059E102795	vinyl chloride	91	455
	Acetone	16	160

Samples	Compound	Qualification
064S200801	acetone	CRQL
064S200201		
064S200203		
064S200901	acetone	U
064S000903		
064S200703		
064S200803		
064S200403		
064S200503		

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
064S200801	methylene chloride	+	CRQL
064S200801 064S200201 064S200203	acetone	+	CRQL
064S200901 064S000903 064S200403 064S200503 064S200703 064S200803	acetone	+	U

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA CLP, 3/90; National Functional Guidelines for Organic Data Review, and DQO Level IV. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 1592

A validation was performed on the Semivolatile Data from SDG 1592. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Continuing calibrations

The continuing calibrations that were analyzed with this data package exhibited %Ds that were not within %D continuing calibration criteria. All RRFs were within calibration criteria.

Continuing calibrations (continued)

Specific finding:

The continuing calibration, F651, contained compounds with %Ds greater than 50%, but less than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

065S000901 065S000903	Hexachlorocyclopentadiene (65.1)

Method Blanks

Associated blank	Compound	Conc.	Action level
SBLK103095F	di-n-butlyphthalate	170J	1700

Samples	Compound	Qualification
064S000901	di-n-butylphthalate	CRQL

Rinseate Blank

Associated blank	Compound	Conc.	Action level
064E100695	bis(2-ethylhexyl)phthalate	7J	70

Samples	Compound	Qualification
064S000901	bis(2-ethylhexyl)phthalate	CRQL

System Performance and Overall Assessment

The overall system performance was fair. The laboratory did not encounter any large problems. The data reviewer estimates that less than 5% of the data is qualified.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
065S000901 065S000903	hexachlorocyclopentadiene	+/-	J/UJ
064S000901	di-n-butylphthalate	+	CRQL
064S000901	bis(2-ethylhexyl)phthalate	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

CHLORINATED PESTICIDES/PCBs

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8080; the National Functional Guidelines for Organic Data Validation, June 1991, and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1592

A validation was performed on the Pesticide/PCB Data from SDG 1592. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The instrument experienced a significant retention time shift between the analysis of the initial calibration curve on 10/09/95 and the analysis of the samples in this sequence on 11/20/95. The laboratory periodically updated the retention time windows (RTWs) appropriately based on the guidelines in the method (SW-846, 8000 & 8080). However, the laboratory did not submit updated retention time windows in the data package, but submitted the original ICAL retention time windows. Therefore, according to the Form 8s (pesticide analytical sequence) all TCMX and DCB retention times are outside the RTWs. The quantitation pages list expected retention times, actual retention times and δ-retention times which are based on the updated retention time windows. There was no impact to the data since the laboratory was correctly updating the RTWs. However, the summary forms in the data package should reflect the updated RTWs. No qualifications were required.

System Performance and Overall Assessment

Overall performance was acceptable. It should be noted that the extraction and analysis dates on the spreadsheets are incorrect in many cases. The data did not require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL

NO QUALIFICATIONS WERE REQUIRED

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS AND CYANIDE

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the CLP ILM03.0 Method; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 1592

A validation was performed on the Metals Data from SDG 1592. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions
*	●	MSAs

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Tin	11.3 mg/kg	all soil samples below 56.5 mg/kg

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U". The field or DI water blanks exhibited contamination but had no impact on the data.

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Thallium	-0.50 mg/kg	all soil samples below 5.0 mg/kg

This reviewer qualifies all samples results below ten times the negative bias as estimated, "J" or "UJ".

Matrix Spike Recovery

Specific Finding

The Matrix Spike recoveries for soils for Antimony (31%), Arsenic (68%), Lead (74%) and Silver (69%) were below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
064S000901	Sn.	+	U
all soil samples	Tl.	+/U	J/UJ
all soil samples	Sb, As, Pb and Ag.	+/U	J/UJ
All "B" results	all analytes	B	J

PBK 3/18/96

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Appendix B

Validated Data Tables

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 11

APX9-METAL													
		SAMPLE ID ------->	011-S-0001-01		011-S-0002-01		011-S-0004-01		011-S-0006-01		011-S-0009-01		011-S-0014-01	
		ORIGINAL ID ----->	011S000101		011S000201		011S000401		011S000601		011S000901		011S001401	
		LAB SAMPLE ID --->	136784S		136785S		136786S		136787S		136788S		136789S	
		ID FROM REPORT -->	011S000101		011S000201		011S000401		011S000601		011S000901		011S001401	
		SAMPLE DATE ----->												
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		1565	VAL	1565	VAL	1565	VAL	1565	VAL	1565	VAL	1565	VAL
SB	Antimony		11.1	UR	11.8	UR	11.	UR	11.	UR	11.9	UR	11.7	UR
AS	Arsenic		5.9		4.9		6.3		2.7		6.8		2.7	
BA	Barium		70.4		162.		115.		60.4		89.6		146.	
BE	Beryllium		0.29	J	0.46	J	0.44	J	0.32	J	0.46	J	0.41	J
CD	Cadmium		2.8		2.4		3.4		1.1	J	3.5		2.3	
CR	Chromium		9.6		9.5		11.4		19.5		8.6		8.9	
CO	Cobalt		4.6	J	7.6	J	8.2	J	4.	J	9.6	J	6.5	J
CU	Copper		10.6		14.		15.5		7.7		15.3		11.9	
PB	Lead		9.7		10.		8.9		6.8		12.		78.7	
HG	Mercury		0.11	U	0.12	U	0.24		0.11	U	0.12	U	0.12	U
NI	Nickel		8.8	J	16.2		19.4		40.9		9.1	J	6.	J
SE	Selenium		0.34	J	0.24	U	0.22	U	0.22	U	0.39	J	0.23	U
AG	Silver		0.67	UJ	0.71	UJ	0.66	UJ	0.66	UJ	0.71	UJ	0.7	UJ
TL	Thallium		0.44	UJ	0.47	UJ	0.44	UJ	0.44	UJ	0.47	UJ	0.47	UJ
V	Vanadium		21.		22.3		21.		15.2		24.3		16.3	
ZN	Zinc		36.8		50.7		53.6		26.5		55.3		134.	
SN	Tin		4.5	U	4.7	U	4.4	U	4.4	U	4.7	U	4.7	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 11

SW846-PEST																	
	SAMPLE ID ------->	011-S-0001-01		011-S-0002-01		011-S-0004-01		011-S-0006-01		011-S-0009-01		011-S-0014-01	
	ORIGINAL ID ----->	011S000101		011S000201		011S000401		011S000601		011S000901		011S001401	
	LAB SAMPLE ID --->	136784		136785		136786		136787		136788		136789	
	ID FROM REPORT -->	011S000101		011S000201		011S000401		011S000601		011S000901		011S001401	
	SAMPLE DATE ----->	10/05/95		10/05/95		10/04/95		10/04/95		10/04/95		10/04/95	
	DATE EXTRACTED -->	11/02/95		11/02/95		11/02/95		11/02/95		11/02/95		11/02/95	
	DATE ANALYZED --->	11/11/95		11/11/95		11/16/95		11/11/95		11/11/95		11/11/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1565	VAL	1565	VAL	1565	VAL	1565	VAL	1565	VAL	1565	VAL
319-84-6	alpha-BHC	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
319-85-7	beta-BHC	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
319-86-8	delta-BHC	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
76-44-8	Heptachlor	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
309-00-2	Aldrin	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
1024-57-3	Heptachlor epoxide	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
959-98-8	Endosulfan I	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
60-57-1	Dieldrin	3.5	U	3.5	U	82.	U	130.	D	4.2	U	20.	U
72-55-9	4,4'-DDE	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	D
72-20-8	Endrin	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	U
33213-65-9	Endosulfan II	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	U
72-54-8	4,4'-DDD	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	U
1031-07-8	Endosulfan sulfate	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	U
50-29-3	4,4'-DDT	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	U
72-43-5	Methoxychlor	18.	U	18.	U	410.	U	92.	U	21.	U	98.	U
53494-70-5	Endrin ketone	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	U
7421-93-4	Endrin aldehyde	3.5	U	3.5	U	82.	U	18.	U	4.2	U	20.	U
5103-71-9	alpha-Chlordane	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
5103-74-2	gamma-Chlordane	1.8	U	1.8	U	41.	U	9.2	U	2.1	U	9.8	U
8001-35-2	Toxaphene	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U
12674-11-2	Aroclor-1016	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U
11104-28-2	Aroclor-1221	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U
53469-21-9	Aroclor-1242	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U
12672-29-6	Aroclor-1248	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U
11097-69-1	Aroclor-1254	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U
11096-82-5	Aroclor-1260	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U
12789-03-6	Technical Chlordane	36.	U	35.	U	820.	U	180.	U	42.	U	200.	U
11141-16-5	Aroclor-1232	35.	U	35.	U	820.	U	180.	U	42.	U	200.	U

*** Validation Complete ***

DATALCP3
03/21/96

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 36

APX9-METAL													
	SAMPLE ID ------->	036-S-0001-01		036-S-0002-01		036-S-0003-01		036-S-0004-01		036-C-0005-01		036-S-0005-01	
	ORIGINAL ID ----->	036S000101		036S000201		036S000301		036S000401		036C000501		036S000501	
	LAB SAMPLE ID --->	136608S		136609S		136610S		136611S		136606S		136607S	
	ID FROM REPORT -->	036S000101		036S000201		036S000301		036S000401		036C000501		036S000501	
	SAMPLE DATE ----->	10/11/95		10/11/95		10/11/95		10/11/95		10/11/95		10/11/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL
SB	Antimony	10.4	UJ	11.1	UJ	10.8	UJ	11.4	UJ	11.	UJ	11.2	UJ
AS	Arsenic	3.9		11.		5.7		7.3		7.5		8.3	
BA	Barium	63.3		118.		85.9		63.5		112.		115.	
BE	Beryllium	0.79	J	0.48	J	0.4	J	0.28	J	0.44	J	0.48	J
CD	Cadmium	0.62	U	0.66	U	0.65	U	0.68	U	0.66	U	0.67	U
CR	Chromium	3.5	J	10.6	J	8.2	J	3.5	J	7.7	J	7.7	J
CO	Cobalt	2.2	J	7.4	J	7.7	J	7.2	J	6.9	J	7.5	J
CU	Copper	4.8	J	13.1		8.4		6.		8.9		9.1	
PB	Lead	14.5		79.		12.		57.		12.8		12.7	
HG	Mercury	0.1	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
NI	Nickel	4.2	UJ	6.8	J	4.3	UJ	4.5	UJ	4.4	UJ	4.5	UJ
SE	Selenium	0.21	UJ	0.22	U	0.22	U	0.23	U	0.33	J	0.25	J
AG	Silver	0.77	J	0.66	UJ	0.65	UJ	0.68	UJ	0.66	UJ	0.67	UJ
TL	Thallium	0.42	UJ	0.44	UJ	0.43	UJ	0.45	UJ	0.44	UJ	0.45	UJ
V	Vanadium	6.1	J	23.5		21.8		14.5		19.8		20.2	
ZN	Zinc	20.4		50.		32.1		25.		36.		34.5	
SN	Tin	7.1	J	7.7	J	4.3	U	4.5	U	4.4	U	8.	J

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 36

DIOXIN													
	SAMPLE ID ------->	036-S-0001-01		036-S-0002-01		036-S-0003-01		036-S-0004-01		036-S-0005-01		036-C-0005-01	
	ORIGINAL ID ----->	136608		136609		136610		136611		136607		136606	
	LAB SAMPLE ID --->	23804.03		23804.04		23804.05		23804.06		23804.02		23804.01	
	ID FROM REPORT -->	136608		136609		136610		136611		136607		136606	
	SAMPLE DATE ----->	10/11/95		10/11/95		10/11/95		10/11/95		10/11/95		10/11/95	
	DATE EXTRACTED -->	10/17/95		10/17/95		10/17/95		10/17/95		10/17/95		10/17/95	
	DATE ANALYZED --->	10/26/95		10/31/95		10/31/95		10/31/95		10/26/95		10/26/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL
3268-87-9	OCDD	1.2084		2.1273	J	2.3877	J	3.7353	J	1.2194		1.407	
39001-02-0	OCDF	0.0161	U	0.0062		0.0037	U	0.0021	U	0.0071		0.0069	
1746-01-6	2378-TCDD	0.0019	U	0.0058	U	0.0058	U	0.004	U	0.0015	U	0.0022	U
51207-31-9	2378-TCDF	0.0018	U	0.0037	U	0.0054	U	0.0032	U	0.0016	U	0.0025	U
57117-41-6	12378-PeCDF	0.0025	U	0.0028	U	0.0059	U	0.0021	U	0.002	U	0.0037	U
40321-76-4	12378-PeCDD	0.0021	U	0.0051	U	0.0034	U	0.0036	U	0.0026	U	0.0031	U
57117-31-4	23478-PeCDF	0.0022	U	0.0026	U	0.0055	U	0.002	U	0.0018	U	0.0032	U
70648-26-9	123478-HxCDF	0.001	U	0.002	U	0.0033	U	0.0038	U	0.0007	U	0.0013	U
57117-44-9	123678-HxCDF	0.0009	U	0.0014	U	0.0022	U	0.0026	U	0.0007	U	0.0012	U
39227-28-6	123478-HxCDD	0.0072	U	0.0044	U	0.0058	U	0.0054	U	0.0058	U	0.0068	U
57653-85-7	123678-HxCDD	0.0031	U	0.0026	U	0.0035	U	0.0032	U	0.0025	U	0.0029	U
19408-74-3	123789-HxCDD	0.0042	U	0.0031	U	0.0042	U	0.0038	U	0.0033	U	0.0039	U
60851-34-5	234678-HxCDF	0.0017	U	0.002	U	0.0032	U	0.0037	U	0.0012	U	0.0021	U
72918-21-9	123789-HxCDF	0.002	U	0.0021	U	0.0035	U	0.004	U	0.0015	U	0.0025	U
67562-39-4	1234678-HpCDF	0.0067		0.0061		0.0024	U	0.0048		0.0041	U	0.0043	U
35822-46-9	1234678-HpCDD	0.0331		0.0461	J	0.0534		0.0685		0.0019	U	0.0336	
55673-89-7	1234789-HpCDF	0.005	U	0.0052	U	0.0033	U	0.0034	U	0.003	U	0.0026	U

*** Validation Complete ***

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SWMU 36

SW846-PEST																			
	SAMPLE ID ------->	036-S-0001-01 DL		036-S-0002-01		036-S-0003-01		036-S-0004-01 DL		036-S-0005-01		036-C-0005-01	
	ORIGINAL ID ----->	036S000101DL		036S000201		036S000301		036S000401DL		036S000501		036C000501	
	LAB SAMPLE ID --->	136608_10DL		136609		136610		136611_5DL		136607		136606	
	ID FROM REPORT -->	036S000101DL		036S000201		036S000301		036S000401DL		036S000501		036C000501	
	SAMPLE DATE ----->	10/11/95		10/11/95		10/11/95		10/11/95		10/11/95		10/11/95	
	DATE EXTRACTED -->	10/21/09		10/21/09		10/21/09		10/21/09		10/21/09		10/21/09	
	DATE ANALYZED --->	11/07/09		11/07/09		11/07/09		11/07/09		11/07/09		11/07/09	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL
319-84-6	alpha-BHC	17.	U	1.8	U	1.8	U	9.4	U	1.9	U	1.8	U
319-85-7	beta-BHC	17.	U	1.8	U	1.8	U	9.4	U	1.9	U	1.8	U
319-86-8	delta-BHC	17.	U	1.8	U	1.8	U	9.4	U	1.9	U	1.8	U
58-89-9	gamma-BHC (Lindane)	17.	U	1.8	U	1.8	U	9.4	U	1.9	U	1.8	U
76-44-8	Heptachlor	17.	U	1.8	U	1.8	U	9.4	U	1.9	U	1.8	U
309-00-2	Aldrin	17.	U	1.8	U	1.8	U	9.4	U	1.9	U	1.8	U
1024-57-3	Heptachlor epoxide	17.	U	1.8	U	9.8		9.4	U	1.8	J	1.7	J
959-98-8	Endosulfan I	17.	U	1.8	U	1.8	U	9.4	U	1.9	U	1.8	U
60-57-1	Dieldrin	120.	D	12.		70.	D	78.	D	3.6	J	4.5	
72-55-9	4,4'-DDE	27.	JD	19.		7.2	J	19.	U	3.8	U	1.6	J
72-20-8	Endrin	34.	U	3.7	U	3.6	U	19.	U	3.8	U	3.7	U
33213-65-9	Endosulfan II	34.	U	3.7	U	2.2	J	19.	U	3.8	U	3.7	U
72-54-8	4,4'-DDD	34.	U	3.7	U	3.6	U	19.	U	3.8	U	3.7	U
1031-07-8	Endosulfan sulfate	34.	U	3.7	U	3.6	U	19.	U	3.8	U	3.7	U
50-29-3	4,4'-DDT	31.	JD	24.		8.8	J	19.	U	3.	J	5.2	J
72-43-5	Methoxychlor	170.	U	18.	U	18.	U	94.	U	19.	U	18.	U
53494-70-5	Endrin ketone	34.	U	3.7	U	1.6	J	19.	U	3.8	U	3.7	U
7421-93-4	Endrin aldehyde	34.	U	3.7	U	3.6	U	19.	U	3.8	U	3.7	U
5103-71-9	alpha-Chlordane	17.	U	3.4	J	26.		8.2	JD	4.		4.7	J
5103-74-2	gamma-Chlordane	17.	U	1.9	J	8.6		9.4	U	1.6	J	1.6	J
8001-35-2	Toxaphene	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U
12674-11-2	Aroclor-1016	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U
11104-28-2	Aroclor-1221	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U
53469-21-9	Aroclor-1242	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U
12672-29-6	Aroclor-1248	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U
11097-69-1	Aroclor-1254	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U
11096-82-5	Aroclor-1260	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U
12789-03-6	Technical Chlordane	340.	U	37.	U	210.		190.	U	38.	U	37.	U
11141-16-5	Aroclor-1232	340.	U	37.	U	36.	U	190.	U	38.	U	37.	U

*** Validation Complete ***

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SWMU 36

SW846-SVOA													
	SAMPLE ID ------->	036-S-0001-01		036-S-0002-01		036-S-0003-01		036-S-0004-01		036-S-0005-01		036-C-0005-01	
	ORIGINAL ID ----->	036S000101		036S000201		036S000301		036S000401		036S000501		036C000501	
	LAB SAMPLE ID --->	136608		136609		136610		136611		136607		136606	
	ID FROM REPORT -->	036S000101		036s000201		036s000301		036s000401		036s000501		036c000501	
	SAMPLE DATE ----->			10/11/95		10/11/95		10/11/95		10/11/95		10/11/95	
	DATE EXTRACTED -->	10/22/95		10/22/95		10/22/95		10/22/95		10/22/95		10/22/95	
	DATE ANALYZED --->	11/02/95		11/02/95		11/02/95		11/02/95		11/02/95		11/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL
108-95-2	Phenol	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
111-44-4	bis(2-Chloroethyl)ether	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
95-57-8	2-Chlorophenol	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
541-73-1	1,3-Dichlorobenzene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
106-46-7	1,4-Dichlorobenzene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
95-50-1	1,2-Dichlorobenzene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
95-48-7	2-Methylphenol (o-Cresol)	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
106-44-5	4-Methylphenol (p-Cresol)	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
621-64-7	N-Nitroso-di-n-propylamine	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
67-72-1	Hexachloroethane	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
98-95-3	Nitrobenzene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
78-59-1	Isophorone	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
88-75-5	2-Nitrophenol	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
105-67-9	2,4-Dimethylphenol	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
120-83-2	2,4-Dichlorophenol	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
120-82-1	1,2,4-Trichlorobenzene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
91-20-3	Naphthalene	340.	U	370.	U	75.	J	110.	J	380.	U	370.	U
106-47-8	4-Chloroaniline	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
87-68-3	Hexachlorobutadiene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
111-91-1	bis(2-Chloroethoxy)methane	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
59-50-7	4-Chloro-3-methylphenol	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
91-57-6	2-Methylnaphthalene	340.	U	370.	U	370.	U	44.	J	380.	U	370.	U
77-47-4	Hexachlorocyclopentadiene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
88-06-2	2,4,6-Trichlorophenol	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
95-95-4	2,4,5-Trichlorophenol	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
91-58-7	2-Chloronaphthalene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
88-74-4	2-Nitroaniline	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
131-11-3	Dimethyl phthalate	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
208-96-8	Acenaphthylene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
606-20-2	2,6-Dinitrotoluene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
99-09-2	3-Nitroaniline	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
83-32-9	Acenaphthene	340.	U	370.	U	47.	J	120.	J	380.	U	370.	U
51-28-5	2,4-Dinitrophenol	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
100-02-7	4-Nitrophenol	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
132-64-9	Dibenzofuran	340.	U	370.	U	370.	U	61.	J	380.	U	370.	U

*** Validation Complete ***

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SWMU 36

SW846-SVOA															
	SAMPLE ID ------->	036-S-0001-01		036-S-0002-01		036-S-0003-01		036-S-0004-01		036-S-0005-01		036-C-0005-01	
	ORIGINAL ID ----->	036S000101		036S000201		036S000301		036S000401		036S000501		036C000501	
	LAB SAMPLE ID --->	136608		136609		136610		136611		136607		136606	
	ID FROM REPORT -->	036S000101		036s000201		036s000301		036s000401		036s000501		036c000501	
	SAMPLE DATE ----->			10/11/95		10/11/95		10/11/95		10/11/95		10/11/95	
	DATE EXTRACTED -->	10/22/95		10/22/95		10/22/95		10/22/95		10/22/95		10/22/95	
	DATE ANALYZED --->	11/02/95		11/02/95		11/02/95		11/02/95		11/02/95		11/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL	1564	VAL
121-14-2	2,4-Dinitrotoluene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
84-66-2	Diethylphthalate	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
7005-72-3	4-Chlorophenylphenylether	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
86-73-7	Fluorene	340.	U	370.	U	40.	J	90.	J	380.	U	370.	U
100-01-6	4-Nitroaniline	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
86-30-6	N-Nitrosodiphenylamine	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
101-55-3	4-Bromophenyl-phenylether	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
118-74-1	Hexachlorobenzene	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
87-86-5	Pentachlorophenol	860.	U	920.	U	920.	U	940.	U	950.	U	920.	U
85-01-8	Phenanthrene	53.	J	49.	J	220.	J	660.		380.	U	370.	U
120-12-7	Anthracene	340.	U	370.	U	55.	J	140.	J	380.	U	370.	U
86-74-8	Carbazole	340.	U	370.	U	42.	J	150.	J	380.	U	370.	U
84-74-2	Di-n-butylphthalate	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
206-44-0	Fluoranthene	120.	J	77.	J	250.	J	810.		380.	U	370.	U
129-00-0	Pyrene	100.	J	71.	J	200.	J	680.		380.	U	370.	U
85-68-7	Butylbenzylphthalate	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
91-94-1	3,3'-Dichlorobenzidine	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
56-55-3	Benzo(a)anthracene	71.	J	42.	J	120.	J	410.		380.	U	370.	U
218-01-9	Chrysene	80.	J	46.	J	120.	J	450.		380.	U	370.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
117-84-0	Di-n-octyl phthalate	340.	U	370.	U	370.	U	370.	U	380.	U	370.	U
205-99-2	Benzo(b)fluoranthene	74.	J	45.	J	120.	J	410.		380.	U	370.	U
207-08-9	Benzo(k)fluoranthene	66.	J	40.	J	91.	J	340.	J	380.	U	370.	U
50-32-8	Benzo(a)pyrene	72.	J	41.	J	100.	J	380.		380.	U	370.	U
193-39-5	Indeno(1,2,3-cd)pyrene	60.	J	370.	U	75.	J	270.	J	380.	U	370.	U
53-70-3	Dibenz(a,h)anthracene	340.	U	370.	U	36.	J	120.	J	380.	U	370.	U
191-24-2	Benzo(g,h,i)perylene	110.	J	37.	J	84.	J	300.	J	380.	U	370.	U

*** Validation Complete ***

NAS MEMPHIS
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SWMU 36

SW846-VOA

SAMPLE ID ------->	036-G-2006-43
ORIGINAL ID ----->	036G200643
LAB SAMPLE ID --->	137963
ID FROM REPORT -->	036G200643
SAMPLE DATE ----->	10/28/95
DATE ANALYZED --->	11/07/95
MATRIX ---------->	Water
UNITS ---------->	UG/L

CAS #	Parameter	1596	VAL
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene chloride	10.	U
67-64-1	Acetone	33.	U
75-15-0	Carbon disulfide	10.	U
75-35-4	1,1-Dichloroethylene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone (MEK)	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	1.	J
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	Xylene (Total)	10.	U

*** Validation Complete ***

NAS MEMPHIS
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SWMU 36

TPH-DRO											
		SAMPLE ID ------->	036-S-0001-10		036-S-0002-11		036-S-0003-10		036-S-0004-10			
		ORIGINAL ID ----->	036S000110		036S000211		036S000310		036S000410			
		LAB SAMPLE ID --->	137602		137603		137831		137832			
		ID FROM REPORT -->	036S000110		036S000211		036S000310		036S000410			
		SAMPLE DATE ----->	10/23/95		10/23/95		10/26/95		10/26/95			
		DATE EXTRACTED -->	11/05/95		11/05/95		11/09/95		11/09/95			
		DATE ANALYZED --->	11/07/95		11/07/95		11/07/95		11/07/95			
		MATRIX ---------->	Soil		Soil		Soil		Soil			
		UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter		1592	VAL	1592	VAL	1592	VAL	1592	VAL		
9999900-02-6	TPH - Diesel Range Organics		4100.	U	3700.	U	4700.	U	4500.	U		

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 36

TPH-GRO											
	SAMPLE ID ------->	036-S-0001-10		036-S-0002-11		036-S-0003-10		036-S-0004-10			
	ORIGINAL ID ----->	036S000110		036S000211		036S000310		036S000410			
	LAB SAMPLE ID --->	137602		137603		137831		137832			
	ID FROM REPORT -->	036S000110		036S000211		036S000310		036S000410			
	SAMPLE DATE ----->	10/23/95		10/23/95		10/26/95		10/26/95			
	DATE ANALYZED --->	11/02/95		11/02/95							
	MATRIX ---------->	Soil		Soil		Soil		Soil			
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter	1592	VAL	1592	VAL	1592	VAL	1592	VAL		
9999900-02-5	TPH - Gasoline Range Organics	62.	U	56.	U	59.		56.			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

APX9-METAL													
	SAMPLE ID ------->	042-S-0001-01		042-S-0001-03		042-S-0002-01		042-S-0002-03		042-S-0003-01		042-S-0003-03	
	ORIGINAL ID ----->	042S000101		042S000103		042S000201		042S000203		042S000301		042S000303	
	LAB SAMPLE ID --->	8-135883S		8-135880S		8-135884S		8-135881S		8-135885S		8-135882S	
	ID FROM REPORT -->	042S000101		042S000103		042S000201		042S000203		042S000301		042S000303	
	SAMPLE DATE ----->	10/02/95		10/02/95		10/02/95		10/02/95		10/02/95		10/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL
SB	Antimony	11.5	U	12.8	U	11.7	U	12.3	U	11.8	U	12.6	U
AS	Arsenic	6.1		14.4		8.5		6.5		4.4		4.6	
BA	Barium	87.4		179.		173.		243.		155.		106.	
BE	Beryllium	0.42	J	0.73	J	0.53	J	0.77	J	0.56	J	0.62	J
CD	Cadmium	3.9		1.7		2.6		1.9		2.5		1.7	
CR	Chromium	28.8		14.8		11.1		11.6		13.1		14.6	
CO	Cobalt	7.3	J	7.6	J	9.5	J	7.3	J	11.4	J	5.4	J
CU	Copper	18.		10.5		16.7		10.1		16.3		10.2	
PB	Lead	121.	J	16.6	J	9.9	J	11.4	J	11.7	J	8.8	J
HG	Mercury	0.12	U	0.13	U	0.12	U	0.12	U	0.12	U	0.13	U
NI	Nickel	9.2	J	7.7	J	15.2		8.	J	17.9		5.	U
SE	Selenium	0.23	U	0.59	J	0.23	U	0.39	J	0.24	U	0.48	J
AG	Silver	0.69	UJ	0.77	UJ	0.7	UJ	0.74	UJ	0.87	J	1.2	J
TL	Thallium	0.46	U	0.51	U	0.47	U	0.49	U	0.47	U	0.5	U
V	Vanadium	18.6		29.5		23.6		27.1		24.		23.9	
ZN	Zinc	89.8		33.9		50.2		33.1		50.6		28.2	
SN	Tin	4.6	U	5.1	U	4.7	U	4.9	U	4.7	U	5.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

APX9-METAL													
	SAMPLE ID ------->	053-S-0001-01		053-C-0001-01		053-S-0002-01		053-S-0003-01		053-S-0003-03		053-S-0004-01	
	ORIGINAL ID ----->	053S000101		053C000101		053S000201		053S000301		053S000303		053S000401	
	LAB SAMPLE ID --->	2-135962S		2-135963S		2-135964S		2-135965S		2-135968S		2-135966S	
	ID FROM REPORT -->	053S000101		053C000101		053S000201		053S000301		053S000303		053S000401	
	SAMPLE DATE ----->												
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL
SB	Antimony	12.1	UJ	12.1	UJ	11.4	UJ	11.7	UJ	12.6	UJ	12.1	UJ
AS	Arsenic	6.1	J	5.8	J	3.	J	3.6	J	2.9	J	2.3	J
BA	Barium	125.		122.		33.4	J	115.		145.		95.8	
BE	Beryllium	0.45	J	0.46	J	0.28	J	0.61	J	0.38	J	0.42	J
CD	Cadmium	1.4		0.73	U	1.5		3.1		1.1	J	1.2	J
CR	Chromium	10.2		10.8		11.7		17.5		7.6		11.3	
CO	Cobalt	7.8	J	7.5	J	5.6	J	8.9	J	5.8	J	9.3	J
CU	Copper	12.9		12.9		6.4		16.3		7.1		13.4	
PB	Lead	12.3	J	9.8	J	15.3	J	16.8	J	6.2	J	21.5	J
HG	Mercury	0.12	U	0.12	U	0.11	U	0.12	U	0.13	U	0.12	U
NI	Nickel	16.7		15.2		11.9		23.		12.		17.2	
SE	Selenium	0.24	UJ	0.24	UJ	0.23	UJ	0.23	UJ	0.25	UJ	0.52	J
AG	Silver	0.73	UJ	0.73	UJ	0.68	UJ	0.7	UJ	0.76	UJ	0.72	UJ
TL	Thallium	0.49	U	0.48	U	0.46	U	0.47	U	0.51	U	0.48	U
V	Vanadium	20.9		20.2		16.2		23.6		14.6		19.7	
ZN	Zinc	45.8		42.2		120.		58.5		32.3		53.1	
SN	Tin	4.9	UJ	4.8	UJ	4.6	UJ	4.7	UJ	5.1	UJ	4.8	UJ

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

APX9-METAL											
		SAMPLE ID ------->	053-S-0004-03		053-S-0005-01		053-S-0005-03				
		ORIGINAL ID ----->	053S000403		053S000501		053S000503				
		LAB SAMPLE ID --->	2-135969S		2-135967S		2-135970S				
		ID FROM REPORT -->	053S000403		053S000501		053S000503				
		SAMPLE DATE ----->									
		MATRIX ---------->	Soil		Soil		Soil				
		UNITS ---------->	MG/KG		MG/KG		MG/KG				
CAS #	Parameter		1541	VAL	1541	VAL	1541	VAL			
SB	Antimony		12.3	UJ	12.	UJ	12.	UJ			
AS	Arsenic		2.1	J	7.9	J	6.9	J			
BA	Barium		131.		228.		153.				
BE	Beryllium		0.39	J	0.65	J	0.53	J			
CD	Cadmium		0.74	U	1.8		1.1	J			
CR	Chromium		8.8		13.6		11.8				
CO	Cobalt		5.4	J	22.3		8.8	J			
CU	Copper		9.		14.7		17.5				
PB	Lead		5.9	J	17.5	J	10.7	J			
HG	Mercury		0.12	U	0.12	U	0.12	U			
NI	Nickel		13.9		16.6		18.3				
SE	Selenium		0.25	UJ	0.24	UJ	0.24	UJ			
AG	Silver		0.74	UJ	0.72	UJ	0.72	UJ			
TL	Thallium		0.49	U	0.48	U	0.48	U			
V	Vanadium		16.1		24.6		25.				
ZN	Zinc		28.5		47.5		56.6				
SN	Tin		4.9	UJ	4.8	UJ	4.8	UJ			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-PEST													
	SAMPLE ID ------->	042-S-0001-01		042-S-0002-01		042-S-0003-01		053-S-0001-01		053-C-0001-01		053-S-0002-01	
	ORIGINAL ID ----->	042S000101		042S000201		042S000301		053S000101		053C000101		053S000201	
	LAB SAMPLE ID --->	135883		135884		135885		135962		135963		135964	
	ID FROM REPORT -->	042S000101		042S000201		042S000301		053S000101		053C000101		053S000201	
	SAMPLE DATE ----->	10/02/95		10/02/95		10/02/95							
	DATE EXTRACTED -->	10/06/95		10/06/95		10/06/95		10/06/95		10/06/95		10/06/95	
	DATE ANALYZED --->	10/23/95		10/23/95		10/23/95		10/23/95		10/23/95		10/23/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	T536	VAL	T536	VAL	T536	VAL	1541	VAL	1541	VAL	1541	VAL
319-84-6	alpha-BHC	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
319-85-7	beta-BHC	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
319-86-8	delta-BHC	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
58-89-9	gamma-BHC (Lindane)	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
76-44-8	Heptachlor	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
309-00-2	Aldrin	19.	U	1.9	U	3.6	J	1.5	J	2.	U	1.2	J
1024-57-3	Heptachlor epoxide	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
959-98-8	Endosulfan I	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
60-57-1	Dieldrin	29.	J	60.		3.6	J	26.		18.		15.	
72-55-9	4,4'-DDE	38.	U	4.8	J	3.7	U	4.	U	4.	U	4.7	
72-20-8	Endrin	38.	U	3.9	U	3.7	U	4.	U	4.	U	3.8	U
33213-65-9	Endosulfan II	38.	U	3.9	U	3.7	U	4.	U	4.	U	3.8	U
72-54-8	4,4'-DDD	38.	U	3.9	U	3.7	U	4.	U	4.	U	3.8	U
1031-07-8	Endosulfan sulfate	38.	U	3.9	U	3.7	U	4.	U	4.	U	3.8	U
50-29-3	4,4'-DDT	38.	U	3.9	U	3.7	U	4.	U	4.	U	5.2	J
72-43-5	Methoxychlor	190.	U	19.	U	18.	U	20.	U	20.	U	19.	U
53494-70-5	Endrin ketone	38.	U	3.9	U	3.7	U	4.	U	4.	U	3.8	U
7421-93-4	Endrin aldehyde	38.	U	2.2	J	3.7	U	4.	U	4.	U	2.	J
5103-71-9	alpha-Chlordane	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
5103-74-2	gamma-Chlordane	19.	U	1.9	U	1.8	U	2.	U	2.	U	1.9	U
8001-35-2	Toxaphene	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U
12674-11-2	Aroclor-1016	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U
11104-28-2	Aroclor-1221	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U
53469-21-9	Aroclor-1242	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U
12672-29-6	Aroclor-1248	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U
11097-69-1	Aroclor-1254	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U
11096-82-5	Aroclor-1260	380.	U	56.	P	37.	U	40.	U	40.	U	63.	J
12789-03-6	Technical Chlordane	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U
11141-16-5	Aroclor-1232	380.	U	39.	U	37.	U	40.	U	40.	U	38.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-PEST											
	SAMPLE ID ------->	053-S-0003-01		053-S-0004-01		053-S-0005-01		053-E-1002-95			
	ORIGINAL ID ----->	053S000301		053S000401		053S000501		053e100295			
	LAB SAMPLE ID --->	135965		135966		135967		135971			
	ID FROM REPORT -->	053S000301		053S000401		053S000501		053E100295			
	SAMPLE DATE ----->							10/03/95			
	DATE EXTRACTED -->	10/06/95		10/06/95		10/06/95		10/09/95			
	DATE ANALYZED --->	10/23/95		10/23/95		10/23/95		10/26/95			
	MATRIX ---------->	Soil		Soil		Soil		Water			
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/L			
CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL	1541	VAL		
319-84-6	alpha-BHC	1.9	U	9.8	U	1.9	U	0.05	U		
319-85-7	beta-BHC	1.9	U	9.8	U	1.9	U	0.05	U		
319-86-8	delta-BHC	1.9	U	9.8	U	1.9	U	0.05	U		
58-89-9	gamma-BHC (Lindane)	1.9	U	9.8	U	1.9	U	0.05	U		
76-44-8	Heptachlor	1.9	U	9.8	U	1.9	U	0.05	U		
309-00-2	Aldrin	2.	J	9.8	U	3.	J	0.05	U		
1024-57-3	Heptachlor epoxide	1.9	U	9.8	U	1.9	U	0.05	U		
959-98-8	Endosulfan I	1.9	U	9.8	U	1.9	U	0.05	U		
60-57-1	Dieldrin	12.		36.		3.9	U	0.1	U		
72-55-9	4,4'-DDE	3.9	U	20.	U	20.		0.1	U		
72-20-8	Endrin	3.9	U	20.	U	3.9	U	0.1	U		
33213-65-9	Endosulfan II	3.9	U	20.	U	3.9	U	0.1	U		
72-54-8	4,4'-DDD	3.9	U	20.	U	2.2	J	0.1	U		
1031-07-8	Endosulfan sulfate	3.9	U	20.	U	3.9	U	0.1	U		
50-29-3	4,4'-DDT	3.9	U	20.	U	2.4	J	0.1	U		
72-43-5	Methoxychlor	19.	U	98.	U	19.	U	0.5	U		
53494-70-5	Endrin ketone	3.9	U	20.	U	3.9	U	0.1	U		
7421-93-4	Endrin aldehyde	3.9	U	20.	U	3.9	U	0.1	U		
5103-71-9	alpha-Chlordane	1.9	U	9.8	U	1.9	U	0.05	U		
5103-74-2	gamma-Chlordane	1.9	U	9.8	U	1.9	U	0.05	U		
8001-35-2	Toxaphene	39.	U	200.	U	39.	U	1.	U		
12674-11-2	Aroclor-1016	39.	U	200.	U	39.	U	1.	U		
11104-28-2	Aroclor-1221	39.	U	200.	U	39.	U	1.	U		
53469-21-9	Aroclor-1242	39.	U	200.	U	39.	U	1.	U		
12672-29-6	Aroclor-1248	39.	U	200.	U	39.	U	1.	U		
11097-69-1	Aroclor-1254	39.	U	200.	U	39.	U	1.	U		
11096-82-5	Aroclor-1260	39.	U	200.	U	39.	U	1.	U		
12789-03-6	Technical Chlordane	39.	U	200.	U	39.	U	1.	U		
11141-16-5	Aroclor-1232	39.	U	200.	U	39.	U	1.	U		

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-SVOA													
	SAMPLE ID ------->	042-S-0001-01		042-S-0001-03		042-S-0002-01		042-S-0002-03		042-S-0003-01		042-S-0003-03	
	ORIGINAL ID ----->	042S000101		042S000103		042S000201		042S000203		042S000301		042S000303	
	LAB SAMPLE ID --->	135883		135880		135884		135881		135885		135882	
	ID FROM REPORT -->	042s000101		042s000103		042s000201		042s000203		042s000301		042s000303	
	SAMPLE DATE ----->	10/02/95		10/02/95		10/02/95		10/02/95		10/02/95		10/02/95	
	DATE EXTRACTED -->	10/04/95		10/04/95		10/04/95		10/04/95		10/04/95		10/04/95	
	DATE ANALYZED --->	10/23/95		10/23/95		10/23/95		10/23/95		10/23/95		10/23/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL
108-95-2	Phenol	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
111-44-4	bis(2-Chloroethyl)ether	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
95-57-8	2-Chlorophenol	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
541-73-1	1,3-Dichlorobenzene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
106-46-7	1,4-Dichlorobenzene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
95-50-1	1,2-Dichlorobenzene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
95-48-7	2-Methylphenol (o-Cresol)	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
106-44-5	4-Methylphenol (p-Cresol)	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
621-64-7	N-Nitroso-di-n-propylamine	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
67-72-1	Hexachloroethane	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
98-95-3	Nitrobenzene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
78-59-1	Isophorone	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
88-75-5	2-Nitrophenol	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
105-67-9	2,4-Dimethylphenol	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
120-83-2	2,4-Dichlorophenol	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
120-82-1	1,2,4-Trichlorobenzene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
91-20-3	Naphthalene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
106-47-8	4-Chloroaniline	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
87-68-3	Hexachlorobutadiene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
111-91-1	bis(2-Chloroethoxy)methane	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
59-50-7	4-Chloro-3-methylphenol	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
91-57-6	2-Methylnaphthalene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
77-47-4	Hexachlorocyclopentadiene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
88-06-2	2,4,6-Trichlorophenol	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
95-95-4	2,4,5-Trichlorophenol	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
91-58-7	2-Chloronaphthalene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
88-74-4	2-Nitroaniline	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
131-11-3	Dimethyl phthalate	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
208-96-8	Acenaphthylene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
606-20-2	2,6-Dinitrotoluene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
99-09-2	3-Nitroaniline	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
83-32-9	Acenaphthene	1900.	U	420.	U	1900.	U	410.	U	94.	J	410.	U
51-28-5	2,4-Dinitrophenol	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
100-02-7	4-Nitrophenol	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
132-64-9	Dibenzofuran	1900.	U	420.	U	1900.	U	410.	U	40.	J	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-SVOA													
	SAMPLE ID ------->	042-S-0001-01		042-S-0001-03		042-S-0002-01		042-S-0002-03		042-S-0003-01		042-S-0003-03	
	ORIGINAL ID ----->	042S000101		042S000103		042S000201		042S000203		042S000301		042S000303	
	LAB SAMPLE ID --->	135883		135880		135884		135881		135885		135882	
	ID FROM REPORT -->	042s000101		042s000103		042s000201		042s000203		042s000301		042s000303	
	SAMPLE DATE ----->	10/02/95		10/02/95		10/02/95		10/02/95		10/02/95		10/02/95	
	DATE EXTRACTED -->	10/04/95		10/04/95		10/04/95		10/04/95		10/04/95		10/04/95	
	DATE ANALYZED --->	10/23/95		10/23/95		10/23/95		10/23/95		10/23/95		10/23/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL
121-14-2	2,4-Dinitrotoluene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
84-66-2	Diethylphthalate	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
7005-72-3	4-Chlorophenylphenylether	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
86-73-7	Fluorene	1900.	U	420.	U	1900.	U	410.	U	81.	J	410.	U
100-01-6	4-Nitroaniline	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
86-30-6	N-Nitrosodiphenylamine	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
101-55-3	4-Bromophenyl-phenylether	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
118-74-1	Hexachlorobenzene	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
87-86-5	Pentachlorophenol	4800.	U	1000.	U	4800.	U	1000.	U	920.	U	1000.	U
85-01-8	Phenanthrene	220.	J	420.	U	1900.	U	410.	U	400.		410.	U
120-12-7	Anthracene	1900.	U	420.	U	1900.	U	410.	U	180.	J	410.	U
86-74-8	Carbazole	1900.	U	420.	U	1900.	U	410.	U	53.	J	410.	U
84-74-2	Di-n-butylphthalate	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
206-44-0	Fluoranthene	410.	J	420.	U	190.	J	410.	U	680.		410.	U
129-00-0	Pyrene	400.	J	420.	U	220.	J	410.	U	560.		410.	U
85-68-7	Butylbenzylphthalate	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
91-94-1	3,3'-Dichlorobenzidine	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
56-55-3	Benzo(a)anthracene	250.	J	420.	U	1900.	U	410.	U	340.	J	410.	U
218-01-9	Chrysene	360.	J	420.	U	1900.	U	410.	U	330.	J	410.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	1900.	U	80.	J	1900.	U	68.	J	120.	J	160.	J
117-84-0	Di-n-octyl phthalate	1900.	U	420.	U	1900.	U	410.	U	370.	U	410.	U
205-99-2	Benzo(b)fluoranthene	390.	J	420.	U	1900.	U	410.	U	220.	J	410.	U
207-08-9	Benzo(k)fluoranthene	440.	J	420.	U	1900.	U	410.	U	280.	J	410.	U
50-32-8	Benzo(a)pyrene	480.	J	420.	U	1900.	U	410.	U	250.	J	410.	U
193-39-5	Indeno(1,2,3-cd)pyrene	240.	J	420.	U	1900.	U	410.	U	80.	J	410.	U
53-70-3	Dibenz(a,h)anthracene	1900.	U	420.	U	1900.	U	410.	U	44.	J	410.	U
191-24-2	Benzo(g,h,i)perylene	280.	J	420.	U	1900.	U	410.	U	83.	J	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-SVOA						
SAMPLE ID ------->	053-S-0001-01	053-C-0001-01	053-S-0002-01	053-S-0003-01	053-S-0003-03	053-S-0004-01
ORIGINAL ID ----->	053S000101	053C000101	053S000201	053S000301	053S000303	053S000401
LAB SAMPLE ID --->	135962	135963	135964	135965	135968	135966
ID FROM REPORT -->	053S000101	053C000101	053S000201	053S000301	053S000303	053S000401
SAMPLE DATE ----->						
DATE EXTRACTED -->	10/09/95	10/09/95	10/09/95	10/09/95	10/09/95	10/09/95
DATE ANALYZED --->	10/27/95	10/27/95	10/26/95	10/26/95	10/26/95	10/26/95
MATRIX ---------->	Soil	Soil	Soil	Soil	Soil	Soil
UNITS ---------->	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg

CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL
108-95-2	Phenol	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
111-44-4	bis(2-Chloroethyl)ether	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
95-57-8	2-Chlorophenol	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
541-73-1	1,3-Dichlorobenzene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
106-46-7	1,4-Dichlorobenzene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
95-50-1	1,2-Dichlorobenzene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
95-48-7	2-Methylphenol (o-Cresol)	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
106-44-5	4-Methylphenol (p-Cresol)	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
621-64-7	N-Nitroso-di-n-propylamine	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
67-72-1	Hexachloroethane	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
98-95-3	Nitrobenzene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
78-59-1	Isophorone	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
88-75-5	2-Nitrophenol	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
105-67-9	2,4-Dimethylphenol	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
120-83-2	2,4-Dichlorophenol	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
91-20-3	Naphthalene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
106-47-8	4-Chloroaniline	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
87-68-3	Hexachlorobutadiene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
111-91-1	bis(2-Chloroethoxy)methane	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
59-50-7	4-Chloro-3-methylphenol	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
91-57-6	2-Methylnaphthalene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
77-47-4	Hexachlorocyclopentadiene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
88-06-2	2,4,6-Trichlorophenol	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
91-58-7	2-Chloronaphthalene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
88-74-4	2-Nitroaniline	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
131-11-3	Dimethyl phthalate	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
208-96-8	Acenaphthylene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
606-20-2	2,6-Dinitrotoluene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
99-09-2	3-Nitroaniline	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
83-32-9	Acenaphthene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
51-28-5	2,4-Dinitrophenol	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
100-02-7	4-Nitrophenol	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
132-64-9	Dibenzofuran	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-SVOA															
	SAMPLE ID ------->	053-S-0001-01		053-C-0001-01		053-S-0002-01		053-S-0003-01		053-S-0003-03		053-S-0004-01	
	ORIGINAL ID ----->	053S000101		053C000101		053S000201		053S000301		053S000303		053S000401	
	LAB SAMPLE ID --->	135962		135963		135964		135965		135968		135966	
	ID FROM REPORT -->	053S000101		053C000101		053S000201		053S000301		053S000303		053S000401	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE ANALYZED --->	10/27/95		10/27/95		10/26/95		10/26/95		10/26/95		10/26/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL
121-14-2	2,4-Dinitrotoluene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
84-66-2	Diethylphthalate	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
7005-72-3	4-Chlorophenylphenylether	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
86-73-7	Fluorene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
100-01-6	4-Nitroaniline	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
86-30-6	N-Nitrosodiphenylamine	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
101-55-3	4-Bromophenyl-phenylether	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
118-74-1	Hexachlorobenzene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
87-86-5	Pentachlorophenol	1000.	U	990.	U	970.	U	980.	U	1000.	U	990.	U
85-01-8	Phenanthrene	54.	J	400.	U	42.	J	53.	J	420.	U	190.	J
120-12-7	Anthracene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
86-74-8	Carbazole	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
84-74-2	Di-n-butylphthalate	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
206-44-0	Fluoranthene	180.	J	400.	U	78.	J	130.	J	420.	U	390.	J
129-00-0	Pyrene	150.	J	400.	U	62.	J	100.	J	420.	U	320.	J
85-68-7	Butylbenzylphthalate	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
56-55-3	Benzo(a)anthracene	100.	J	400.	U	390.	U	61.	J	420.	U	180.	J
218-01-9	Chrysene	110.	J	400.	U	43.	J	69.	J	420.	U	190.	J
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
117-84-0	Di-n-octyl phthalate	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
205-99-2	Benzo(b)fluoranthene	76.	J	400.	U	40.	J	62.	J	420.	U	180.	J
207-08-9	Benzo(k)fluoranthene	72.	J	400.	U	390.	U	56.	J	420.	U	150.	J
50-32-8	Benzo(a)pyrene	81.	J	400.	U	38.	J	62.	J	420.	U	170.	J
193-39-5	Indeno(1,2,3-cd)pyrene	52.	J	400.	U	390.	U	39.	J	420.	U	81.	J
53-70-3	Dibenz(a,h)anthracene	410.	U	400.	U	390.	U	390.	U	420.	U	400.	U
191-24-2	Benzo(g,h,i)perylene	56.	J	400.	U	390.	U	42.	J	420.	U	89.	J

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-SVOA											
	SAMPLE ID ------->	053-S-0004-03		053-S-0005-01		053-S-0005-03					
	ORIGINAL ID ----->	053S000403		053S000501		053S000503					
	LAB SAMPLE ID --->	135969		135967		135970					
	ID FROM REPORT -->	053S000403		053S000501		053S000503					
	SAMPLE DATE ----->										
	DATE EXTRACTED -->	10/09/95		10/09/95		10/09/95					
	DATE ANALYZED --->	10/30/95		10/26/95		10/26/95					
	MATRIX ---------->	Soil		Soil		Soil					
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg					
CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL				
108-95-2	Phenol	410.	U	400.	U	400.	U				
111-44-4	bis(2-Chloroethyl)ether	410.	U	400.	U	400.	U				
95-57-8	2-Chlorophenol	410.	U	400.	U	400.	U				
541-73-1	1,3-Dichlorobenzene	410.	U	400.	U	400.	U				
106-46-7	1,4-Dichlorobenzene	410.	U	400.	U	400.	U				
95-50-1	1,2-Dichlorobenzene	410.	U	400.	U	400.	U				
95-48-7	2-Methylphenol (o-Cresol)	410.	U	400.	U	400.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U	400.	U	400.	U				
106-44-5	4-Methylphenol (p-Cresol)	410.	U	400.	U	400.	U				
621-64-7	N-Nitroso-di-n-propylamine	410.	U	400.	U	400.	U				
67-72-1	Hexachloroethane	410.	U	400.	U	400.	U				
98-95-3	Nitrobenzene	410.	U	400.	U	400.	U				
78-59-1	Isophorone	410.	U	400.	U	400.	U				
88-75-5	2-Nitrophenol	410.	U	400.	U	400.	U				
105-67-9	2,4-Dimethylphenol	410.	U	400.	U	400.	U				
120-83-2	2,4-Dichlorophenol	410.	U	400.	U	400.	U				
120-82-1	1,2,4-Trichlorobenzene	410.	U	400.	U	400.	U				
91-20-3	Naphthalene	410.	U	400.	U	400.	U				
106-47-8	4-Chloroaniline	410.	U	400.	U	400.	U				
87-68-3	Hexachlorobutadiene	410.	U	400.	U	400.	U				
111-91-1	bis(2-Chloroethoxy)methane	410.	U	400.	U	400.	U				
59-50-7	4-Chloro-3-methylphenol	410.	U	400.	U	400.	U				
91-57-6	2-Methylnaphthalene	410.	U	400.	U	400.	U				
77-47-4	Hexachlorocyclopentadiene	410.	U	400.	U	400.	U				
88-06-2	2,4,6-Trichlorophenol	410.	U	400.	U	400.	U				
95-95-4	2,4,5-Trichlorophenol	1000.	U	990.	U	1000.	U				
91-58-7	2-Chloronaphthalene	410.	U	400.	U	400.	U				
88-74-4	2-Nitroaniline	1000.	U	990.	U	1000.	U				
131-11-3	Dimethyl phthalate	410.	U	400.	U	400.	U				
208-96-8	Acenaphthylene	410.	U	400.	U	400.	U				
606-20-2	2,6-Dinitrotoluene	410.	U	400.	U	400.	U				
99-09-2	3-Nitroaniline	1000.	U	990.	U	1000.	U				
83-32-9	Acenaphthene	410.	U	400.	U	400.	U				
51-28-5	2,4-Dinitrophenol	1000.	U	990.	U	1000.	U				
100-02-7	4-Nitrophenol	1000.	U	990.	U	1000.	U				
132-64-9	Dibenzofuran	410.	U	400.	U	400.	U				

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-SVOA										
	SAMPLE ID ------->	053-S-0004-03		053-S-0005-01		053-S-0005-03				
	ORIGINAL ID ----->	053S000403		053S000501		053S000503				
	LAB SAMPLE ID --->	135969		135967		135970				
	ID FROM REPORT -->	053S000403		053S000501		053S000503				
	SAMPLE DATE ----->									
	DATE EXTRACTED -->	10/09/95		10/09/95		10/09/95				
	DATE ANALYZED --->	10/30/95		10/26/95		10/26/95				
	MATRIX ---------->	Soil		Soil		Soil				
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg				
CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL			
121-14-2	2,4-Dinitrotoluene	410.	U	400.	U	400.	U			
84-66-2	Diethylphthalate	410.	U	400.	U	400.	U			
7005-72-3	4-Chlorophenylphenylether	410.	U	400.	U	400.	U			
86-73-7	Fluorene	410.	U	400.	U	400.	U			
100-01-6	4-Nitroaniline	1000.	U	990.	U	1000.	U			
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	990.	U	1000.	U			
86-30-6	N-Nitrosodiphenylamine	410.	U	400.	U	400.	U			
101-55-3	4-Bromophenyl-phenylether	410.	U	400.	U	400.	U			
118-74-1	Hexachlorobenzene	410.	U	400.	U	400.	U			
87-86-5	Pentachlorophenol	1000.	U	990.	U	1000.	U			
85-01-8	Phenanthrene	410.	U	280.	J	110.	J			
120-12-7	Anthracene	410.	U	53.	J	400.	U			
86-74-8	Carbazole	410.	U	400.	U	400.	U			
84-74-2	Di-n-butylphthalate	410.	U	400.	U	400.	U			
206-44-0	Fluoranthene	410.	U	580.		190.	J			
129-00-0	Pyrene	410.	U	480.		150.	J			
85-68-7	Butylbenzylphthalate	410.	U	400.	U	400.	U			
91-94-1	3,3'-Dichlorobenzidine	410.	U	400.	U	400.	U			
56-55-3	Benzo(a)anthracene	410.	U	270.	J	80.	J			
218-01-9	Chrysene	410.	U	300.	J	78.	J			
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	410.	U	400.	U	400.	U			
117-84-0	Di-n-octyl phthalate	410.	U	400.	U	400.	U			
205-99-2	Benzo(b)fluoranthene	410.	U	260.	J	66.	J			
207-08-9	Benzo(k)fluoranthene	410.	U	220.	J	64.	J			
50-32-8	Benzo(a)pyrene	410.	U	240.	J	72.	J			
193-39-5	Indeno(1,2,3-cd)pyrene	410.	U	130.	J	400.	U			
53-70-3	Dibenz(a,h)anthracene	410.	U	61.	J	400.	U			
191-24-2	Benzo(g,h,i)perylene	410.	U	130.	J	400.	U			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-VOA															
	SAMPLE ID ------->	042-S-0001-01		042-S-0001-03		042-S-0002-01		042-S-0002-03		042-S-0003-01		042-S-0003-03	
	ORIGINAL ID ----->	042S000101		042S000103		042S000201		042S000203		042S000301		042S000303	
	LAB SAMPLE ID --->	135883		135880		135844		135881		135885		135882	
	ID FROM REPORT -->	042S000101		042S000103		042S000201		042S000203		042S000301		042S000303	
	SAMPLE DATE ----->	10/02/95		10/02/95		10/02/95		10/02/95		10/02/95		10/02/95	
	DATE ANALYZED --->	10/04/95		10/05/95		10/08/95		10/05/95		10/05/95		10/04/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL	T536	VAL
74-87-3	Chloromethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
74-83-9	Bromomethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
75-01-4	Vinyl chloride	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
75-00-3	Chloroethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
75-09-2	Methylene chloride	12.	U	4.	J	1400.	U	2.	J	8.	J	12.	U
67-64-1	Acetone	38.		380.		1800.		220.		560.		74.	
75-15-0	Carbon disulfide	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
75-35-4	1,1-Dichloroethylene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
75-34-3	1,1-Dichloroethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
67-66-3	Chloroform	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
107-06-2	1,2-Dichloroethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
78-93-3	2-Butanone (MEK)	12.	U	26.	U	1900.		20.	J	55.	U	40.	
71-55-6	1,1,1-Trichloroethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
56-23-5	Carbon tetrachloride	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
75-27-4	Bromodichloromethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
78-87-5	1,2-Dichloropropane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
79-01-6	Trichloroethene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
124-48-1	Dibromochloromethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
71-43-2	Benzene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
75-25-2	Bromoform	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
591-78-6	2-Hexanone	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
127-18-4	Tetrachloroethene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
108-88-3	Toluene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
108-90-7	Chlorobenzene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
100-41-4	Ethylbenzene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
100-42-5	Styrene	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U
1330-20-7	Xylene (Total)	12.	U	26.	U	1400.	U	24.	U	55.	U	12.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-VOA													
	SAMPLE ID ------->	053-S-0001-01		053-C-0001-01		053-S-0002-01		053-S-0003-01		053-S-0003-03		053-S-0004-01	
	ORIGINAL ID ----->	053S000101		053C000101		053S000201		053S000301		053S000303		053S000401	
	LAB SAMPLE ID --->	135962		135963		135964		135965		135968		135966	
	ID FROM REPORT -->	053S000101		053C000101		053S000201		053S000301		053S000303		053S000401	
	SAMPLE DATE ----->												
	DATE ANALYZED --->	10/05/95		10/05/95		10/07/95		10/05/95		10/06/95		10/06/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL	1541	VAL
74-87-3	Chloromethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
74-83-9	Bromomethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
75-01-4	Vinyl chloride	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
75-00-3	Chloroethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
75-09-2	Methylene chloride	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
67-64-1	Acetone	98.	J	200.		320.		95.		11.	J	12.	J
75-15-0	Carbon disulfide	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
75-35-4	1,1-Dichloroethylene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
75-34-3	1,1-Dichloroethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
67-66-3	Chloroform	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
107-06-2	1,2-Dichloroethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
78-93-3	2-Butanone (MEK)	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
71-55-6	1,1,1-Trichloroethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
56-23-5	Carbon tetrachloride	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
75-27-4	Bromodichloromethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
78-87-5	1,2-Dichloropropane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
79-01-6	Trichloroethene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
124-48-1	Dibromochloromethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
79-00-5	1,1,2-Trichloroethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
71-43-2	Benzene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
75-25-2	Bromoform	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
591-78-6	2-Hexanone	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
127-18-4	Tetrachloroethene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
108-88-3	Toluene	12.	UJ	1.	J	28.	U	2.	J	13.	U	12.	U
108-90-7	Chlorobenzene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
100-41-4	Ethylbenzene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
100-42-5	Styrene	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U
1330-20-7	Xylene (Total)	12.	UJ	12.	U	28.	U	12.	U	13.	U	12.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 42 & 53

SW846-VOA											
	SAMPLE ID ------->	053-S-0004-03		053-S-0005-01		053-S-0005-03					
	ORIGINAL ID ----->	053S000403		053S000501		053S000503					
	LAB SAMPLE ID --->	135969		135967		135970					
	ID FROM REPORT -->	053S000403		053S000501		053S000503					
	SAMPLE DATE ----->										
	DATE ANALYZED --->	10/06/95		10/06/95		10/06/95					
	MATRIX ---------->	Soil		Soil		Soil					
	UNITS ---------->	UG/KG		UG/KG		UG/KG					
CAS #	Parameter	1541	VAL	1541	VAL	1541	VAL				
74-87-3	Chloromethane	12.	U	12.	U	12.	U				
74-83-9	Bromomethane	12.	U	12.	U	12.	U				
75-01-4	Vinyl chloride	12.	U	12.	U	12.	U				
75-00-3	Chloroethane	12.	U	12.	U	12.	U				
75-09-2	Methylene chloride	12.	U	12.	U	12.	U				
67-64-1	Acetone	240.		4.	J	13.					
75-15-0	Carbon disulfide	12.	U	12.	U	12.	U				
75-35-4	1,1-Dichloroethylene	12.	U	12.	U	12.	U				
75-34-3	1,1-Dichloroethane	12.	U	12.	U	12.	U				
540-59-0	1,2-Dichloroethene (total)	12.	U	12.	U	12.	U				
67-66-3	Chloroform	12.	U	12.	U	12.	U				
107-06-2	1,2-Dichloroethane	12.	U	12.	U	12.	U				
78-93-3	2-Butanone (MEK)	46.		12.	U	12.	U				
71-55-6	1,1,1-Trichloroethane	12.	U	12.	U	12.	U				
56-23-5	Carbon tetrachloride	12.	U	12.	U	12.	U				
75-27-4	Bromodichloromethane	12.	U	12.	U	12.	U				
78-87-5	1,2-Dichloropropane	12.	U	12.	U	12.	U				
10061-01-5	cis-1,3-Dichloropropene	12.	U	12.	U	12.	U				
79-01-6	Trichloroethene	12.	U	12.	U	12.	U				
124-48-1	Dibromochloromethane	12.	U	12.	U	12.	U				
79-00-5	1,1,2-Trichloroethane	12.	U	12.	U	12.	U				
71-43-2	Benzene	12.	U	12.	U	12.	U				
10061-02-6	trans-1,3-Dichloropropene	12.	U	12.	U	12.	U				
75-25-2	Bromoform	12.	U	12.	U	12.	U				
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	12.	U	12.	U				
591-78-6	2-Hexanone	12.	U	12.	U	12.	U				
127-18-4	Tetrachloroethene	12.	U	12.	U	12.	U				
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	12.	U	12.	U				
108-88-3	Toluene	3.	J	12.	U	2.	J				
108-90-7	Chlorobenzene	12.	U	12.	U	12.	U				
100-41-4	Ethylbenzene	12.	U	12.	U	12.	U				
100-42-5	Styrene	12.	U	12.	U	12.	U				
1330-20-7	Xylene (Total)	12.	U	12.	U	12.	U				

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

APX9-METAL													
	SAMPLE ID ------->	044-S-0001-01		044-S-0001-03		044-S-0002-01		044-S-0002-03		044-S-0003-01		044-S-0003-03	
	ORIGINAL ID ----->	044S000101		044S000103		044S000201		044S000203		044S000301		044S000303	
	LAB SAMPLE ID --->	5-135639S		5-135640S		5-135641S		5-135642S		5-135645S		5-135646S	
	ID FROM REPORT -->	044S000101		044S000103		044S000201		044S000203		044S000301		044S000303	
	SAMPLE DATE ----->	09/26/95		09/26/95		09/26/95		09/26/95		09/26/95		09/26/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	T534	VAL	T534	VAL	T534	VAL	T534	VAL	T534	VAL	T534	VAL
SB	Antimony	11.4	UJ	12.9	UJ	11.3	UJ	12.7	UJ	11.7	UJ	12.7	UJ
AS	Arsenic	4.8		9.		7.9		7.5		4.6		9.4	
BA	Barium	61.9		80.		102.		95.8		58.7		120.	
BE	Beryllium	0.39	J	0.47	J	0.37	J	0.46	J	0.33	J	0.48	J
CD	Cadmium	6.2		1.4		2.8		1.7		9.1		2.1	
CR	Chromium	11.2		12.		29.8		9.9		165.		11.4	
CO	Cobalt	5.3	J	7.	J	5.3	J	7.9	J	5.4	J	7.8	J
CU	Copper	11.2		17.		38.1		16.5		36.3		16.7	
PB	Lead	26.4	J	8.9	J	40.7	J	9.3	J	200.	J	11.2	J
HG	Mercury	0.11	U	0.13	U	0.11	U	0.13	U	0.17		0.14	
NI	Nickel	6.2	J	19.		13.2		20.		8.3	J	20.3	
SE	Selenium	0.23	U	0.26	U	0.23	U	0.25	U	0.23	U	0.25	U
AG	Silver	0.69	UJ	0.77	UJ	0.68	UJ	0.76	UJ	0.7	UJ	0.76	UJ
TL	Thallium	0.46	U	0.51	U	0.45	U	0.51	U	0.47	U	0.51	U
V	Vanadium	13.3		23.		16.3		20.7		13.8		21.7	
ZN	Zinc	63.6		53.3		132.		48.5		589.		54.5	
SN	Tin	22.2	U	27.7	U	31.9	U	27.4	U	20.8	U	25.9	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

APX9-METAL											
	SAMPLE ID ------->	044-S-0004-01		044-S-0004-03		044-C-0004-03					
	ORIGINAL ID ----->	044S000401		044S000403		044C000403					
	LAB SAMPLE ID --->	5-135643S		5-135644S		5-135638S					
	ID FROM REPORT -->	044S000401		044S000403		044C000403					
	SAMPLE DATE ----->	09/26/95		09/26/95		09/26/95					
	MATRIX ---------->	Soil		Soil		Soil					
	UNITS ---------->	MG/KG		MG/KG		MG/KG					
CAS #	Parameter	T534	VAL	T534	VAL	T534	VAL				
SB	Antimony	11.5	UJ	12.7	UJ	12.9	UJ				
AS	Arsenic	3.8		9.9		8.6					
BA	Barium	37.3	J	131.		134.					
BE	Beryllium	0.31	J	0.48	J	0.5	J				
CD	Cadmium	3.4		2.3		1.9					
CR	Chromium	20.7		10.1		11.4					
CO	Cobalt	2.7	J	8.2	J	8.	J				
CU	Copper	28.1		15.9		16.7					
PB	Lead	44.7	J	10.	J	9.5	J				
HG	Mercury	0.14		0.13	U	0.13	U				
NI	Nickel	7.5	J	19.7		18.5					
SE	Selenium	0.23	U	0.25	U	0.26	U				
AG	Silver	0.69	UJ	0.76	UJ	0.77	UJ				
TL	Thallium	0.46	U	0.51	U	0.51	U				
V	Vanadium	10.6	J	21.7		23.					
ZN	Zinc	183.		49.6		55.4					
SN	Tin	21.6	U	28.2	U	27.3	U				

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

SW846-PCB													
	SAMPLE ID ------->	044-S-0001-01		044-S-0001-03		044-S-0002-01		044-S-0002-03		044-S-0003-01		044-S-0003-03	
	ORIGINAL ID ----->	044S000101		044S000103		044S000201		044S000203		044S000301		044S000303	
	LAB SAMPLE ID --->	135639		135640		135641		135642		135645		135646	
	ID FROM REPORT -->	044S000101		044S000103		044S000201		044S000203		044S000301		044S000303	
	SAMPLE DATE ----->	09/26/95		09/26/95		09/26/95		09/26/95		09/26/95		09/26/95	
	DATE EXTRACTED -->	10/02/95		10/02/95		10/02/95		10/02/95		10/02/95		10/02/95	
	DATE ANALYZED --->	10/10/95		10/10/95		10/10/95		10/10/95		10/10/95		10/10/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	T534	VAL	T534	VAL	T534	VAL	T534	VAL	T534	VAL	T534	VAL
12674-11-2	Aroclor-1016	37.	U	42.	U	37.	U	41.	U	39.	U	42.	U
11104-28-2	Aroclor-1221	37.	U	42.	U	37.	U	41.	U	39.	U	42.	U
53469-21-9	Aroclor-1242	37.	U	42.	U	37.	U	41.	U	39.	U	42.	U
12672-29-6	Aroclor-1248	37.	U	42.	U	37.	U	41.	U	39.	U	42.	U
11097-69-1	Aroclor-1254	37.	U	42.	U	37.	U	41.	U	39.	U	42.	U
11096-82-5	Aroclor-1260	37.	U	42.	U	37.	U	41.	U	120.	J	42.	U
11141-16-5	Aroclor-1232	37.	U	42.	U	37.	U	41.	U	39.	U	42.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

SW846-PCB											
		SAMPLE ID ------->	044-S-0004-01		044-S-0004-03		044-C-0004-03				
		ORIGINAL ID ----->	044S000401		044S000403		044C000403				
		LAB SAMPLE ID --->	135643		135644		135638				
		ID FROM REPORT -->	044S000401		044S000403		044C000403				
		SAMPLE DATE ----->	09/26/95		09/26/95		09/26/95				
		DATE EXTRACTED -->	10/02/95		10/02/95		10/02/95				
		DATE ANALYZED --->	10/10/95		10/10/95		10/10/95				
		MATRIX ---------->	Soil		Soil		Soil				
		UNITS ---------->	UG/KG		UG/KG		UG/KG				
CAS #	Parameter		T534	VAL	T534	VAL	T534	VAL			
12674-11-2	Aroclor-1016		44.	U	37.	U	43.	U			
11104-28-2	Aroclor-1221		44.	U	37.	U	43.	U			
53469-21-9	Aroclor-1242		44.	U	37.	U	43.	U			
12672-29-6	Aroclor-1248		44.	U	37.	U	43.	U			
11097-69-1	Aroclor-1254		44.	U	37.	U	43.	U			
11096-82-5	Aroclor-1260		46.	J	37.	U	43.	U			
11141-16-5	Aroclor-1232		44.	U	37.	U	43.	U			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

SW846-SVOA								
	SAMPLE ID ------->	044-S-0003-01		044-S-0003-03				
	ORIGINAL ID ----->	044S000301RE		044S000303				
	LAB SAMPLE ID --->	135645re		135646				
	ID FROM REPORT -->	044S000301RE		044S000303				
	SAMPLE DATE ----->	09/26/95		09/26/95				
	DATE EXTRACTED -->	10/03/95		10/03/95				
	DATE ANALYZED --->	10/10/95		10/09/95				
	MATRIX ---------->	Soil		Soil				
	UNITS ---------->	ug/Kg		ug/Kg				
CAS #	Parameter	T534	VAL	T534	VAL			
108-95-2	Phenol	390.	U	370.	UJ			
111-44-4	bis(2-Chloroethyl)ether	390.	U	370.	UJ			
95-57-8	2-Chlorophenol	390.	U	370.	UJ			
541-73-1	1,3-Dichlorobenzene	390.	U	370.	UJ			
106-46-7	1,4-Dichlorobenzene	390.	U	370.	UJ			
95-50-1	1,2-Dichlorobenzene	390.	U	370.	UJ			
95-48-7	2-Methylphenol (o-Cresol)	390.	U	370.	UJ			
108-60-1	2,2'-oxybis(1-Chloropropane)	390.	U	370.	UJ			
106-44-5	4-Methylphenol (p-Cresol)	390.	U	370.	UJ			
621-64-7	N-Nitroso-di-n-propylamine	390.	U	370.	UJ			
67-72-1	Hexachloroethane	390.	U	370.	UJ			
98-95-3	Nitrobenzene	390.	U	370.	UJ			
78-59-1	Isophorone	390.	U	370.	UJ			
88-75-5	2-Nitrophenol	390.	U	370.	UJ			
105-67-9	2,4-Dimethylphenol	390.	U	370.	UJ			
120-83-2	2,4-Dichlorophenol	390.	U	370.	UJ			
120-82-1	1,2,4-Trichlorobenzene	390.	U	370.	UJ			
91-20-3	Naphthalene	1200.		2900.	J			
106-47-8	4-Chloroaniline	390.	U	370.	UJ			
87-68-3	Hexachlorobutadiene	390.	U	370.	UJ			
111-91-1	bis(2-Chloroethoxy)methane	390.	U	370.	UJ			
59-50-7	4-Chloro-3-methylphenol	390.	U	370.	UJ			
91-57-6	2-Methylnaphthalene	3300.		8200.	D			
77-47-4	Hexachlorocyclopentadiene	390.	U	370.	UJ			
88-06-2	2,4,6-Trichlorophenol	390.	U	370.	UJ			
95-95-4	2,4,5-Trichlorophenol	980.	U	940.	UJ			
91-58-7	2-Chloronaphthalene	390.	U	370.	UJ			
88-74-4	2-Nitroaniline	980.	U	940.	UJ			
131-11-3	Dimethyl phthalate	390.	U	370.	UJ			
208-96-8	Acenaphthylene	390.	U	370.	UJ			
606-20-2	2,6-Dinitrotoluene	390.	U	370.	UJ			
99-09-2	3-Nitroaniline	980.	U	940.	UJ			
83-32-9	Acenaphthene	390.	U	370.	UJ			
51-28-5	2,4-Dinitrophenol	980.	U	940.	UJ			
100-02-7	4-Nitrophenol	980.	U	940.	UJ			
132-64-9	Dibenzofuran	390.	U	370.	UJ			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

SW846-SVOA			
	SAMPLE ID ------->	044-S-0003-01	044-S-0003-03
	ORIGINAL ID ----->	044S000301RE	044S000303
	LAB SAMPLE ID --->	135645re	135646
	ID FROM REPORT -->	044S000301RE	044S000303
	SAMPLE DATE ----->	09/26/95	09/26/95
	DATE EXTRACTED -->	10/03/95	10/03/95
	DATE ANALYZED --->	10/10/95	10/09/95
	MATRIX ---------->	Soil	Soil
	UNITS ---------->	ug/Kg	ug/Kg

CAS #	Parameter	T534	VAL	T534	VAL
121-14-2	2,4-Dinitrotoluene	390.	U	370.	UJ
84-66-2	Diethylphthalate	390.	U	370.	UJ
7005-72-3	4-Chlorophenylphenylether	390.	U	370.	UJ
86-73-7	Fluorene	390.	U	640.	J
100-01-6	4-Nitroaniline	980.	U	940.	UJ
534-52-1	2-Methyl-4,6-Dinitrophenol	980.	U	940.	U
86-30-6	N-Nitrosodiphenylamine	390.	U	370.	U
101-55-3	4-Bromophenyl-phenylether	390.	U	370.	U
118-74-1	Hexachlorobenzene	390.	U	370.	U
87-86-5	Pentachlorophenol	980.	U	940.	U
85-01-8	Phenanthrene	620.		380.	
120-12-7	Anthracene	100.	J	370.	U
86-74-8	Carbazole	76.	J	370.	U
84-74-2	Di-n-butylphthalate	840.	U	520.	U
206-44-0	Fluoranthene	550.		370.	U
129-00-0	Pyrene	490.		370.	U
85-68-7	Butylbenzylphthalate	81.	J	370.	U
91-94-1	3,3'-Dichlorobenzidine	390.	U	370.	U
56-55-3	Benzo(a)anthracene	240.	J	370.	U
218-01-9	Chrysene	280.	J	370.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	480.		45.	J
117-84-0	Di-n-octyl phthalate	390.	U	370.	U
205-99-2	Benzo(b)fluoranthene	280.	J	370.	U
207-08-9	Benzo(k)fluoranthene	240.	J	370.	U
50-32-8	Benzo(a)pyrene	240.	J	370.	U
193-39-5	Indeno(1,2,3-cd)pyrene	120.	J	370.	U
53-70-3	Dibenz(a,h)anthracene	68.	J	370.	U
191-24-2	Benzo(g,h,i)perylene	140.	J	370.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

TPH-DRO								
	SAMPLE ID ------->	044-S-0003-01		044-S-0003-03				
	ORIGINAL ID ----->	044S000301		044S000303				
	LAB SAMPLE ID --->	135645		135646				
	ID FROM REPORT -->	044S000301		044S000303				
	SAMPLE DATE ----->	09/26/95		09/26/95				
	DATE EXTRACTED -->	10/03/95		10/03/95				
	DATE ANALYZED --->	10/09/95		10/09/95				
	MATRIX ---------->	Soil		Water				
	UNITS ---------->	UG/KG		UG/L				
CAS #	Parameter	T534	VAL	T534	VAL			
9999900-02-6	TPH - Diesel Range Organics	1000000.	D	800000.	D			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 44

TPH-GRO	SAMPLE ID ------->	044-S-0003-01		044-S-0003-03					
	ORIGINAL ID ----->	044S000301		044S000303					
	LAB SAMPLE ID --->	135645		135646					
	ID FROM REPORT -->	044S000301		044S000303					
	SAMPLE DATE ----->	09/26/95		09/26/95					
	DATE ANALYZED --->	10/13/95		10/13/95					
	MATRIX ---------->	Soil		Soil					
	UNITS ---------->	UG/KG		UG/KG					
CAS #	Parameter	T534	VAL	T534	VAL				
9999900-02-5	TPH - Gasoline Range Organics	27000.	J	36000.	J				

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

APX9-METAL													
	SAMPLE ID ------->	050-S-0001-01		050-C-0001-01		050-S-0001-02		050-S-0002-01		050-S-0002-02		050-S-0003-01	
	ORIGINAL ID ----->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	LAB SAMPLE ID --->	0-136393S		0-136391S		0-136401S		0-136394S		0-136402S		0-136395S	
	ID FROM REPORT -->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL
SB	Antimony	12.1	UJ	12.2	UJ	12.6	UJ	12.	UJ	12.6	UJ	11.8	UJ
AS	Arsenic	8.8		7.4		10.1		8.6		11.9		7.5	
BA	Barium	115.		98.6		113.		133.		116.		128.	
BE	Beryllium	0.54	J	0.5	J	0.53	J	0.57	J	0.58	J	0.53	J
CD	Cadmium	1.4		2.1		2.1		2.2		1.6		2.2	
CR	Chromium	9.5		11.2		12.8		11.1		11.7		10.	
CO	Cobalt	9.4	J	11.	J	7.	J	14.8		10.1	J	12.1	
CU	Copper	15.1		15.8		17.5		17.3		19.7		17.9	
PB	Lead	13.9	J	14.4	J	12.8	J	11.5	J	16.3	J	11.1	J
HG	Mercury	0.12	U	0.12	U	0.13	U	0.12	U	0.13	U	0.12	U
NI	Nickel	13.7		8.	J	11.7		12.3		16.6		16.5	
SE	Selenium	0.24	UJ	0.34	UJ	0.29	UJ	0.35	UJ	0.39	UJ	0.24	UJ
AG	Silver	0.72	UJ	0.73	UJ	0.76	UJ	0.72	UJ	0.76	UJ	0.71	UJ
TL	Thallium	0.48	U	0.49	U	0.5	U	0.48	U	0.51	U	0.47	U
V	Vanadium	23.7		24.1		24.1		25.2		23.7		22.6	
ZN	Zinc	46.2		41.1		45.9		63.8		60.2		55.9	
SN	Tin	4.8	U	6.3	U	22.1	U	5.	U	25.3	U	4.7	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

APX9-METAL													
	SAMPLE ID ------->	050-S-0003-02		050-S-0004-01		050-C-0004-01		050-S-0004-02		050-S-0005-01		050-S-0005-02	
	ORIGINAL ID ----->	050S000302		050S000401		050C000401		050S000402		050S000501		050S000502	
	LAB SAMPLE ID --->	0-136403S		138199S		138198S		138200S		0-136396S		138201S	
	ID FROM REPORT -->	050S000302		050S000401		050C000401		050S000402		050S000501		050S000502	
	SAMPLE DATE ----->	10/09/95		10/31/95		10/31/95		10/31/95		10/09/95		10/31/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	1551	VAL	1606	VAL	1606	VAL	1606	VAL	1551	VAL	1606	VAL
SB	Antimony	12.3	UJ	12.1	UJ	12.	UJ	12.4	UJ	11.8	UJ	12.6	UJ
AS	Arsenic	7.5		5.5	J	6.4	J	8.6	J	6.3		7.8	J
BA	Barium	130.		117.		87.2		138.		133.		103.	
BE	Beryllium	0.58	J	0.4	J	0.35	J	0.47	J	0.51	J	0.41	J
CD	Cadmium	2.9		2.2		1.5		2.5		2.6		1.3	
CR	Chromium	12.6		8.8		8.3		10.2		11.3		10.3	
CO	Cobalt	10.8	J	8.5	J	8.6	J	9.1	J	11.6	J	7.8	J
CU	Copper	18.1		16.3		14.6		16.8		14.8		11.3	
PB	Lead	12.8	J	13.7	J	69.8	J	8.7	J	11.2	J	11.1	J
HG	Mercury	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.13	U
NI	Nickel	12.4		18.1		13.2		18.4		8.7	J	10.5	
SE	Selenium	0.25	UJ	0.24	U	0.24	U	0.25	U	0.31	UJ	0.25	U
AG	Silver	0.74	UJ	0.73	UJ	0.72	UJ	0.75	UJ	0.71	UJ	0.75	UJ
TL	Thallium	0.49	U	0.48	UJ	0.48	UJ	0.5	UJ	0.47	U	0.5	UJ
V	Vanadium	24.3		18.4		16.		22.1		22.4		20.2	
ZN	Zinc	53.1		52.6	J	51.	J	53.	J	48.		37.2	J
SN	Tin	20.9	U	7.8	U	10.1	U	5.	U	6.6	U	5.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

APX9-METAL													
	SAMPLE ID ------->	050-S-0006-01		050-S-0006-02		050-S-0007-01		050-S-0007-02		050-S-0008-01		050-S-0008-02	
	ORIGINAL ID ----->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	LAB SAMPLE ID --->	0-136397S		0-136405S		0-136398S		0-136406S		0-136399S		0-136407S	
	ID FROM REPORT -->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL
SB	Antimony	11.8	UJ	12.6	UJ	11.9	UJ	12.2	UJ	12.	UJ	12.3	UJ
AS	Arsenic	8.9		10.6		8.7		10.2		8.3		8.4	
BA	Barium	122.		130.		85.5		128.		119.		134.	
BE	Beryllium	0.54	J	0.52	J	0.45	J	0.79	J	0.52	J	0.73	J
CD	Cadmium	2.1		1.1	J	1.8		2.		1.8		2.2	
CR	Chromium	11.2		12.7		14.1		13.3		16.4		12.7	
CO	Cobalt	10.8	J	9.5	J	12.8		11.1	J	10.5	J	11.1	J
CU	Copper	19.1		18.3		13.5		18.1		13.		16.3	
PB	Lead	3.	J	11.3	J	26.3	J	18.8	J	11.5	J	12.3	J
HG	Mercury	0.12	U	0.13	U	0.12	U	0.12	U	0.12	U	0.12	U
NI	Nickel	17.		15.7		10.1		10.8		9.5	J	6.3	J
SE	Selenium	0.26	UJ	0.49	UJ	0.27	UJ	0.34	UJ	0.53	UJ	0.34	UJ
AG	Silver	0.71	UJ	0.76	UJ	0.71	UJ	0.73	UJ	0.72	UJ	0.74	UJ
TL	Thallium	0.47	U	0.51	U	0.48	U	0.49	U	0.48	U	0.49	U
V	Vanadium	25.7		23.2		29.1		28.9		30.2		28.6	
ZN	Zinc	57.3		52.9		47.3		60.4		39.4		51.7	
SN	Tin	16.9	U	22.1	U	15.6	U	27.9	U	17.3	U	24.6	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

APX9-METAL																			
		SAMPLE ID ------->	050-S-0009-01		050-S-0009-02		050-S-0010-01		050-C-0010-01		050-S-0010-02		051-S-0001-01						
		ORIGINAL ID ----->	050S000901		050S000902		050S001001		050C001001		050S001002		051S000101						
		LAB SAMPLE ID --->	0-136400S		2-136416S		2-136410S		0-136392S		2-136417S		2-136413S						
		ID FROM REPORT -->	050S000901		050S000902		050S001001		050C001001		050S001002		051S000101						
		SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95						
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil						
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG						
CAS #	Parameter		1551	VAL	1552	VAL	1552	VAL	1551	VAL	1552	VAL	1552	VAL					
SB	Antimony		12.2	UJ	12.4	UJ	11.5	UJ	11.8	UJ	12.4	UJ	11.8	UJ					
AS	Arsenic		7.1		9.2		5.8		9.6		13.4		9.4						
BA	Barium		129.		113.		114.		95.1		96.8		137.						
BE	Beryllium		0.63	J	0.66	J	0.52	J	0.46	J	0.5	J	0.51	J					
CD	Cadmium		2.2		2.7		2.6		1.3		2.5		2.5						
CR	Chromium		9.5		16.8		15.2		15.8		12.1		10.7						
CO	Cobalt		18.3		5.5	J	10.1	J	9.7	J	16.3		52.5						
CU	Copper		13.		16.2		12.1		15.6		15.4		16.7						
PB	Lead		18.3	J	9.8		42.		124.	J	13.9		12.7						
HG	Mercury		0.12	U	0.12	U	0.11	U	0.12	U	0.12	U	0.12	U					
NI	Nickel		6.2	J	13.9		16.5		7.9	J	15.9		21.5						
SE	Selenium		0.5	UJ	0.25	U	0.37	J	0.4	UJ	0.48	J	0.25	J					
AG	Silver		0.73	UJ	0.74	UJ	0.69	UJ	0.71	UJ	0.74	UJ	1.4	J					
TL	Thallium		0.49	U	0.49	U	0.46	U	0.47	U	0.5	U	0.47	U					
V	Vanadium		28.8		31.7		32.6		22.6		24.7		24.9						
ZN	Zinc		33.3		61.5		49.		55.1		56.4		50.5						
SN	Tin		26.8	U	4.9	UR	4.6	UR	6.2	U	5.	UR	7.1	UR					

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

APX9-METAL													
		SAMPLE ID ------->	051-S-0001-02		051-S-0002-01		051-C-0002-01		051-S-0002-02		051-S-0003-01		051-S-0003-02	
		ORIGINAL ID ----->	051S000102		051S000201		051C000201		051S000202		051S000301		051S000302	
		LAB SAMPLE ID --->	2-136418S		2-136412S		2-136411S		2-136419S		2-136414S		2-136420S	
		ID FROM REPORT -->	051S000102		051S000201		051C000201		051S000202		051S000301		051S000302	
		SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL
SB	Antimony		12.2	UJ	11.7	UJ	11.5	UJ	12.	UJ	19.1	J	14.7	J
AS	Arsenic		10.1		11.		8.2		10.4		9.8		7.5	
BA	Barium		86.8		136.		105.		115.		138.		108.	
BE	Beryllium		0.53	J	0.52	J	0.5	J	0.58	J	0.55	J	0.74	J
CD	Cadmium		2.1		4.3		3.4		3.3		2.5		2.8	
CR	Chromium		12.6		14.		15.		18.2		8.9		12.9	
CO	Cobalt		9.8	J	9.4	J	8.6	J	8.6	J	9.2	J	10.	J
CU	Copper		17.5		17.6		14.9		17.2		15.2		13.8	
PB	Lead		11.3		22.4		31.8		23.		12.9		11.8	
HG	Mercury		0.12	U	0.12	U	0.12	U	0.12	U	0.11	U	0.12	U
NI	Nickel		19.7		20.7		12.9		19.3		15.7		16.1	
SE	Selenium		0.24	J	0.31	J	0.28	J	0.24	J	0.28	J	0.29	J
AG	Silver		0.73	UJ	0.7	UJ	0.69	UJ	0.86	J	0.68	UJ	0.69	UJ
TL	Thallium		0.49	U	0.47	U	0.46	U	0.48	U	0.45	U	0.46	U
V	Vanadium		28.2		28.1		24.6		25.5		23.5		30.6	
ZN	Zinc		59.3		69.		76.8		69.3		53.9		46.5	
SN	Tin		4.9	UR	4.7	UR	4.6	UR	4.8	UR	4.5	UR	4.6	UR

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

APX9-METAL									
		SAMPLE ID ------->	051-S-0004-01		051-S-0004-02				
		ORIGINAL ID ----->	051S000401		051S000402				
		LAB SAMPLE ID --->	2-136415S		2-136421S				
		ID FROM REPORT -->	051S000401		051S000402				
		SAMPLE DATE ----->	10/09/95		10/09/95				
		MATRIX ---------->	Soil		Soil				
		UNITS ---------->	MG/KG		MG/KG				
CAS #	Parameter		1552	VAL	1552	VAL			
SB	Antimony		11.8	UJ	12.1	UJ			
AS	Arsenic		5.4		9.5				
BA	Barium		162.		101.				
BE	Beryllium		0.61	J	0.62	J			
CD	Cadmium		2.		3.8				
CR	Chromium		10.		17.7				
CO	Cobalt		9.3	J	9.9	J			
CU	Copper		10.5		16.2				
PB	Lead		13.4		12.2				
HG	Mercury		0.12	U	0.12	U			
NI	Nickel		14.7		16.7				
SE	Selenium		0.31	J	0.49	J			
AG	Silver		0.71	UJ	0.73	UJ			
TL	Thallium		0.47	U	0.49	U			
V	Vanadium		21.9		41.7				
ZN	Zinc		40.8		47.				
SN	Tin		4.7	UR	4.9	UR			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-PEST													
	SAMPLE ID ------->	050-S-0001-01		050-C-0001-01		050-S-0002-01 DL		050-S-0003-01 DL		050-S-0004-01 DL		050-C-0004-01 DL	
	ORIGINAL ID ----->	050S000101		050C000101		050S000201		050S000301		050S000401		050C000401	
	LAB SAMPLE ID --->	136393		136391		136394_10		136395_10		138199		138198	
	ID FROM REPORT -->	050S000101		050C000101		050S000201		050S000301		050S000401		050C000401	
	SAMPLE DATE ----->									10/31/95		10/31/95	
	DATE EXTRACTED -->	10/17/95		10/17/95		10/17/95		10/17/95		11/10/95		11/10/95	
	DATE ANALYZED --->	11/08/95		11/08/95		11/08/95		11/16/95		11/29/95		11/29/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1606	VAL	1606	VAL
319-84-6	alpha-BHC	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
319-85-7	beta-BHC	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
319-86-8	delta-BHC	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
58-89-9	gamma-BHC (Lindane)	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
76-44-8	Heptachlor	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
309-00-2	Aldrin	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
1024-57-3	Heptachlor epoxide	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
959-98-8	Endosulfan I	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
60-57-1	Dieldrin	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
72-55-9	4,4'-DDE	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
72-20-8	Endrin	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
33213-65-9	Endosulfan II	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
72-54-8	4,4'-DDD	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
1031-07-8	Endosulfan sulfate	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
50-29-3	4,4'-DDT	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
72-43-5	Methoxychlor	20.	U	20.	U	200.	U	200.	U	200.	U	200.	U
53494-70-5	Endrin ketone	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
7421-93-4	Endrin aldehyde	4.1	U	4.1	U	41.	U	41.	U	41.	U	41.	U
5103-71-9	alpha-Chlordane	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
5103-74-2	gamma-Chlordane	2.	U	2.	U	20.	U	20.	U	20.	U	20.	U
8001-35-2	Toxaphene	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
12674-11-2	Aroclor-1016	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
11104-28-2	Aroclor-1221	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
53469-21-9	Aroclor-1242	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
12672-29-6	Aroclor-1248	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
11097-69-1	Aroclor-1254	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
11096-82-5	Aroclor-1260	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
12789-03-6	Technical Chlordane	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U
11141-16-5	Aroclor-1232	41.	U	41.	U	410.	U	410.	U	410.	U	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-PEST													
	SAMPLE ID ------->	050-S-0005-01 DL		050-S-0006-01		050-S-0007-01		050-S-0008-01		050-S-0009-01 DL		050-S-0010-01 DL	
	ORIGINAL ID ----->	050S000501		050S000601		050S000701		050S000801		050S000901		050S001001DL	
	LAB SAMPLE ID --->	136396_10		136397		136398		136399		136400_5		136410_5DL	
	ID FROM REPORT -->	050S000501		050S000601		050S000701		050S000801		050S000901		050S001001DL	
	SAMPLE DATE ----->											10/09/95	
	DATE EXTRACTED -->	10/17/95		10/17/95		10/17/95		10/17/95		10/17/95			
	DATE ANALYZED --->	11/08/95		11/08/95		11/08/95		11/08/95		11/08/95		01/07/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		ug/kg		ug/kg		ug/Kg	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1552	VAL
319-84-6	alpha-BHC	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
319-85-7	beta-BHC	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
319-86-8	delta-BHC	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
58-89-9	gamma-BHC (Lindane)	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
76-44-8	Heptachlor	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
309-00-2	Aldrin	20.	U	2.	U	9.5		1.1	J	10.	U	10.	U
1024-57-3	Heptachlor epoxide	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
959-98-8	Endosulfan I	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
60-57-1	Dieldrin	39.	U	4.	U	27.		4.1	U	18.	DJ	20.	U
72-55-9	4,4'-DDE	39.	U	4.	U	14.	J	4.1	U	20.	U	20.	DJ
72-20-8	Endrin	39.	U	4.	U	4.	U	4.1	U	20.	U	20.	U
33213-65-9	Endosulfan II	39.	U	4.	U	4.	U	4.1	U	20.	U	20.	U
72-54-8	4,4'-DDD	39.	U	4.	U	5.9	J	4.1	U	20.	U	15.	DJ
1031-07-8	Endosulfan sulfate	39.	U	4.	U	4.	U	4.1	U	20.	U	20.	U
50-29-3	4,4'-DDT	39.	U	4.	U	4.	U	4.1	U	20.	U	20.	U
72-43-5	Methoxychlor	200.	U	20.	U	20.	U	20.	U	100.	U	100.	U
53494-70-5	Endrin ketone	39.	U	4.	U	4.	U	4.1	U	20.	U	20.	U
7421-93-4	Endrin aldehyde	39.	U	4.	U	4.	U	4.1	U	20.	U	20.	U
5103-71-9	alpha-Chlordane	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
5103-74-2	gamma-Chlordane	20.	U	2.	U	2.	U	2.	U	10.	U	10.	U
8001-35-2	Toxaphene	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U
12674-11-2	Aroclor-1016	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U
11104-28-2	Aroclor-1221	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U
53469-21-9	Aroclor-1242	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U
12672-29-6	Aroclor-1248	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U
11097-69-1	Aroclor-1254	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U
11096-82-5	Aroclor-1260	390.	U	40.	U	40.	U	41.	U	200.	U	130.	U
12789-03-6	Technical Chlordane	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U
11141-16-5	Aroclor-1232	390.	U	40.	U	40.	U	41.	U	200.	U	200.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-PEST													
	SAMPLE ID ------->	050-C-0010-01 DL		051-S-0001-01 DL		051-S-0002-01 DL		051-C-0002-01 DL		051-S-0003-01		051-S-0004-01	
	ORIGINAL ID ----->	050C001001		051S000101DL		051S000201DL		051C000201DL		051S000301		051S000401	
	LAB SAMPLE ID --->	136392_5		136413_5DL		136412_5DL		136411_5DL		136414		136415	
	ID FROM REPORT -->	050C001001		051S000101DL		051S000201DL		051C000201DL		051S000301		051S000401	
	SAMPLE DATE ----->			10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/17/95											
	DATE ANALYZED --->	11/08/95		01/07/95		01/07/95		01/07/95		01/07/95		01/07/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1551	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL
319-84-6	alpha-BHC	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
319-85-7	beta-BHC	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
319-86-8	delta-BHC	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
58-89-9	gamma-BHC (Lindane)	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
76-44-8	Heptachlor	10.	U	9.8	U	9.7	U	9.	U	1.9	U	2.	U
309-00-2	Aldrin	10.	U	9.8	U	9.7	U	9.9	U	1.	J	10.	
1024-57-3	Heptachlor epoxide	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
959-98-8	Endosulfan I	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
60-57-1	Dieldrin	20.	U	130.	D	55.	D	66.	D	3.9	U	58.	
72-55-9	4,4'-DDE	23.	DJ	160.	D	10.	DJ	13.	DJ	3.9	U	3.2	J
72-20-8	Endrin	20.	U	20.	U	19.	U	20.	U	3.9	U	4.	U
33213-65-9	Endosulfan II	20.	U	20.	U	19.	U	20.	U	3.9	U	4.	U
72-54-8	4,4'-DDD	14.	DJ	98.	D	8.4	DJ	11.	DJ	3.9	U	4.	U
1031-07-8	Endosulfan sulfate	20.	U	20.	U	19.	U	20.	U	3.9	U	4.	U
50-29-3	4,4'-DDT	20.	U	16.	DJ	19.	U	20.	U	3.9	U	4.	U
72-43-5	Methoxychlor	100.	U	98.	U	97.	U	99.	U	19.	U	20.	U
53494-70-5	Endrin ketone	20.	U	20.	U	19.	U	20.	U	3.9	U	4.	U
7421-93-4	Endrin aldehyde	20.	U	20.	U	19.	U	20.	U	3.9	U	4.	U
5103-71-9	alpha-Chlordane	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
5103-74-2	gamma-Chlordane	10.	U	9.8	U	9.7	U	9.9	U	1.9	U	2.	U
8001-35-2	Toxaphene	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
12674-11-2	Aroclor-1016	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
11104-28-2	Aroclor-1221	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
53469-21-9	Aroclor-1242	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
12672-29-6	Aroclor-1248	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
11097-69-1	Aroclor-1254	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
11096-82-5	Aroclor-1260	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
12789-03-6	Technical Chlordane	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U
11141-16-5	Aroclor-1232	200.	U	200.	U	190.	U	200.	U	39.	U	40.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
	SAMPLE ID ------->	050-S-0001-01		050-C-0001-01		050-S-0001-02		050-S-0002-01		050-S-0002-02		050-S-0003-01	
	ORIGINAL ID ----->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	LAB SAMPLE ID --->	136393		136391		136401		136394		136402		136395	
	ID FROM REPORT -->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/18/95		10/18/95		10/18/95		10/18/95		10/18/95		10/18/95	
	DATE ANALYZED --->	11/01/95		11/01/95		11/01/95		11/01/95		11/01/95		11/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL
108-95-2	Phenol	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
111-44-4	bis(2-Chloroethyl)ether	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
95-57-8	2-Chlorophenol	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
541-73-1	1,3-Dichlorobenzene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
106-46-7	1,4-Dichlorobenzene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
95-50-1	1,2-Dichlorobenzene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
95-48-7	2-Methylphenol (o-Cresol)	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
106-44-5	4-Methylphenol (p-Cresol)	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
621-64-7	N-Nitroso-di-n-propylamine	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
67-72-1	Hexachloroethane	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
98-95-3	Nitrobenzene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
78-59-1	Isophorone	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
88-75-5	2-Nitrophenol	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
105-67-9	2,4-Dimethylphenol	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
120-83-2	2,4-Dichlorophenol	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
120-82-1	1,2,4-Trichlorobenzene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
91-20-3	Naphthalene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
106-47-8	4-Chloroaniline	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
87-68-3	Hexachlorobutadiene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
111-91-1	bis(2-Chloroethoxy)methane	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
59-50-7	4-Chloro-3-methylphenol	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
91-57-6	2-Methylnaphthalene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
77-47-4	Hexachlorocyclopentadiene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
88-06-2	2,4,6-Trichlorophenol	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
91-58-7	2-Chloronaphthalene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
88-74-4	2-Nitroaniline	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
131-11-3	Dimethyl phthalate	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
208-96-8	Acenaphthylene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
606-20-2	2,6-Dinitrotoluene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
99-09-2	3-Nitroaniline	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
83-32-9	Acenaphthene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
51-28-5	2,4-Dinitrophenol	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
100-02-7	4-Nitrophenol	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
132-64-9	Dibenzofuran	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
	SAMPLE ID ------->	050-S-0001-01		050-C-0001-01		050-S-0001-02		050-S-0002-01		050-S-0002-02		050-S-0003-01	
	ORIGINAL ID ----->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	LAB SAMPLE ID --->	136393		136391		136401		136394		136402		136395	
	ID FROM REPORT -->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/18/95		10/18/95		10/18/95		10/18/95		10/18/95		10/18/95	
	DATE ANALYZED --->	11/01/95		11/01/95		11/01/95		11/01/95		11/01/95		11/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL
121-14-2	2,4-Dinitrotoluene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
84-66-2	Diethylphthalate	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
7005-72-3	4-Chlorophenylphenylether	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
86-73-7	Fluorene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
100-01-6	4-Nitroaniline	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
86-30-6	N-Nitrosodiphenylamine	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
101-55-3	4-Bromophenyl-phenylether	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
118-74-1	Hexachlorobenzene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
87-86-5	Pentachlorophenol	1000.	U	1000.	U	1000.	U	1000.	U	1000.	U	980.	U
85-01-8	Phenanthrene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
120-12-7	Anthracene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
86-74-8	Carbazole	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
84-74-2	Di-n-butylphthalate	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
206-44-0	Fluoranthene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
129-00-0	Pyrene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
85-68-7	Butylbenzylphthalate	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
91-94-1	3,3'-Dichlorobenzidine	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
56-55-3	Benzo(a)anthracene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
218-01-9	Chrysene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
117-84-0	Di-n-octyl phthalate	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
205-99-2	Benzo(b)fluoranthene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
207-08-9	Benzo(k)fluoranthene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
50-32-8	Benzo(a)pyrene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
193-39-5	Indeno(1,2,3-cd)pyrene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
53-70-3	Dibenz(a,h)anthracene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U
191-24-2	Benzo(g,h,i)perylene	420.	U	410.	U	420.	U	410.	U	420.	U	390.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
		SAMPLE ID ------->	050-S-0003-02		050-S-0004-01		050-C-0004-01		050-S-0004-02		050-S-0005-01		050-S-0005-02	
		ORIGINAL ID ----->	050S000302		050S000401		050C000401		050S000402		050S000501		050S000502	
		LAB SAMPLE ID --->	136403		138199		138198		138200		136396		138201	
		ID FROM REPORT -->	050S000302		050s000401		050c000401		050s000402		050S000501		050s000502	
		SAMPLE DATE ----->	10/09/95		10/31/95		10/31/95		10/31/95		10/09/95		10/31/95	
		DATE EXTRACTED -->	10/18/95		11/07/95		11/07/95		11/07/95		10/18/95		11/07/95	
		DATE ANALYZED --->	11/01/95		11/13/95		11/13/95		11/13/95		11/01/95		11/13/95	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter		1551	VAL	1606	VAL	1606	VAL	1606	VAL	1551	VAL	1606	VAL
108-95-2	Phenol		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
111-44-4	bis(2-Chloroethyl)ether		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
95-57-8	2-Chlorophenol		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
541-73-1	1,3-Dichlorobenzene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
106-46-7	1,4-Dichlorobenzene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
95-50-1	1,2-Dichlorobenzene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
95-48-7	2-Methylphenol (o-Cresol)		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
108-60-1	2,2'-oxybis(1-Chloropropane)		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
106-44-5	4-Methylphenol (p-Cresol)		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
621-64-7	N-Nitroso-di-n-propylamine		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
67-72-1	Hexachloroethane		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
98-95-3	Nitrobenzene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
78-59-1	Isophorone		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
88-75-5	2-Nitrophenol		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
105-67-9	2,4-Dimethylphenol		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
120-83-2	2,4-Dichlorophenol		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
120-82-1	1,2,4-Trichlorobenzene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
91-20-3	Naphthalene		410.	U	140.	J	220.	J	420.	U	390.	U	420.	U
106-47-8	4-Chloroaniline		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
87-68-3	Hexachlorobutadiene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
111-91-1	bis(2-Chloroethoxy)methane		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
59-50-7	4-Chloro-3-methylphenol		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
91-57-6	2-Methylnaphthalene		410.	U	410.	U	52.	J	420.	U	390.	U	420.	U
77-47-4	Hexachlorocyclopentadiene		410.	U	410.	UJ	410.	UJ	420.	UJ	390.	U	420.	UJ
88-06-2	2,4,6-Trichlorophenol		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
95-95-4	2,4,5-Trichlorophenol		1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
91-58-7	2-Chloronaphthalene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
88-74-4	2-Nitroaniline		1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
131-11-3	Dimethyl phthalate		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
208-96-8	Acenaphthylene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
606-20-2	2,6-Dinitrotoluene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
99-09-2	3-Nitroaniline		1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
83-32-9	Acenaphthene		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
51-28-5	2,4-Dinitrophenol		1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
100-02-7	4-Nitrophenol		1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
132-64-9	Dibenzofuran		410.	U	410.	U	410.	U	420.	U	390.	U	420.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
	SAMPLE ID ------->	050-S-0003-02		050-S-0004-01		050-C-0004-01		050-S-0004-02		050-S-0005-01		050-S-0005-02	
	ORIGINAL ID ----->	050S000302		050S000401		050C000401		050S000402		050S000501		050S000502	
	LAB SAMPLE ID --->	136403		138199		138198		138200		136396		138201	
	ID FROM REPORT -->	050S000302		050s000401		050c000401		050s000402		050S000501		050s000502	
	SAMPLE DATE ----->	10/09/95		10/31/95		10/31/95		10/31/95		10/09/95		10/31/95	
	DATE EXTRACTED -->	10/18/95		11/07/95		11/07/95		11/07/95		10/18/95		11/07/95	
	DATE ANALYZED --->	11/01/95		11/13/95		11/13/95		11/13/95		11/01/95		11/13/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1551	VAL	1606	VAL	1606	VAL	1606	VAL	1551	VAL	1606	VAL
121-14-2	2,4-Dinitrotoluene	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
84-66-2	Diethylphthalate	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
7005-72-3	4-Chlorophenylphenylether	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
86-73-7	Fluorene	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
100-01-6	4-Nitroaniline	1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
86-30-6	N-Nitrosodiphenylamine	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
101-55-3	4-Bromophenyl-phenylether	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
118-74-1	Hexachlorobenzene	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
87-86-5	Pentachlorophenol	1000.	U	1000.	U	1000.	U	1000.	U	980.	U	1000.	U
85-01-8	Phenanthrene	410.	U	56.	J	260.	J	420.	U	390.	U	420.	U
120-12-7	Anthracene	410.	U	410.	U	67.	J	420.	U	390.	U	420.	U
86-74-8	Carbazole	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
84-74-2	Di-n-butylphthalate	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
206-44-0	Fluoranthene	410.	U	150.	J	520.		420.	U	390.	U	420.	U
129-00-0	Pyrene	410.	U	130.	J	440.		420.	U	390.	U	420.	U
85-68-7	Butylbenzylphthalate	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
56-55-3	Benzo(a)anthracene	410.	U	96.	J	290.	J	420.	U	390.	U	420.	U
218-01-9	Chrysene	410.	U	120.	J	280.	J	420.	U	390.	U	420.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	44.	J	410.	U	410.	U	420.	U	390.	U	420.	U
117-84-0	Di-n-octyl phthalate	410.	U	410.	U	410.	U	420.	U	390.	U	420.	U
205-99-2	Benzo(b)fluoranthene	410.	U	140.	J	340.	J	420.	U	390.	U	420.	U
207-08-9	Benzo(k)fluoranthene	410.	U	140.	J	270.	J	420.	U	390.	U	420.	U
50-32-8	Benzo(a)pyrene	410.	U	140.	J	300.	J	420.	U	390.	U	420.	U
193-39-5	Indeno(1,2,3-cd)pyrene	410.	U	50.	J	110.	J	420.	U	390.	U	420.	U
53-70-3	Dibenz(a,h)anthracene	410.	U	410.	U	48.	J	420.	U	390.	U	420.	U
191-24-2	Benzo(g,h,i)perylene	410.	U	55.	J	110.	J	420.	U	390.	U	420.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
	SAMPLE ID ------->	050-S-0006-01		050-S-0006-02		050-S-0007-01		050-S-0007-02		050-S-0008-01		050-S-0008-02	
	ORIGINAL ID ----->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	LAB SAMPLE ID --->	136397		136405		136398		136406		136399		136407	
	ID FROM REPORT -->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/18/95		10/18/95		10/18/95		10/18/95		10/18/95		10/18/95	
	DATE ANALYZED --->	11/01/95		11/02/95		11/01/95		11/02/95		11/01/95		11/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL
108-95-2	Phenol	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
111-44-4	bis(2-Chloroethyl)ether	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
95-57-8	2-Chlorophenol	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
541-73-1	1,3-Dichlorobenzene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
106-46-7	1,4-Dichlorobenzene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
95-50-1	1,2-Dichlorobenzene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
95-48-7	2-Methylphenol (o-Cresol)	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
106-44-5	4-Methylphenol (p-Cresol)	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
67-72-1	Hexachloroethane	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
98-95-3	Nitrobenzene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
78-59-1	Isophorone	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
88-75-5	2-Nitrophenol	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
105-67-9	2,4-Dimethylphenol	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
120-83-2	2,4-Dichlorophenol	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
120-82-1	1,2,4-Trichlorobenzene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
91-20-3	Naphthalene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
106-47-8	4-Chloroaniline	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
87-68-3	Hexachlorobutadiene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
59-50-7	4-Chloro-3-methylphenol	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
91-57-6	2-Methylnaphthalene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
77-47-4	Hexachlorocyclopentadiene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
88-06-2	2,4,6-Trichlorophenol	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
91-58-7	2-Chloronaphthalene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
88-74-4	2-Nitroaniline	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
131-11-3	Dimethyl phthalate	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
208-96-8	Acenaphthylene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
606-20-2	2,6-Dinitrotoluene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
99-09-2	3-Nitroaniline	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
83-32-9	Acenaphthene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
51-28-5	2,4-Dinitrophenol	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
100-02-7	4-Nitrophenol	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
132-64-9	Dibenzofuran	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
	SAMPLE ID ------->	050-S-0006-01		050-S-0006-02		050-S-0007-01		050-S-0007-02		050-S-0008-01		050-S-0008-02	
	ORIGINAL ID ----->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	LAB SAMPLE ID --->	136397		136405		136398		136406		136399		136407	
	ID FROM REPORT -->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/18/95		10/18/95		10/18/95		10/18/95		10/18/95		10/18/95	
	DATE ANALYZED --->	11/01/95		11/02/95		11/01/95		11/02/95		11/01/95		11/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL
121-14-2	2,4-Dinitrotoluene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
84-66-2	Diethylphthalate	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
7005-72-3	4-Chlorophenylphenylether	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
86-73-7	Fluorene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
100-01-6	4-Nitroaniline	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
86-30-6	N-Nitrosodiphenylamine	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
101-55-3	4-Bromophenyl-phenylether	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
118-74-1	Hexachlorobenzene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
87-86-5	Pentachlorophenol	1000.	U	1000.	U	990.	U	1000.	U	1000.	U	1000.	U
85-01-8	Phenanthrene	400.	U	420.	U	94.	J	410.	U	410.	U	420.	U
120-12-7	Anthracene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
86-74-8	Carbazole	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
84-74-2	Di-n-butylphthalate	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
206-44-0	Fluoranthene	400.	U	420.	U	160.	J	410.	U	410.	U	420.	U
129-00-0	Pyrene	400.	U	420.	U	140.	J	410.	U	410.	U	420.	U
85-68-7	Butylbenzylphthalate	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
91-94-1	3,3'-Dichlorobenzidine	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
56-55-3	Benzo(a)anthracene	400.	U	420.	U	81.	J	410.	U	410.	U	420.	U
218-01-9	Chrysene	400.	U	420.	U	97.	J	410.	U	410.	U	420.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	400.	U	420.	U	400.	U	410.	U	410.	U	44.	J
117-84-0	Di-n-octyl phthalate	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
205-99-2	Benzo(b)fluoranthene	400.	U	420.	U	91.	J	410.	U	410.	U	420.	U
207-08-9	Benzo(k)fluoranthene	400.	U	420.	U	94.	J	410.	U	410.	U	420.	U
50-32-8	Benzo(a)pyrene	400.	U	420.	U	86.	J	410.	U	410.	U	420.	U
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U	420.	U	48.	J	410.	U	410.	U	420.	U
53-70-3	Dibenz(a,h)anthracene	400.	U	420.	U	400.	U	410.	U	410.	U	420.	U
191-24-2	Benzo(g,h,i)perylene	400.	U	420.	U	46.	J	410.	U	410.	U	420.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA						
SAMPLE ID ------->	050-S-0009-01	050-S-0009-02	050-S-0010-01	050-C-0010-01	050-S-0010-02	051-S-0001-01
ORIGINAL ID ----->	050S000901	050S000902	050S001001	050C001001	050S001002	051S000101
LAB SAMPLE ID --->	136400	136416	136410	136392	136417	136413
ID FROM REPORT -->	050S000901	050s000902	050s001001	050C001001	050s001002	051s000101
SAMPLE DATE ----->	10/09/95	10/09/95	10/09/95	10/09/95	10/09/95	10/09/95
DATE EXTRACTED -->	10/18/95	10/19/95	10/19/95	10/18/95	10/19/95	10/19/95
DATE ANALYZED --->	11/01/95	11/02/95	11/02/95	11/01/95	11/02/95	11/02/95
MATRIX ---------->	Soil	Soil	Soil	Soil	Soil	Soil
UNITS ---------->	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg

CAS #	Parameter	1551	VAL	1552	VAL	1552	VAL	1551	VAL	1552	VAL	1552	VAL
108-95-2	Phenol	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
111-44-4	bis(2-Chloroethyl)ether	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
95-57-8	2-Chlorophenol	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
541-73-1	1,3-Dichlorobenzene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
106-46-7	1,4-Dichlorobenzene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
95-50-1	1,2-Dichlorobenzene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
95-48-7	2-Methylphenol (o-Cresol)	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
106-44-5	4-Methylphenol (p-Cresol)	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
67-72-1	Hexachloroethane	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
98-95-3	Nitrobenzene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
78-59-1	Isophorone	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
88-75-5	2-Nitrophenol	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
105-67-9	2,4-Dimethylphenol	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
120-83-2	2,4-Dichlorophenol	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
120-82-1	1,2,4-Trichlorobenzene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
91-20-3	Naphthalene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
106-47-8	4-Chloroaniline	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
87-68-3	Hexachlorobutadiene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
59-50-7	4-Chloro-3-methylphenol	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
91-57-6	2-Methylnaphthalene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
77-47-4	Hexachlorocyclopentadiene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
88-06-2	2,4,6-Trichlorophenol	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
91-58-7	2-Chloronaphthalene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
88-74-4	2-Nitroaniline	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
131-11-3	Dimethyl phthalate	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
208-96-8	Acenaphthylene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
606-20-2	2,6-Dinitrotoluene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
99-09-2	3-Nitroaniline	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
83-32-9	Acenaphthene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
51-28-5	2,4-Dinitrophenol	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
100-02-7	4-Nitrophenol	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
132-64-9	Dibenzofuran	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA															
	SAMPLE ID ------->	050-S-0009-01		050-S-0009-02		050-S-0010-01		050-C-0010-01		050-S-0010-02		051-S-0001-01	
	ORIGINAL ID ----->	050S000901		050S000902		050S001001		050C001001		050S001002		051S000101	
	LAB SAMPLE ID --->	136400		136416		136410		136392		136417		136413	
	ID FROM REPORT -->	050S000901		050s000902		050s001001		050C001001		050s001002		051s000101	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/18/95		10/19/95		10/19/95		10/18/95		10/19/95		10/19/95	
	DATE ANALYZED --->	11/01/95		11/02/95		11/02/95		11/01/95		11/02/95		11/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1551	VAL	1552	VAL	1552	VAL	1551	VAL	1552	VAL	1552	VAL
121-14-2	2,4-Dinitrotoluene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
84-66-2	Diethylphthalate	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
7005-72-3	4-Chlorophenylphenylether	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
86-73-7	Fluorene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
100-01-6	4-Nitroaniline	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
86-30-6	N-Nitrosodiphenylamine	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
101-55-3	4-Bromophenyl-phenylether	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
118-74-1	Hexachlorobenzene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
87-86-5	Pentachlorophenol	1000.	U	1000.	U	5100.	U	990.	U	1000.	U	990.	U
85-01-8	Phenanthrene	400.	U	420.	U	2000.	U	130.	J	420.	U	400.	U
120-12-7	Anthracene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
86-74-8	Carbazole	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
84-74-2	Di-n-butylphthalate	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
206-44-0	Fluoranthene	56.	J	420.	U	2000.	U	230.	J	420.	U	400.	U
129-00-0	Pyrene	56.	J	420.	U	2000.	U	200.	J	420.	U	400.	U
85-68-7	Butylbenzylphthalate	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
91-94-1	3,3'-Dichlorobenzidine	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
56-55-3	Benzo(a)anthracene	39.	J	420.	U	2000.	U	84.	J	420.	U	400.	U
218-01-9	Chrysene	39.	J	420.	U	2000.	U	110.	J	420.	U	400.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	400.	U	420.	U	2000.	U	200.	J	420.	U	400.	U
117-84-0	Di-n-octyl phthalate	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
205-99-2	Benzo(b)fluoranthene	400.	U	420.	U	2000.	U	100.	J	420.	U	42.	J
207-08-9	Benzo(k)fluoranthene	400.	U	420.	U	2000.	U	93.	J	420.	U	400.	U
50-32-8	Benzo(a)pyrene	400.	U	420.	U	2000.	U	78.	J	420.	U	400.	U
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
53-70-3	Dibenz(a,h)anthracene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U
191-24-2	Benzo(g,h,i)perylene	400.	U	420.	U	2000.	U	400.	U	420.	U	400.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
	SAMPLE ID ------->	051-S-0001-02		051-S-0002-01		051-C-0002-01		051-S-0002-02		051-S-0003-01		051-S-0003-02	
	ORIGINAL ID ----->	051S000102		051S000201		051C000201		051S000202		051S000301		051S000302	
	LAB SAMPLE ID --->	136418		136412		136411		136419		136414		136420	
	ID FROM REPORT -->	051s000102		051s000201		051c000201		051s000202		051s000301		051s000302	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/19/95		10/19/95		10/19/95		10/19/95		10/19/95		10/19/95	
	DATE ANALYZED --->	11/02/95		11/02/95		11/02/95		11/02/95		11/02/95		11/06/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL
108-95-2	Phenol	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
111-44-4	bis(2-Chloroethyl)ether	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
95-57-8	2-Chlorophenol	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
541-73-1	1,3-Dichlorobenzene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
106-46-7	1,4-Dichlorobenzene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
95-50-1	1,2-Dichlorobenzene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
95-48-7	2-Methylphenol (o-Cresol)	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
106-44-5	4-Methylphenol (p-Cresol)	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
621-64-7	N-Nitroso-di-n-propylamine	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
67-72-1	Hexachloroethane	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
98-95-3	Nitrobenzene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
78-59-1	Isophorone	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
88-75-5	2-Nitrophenol	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
105-67-9	2,4-Dimethylphenol	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
120-83-2	2,4-Dichlorophenol	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
91-20-3	Naphthalene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
106-47-8	4-Chloroaniline	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
87-68-3	Hexachlorobutadiene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
111-91-1	bis(2-Chloroethoxy)methane	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
59-50-7	4-Chloro-3-methylphenol	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
91-57-6	2-Methylnaphthalene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
77-47-4	Hexachlorocyclopentadiene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
88-06-2	2,4,6-Trichlorophenol	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
91-58-7	2-Chloronaphthalene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
88-74-4	2-Nitroaniline	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
131-11-3	Dimethyl phthalate	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
208-96-8	Acenaphthylene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
606-20-2	2,6-Dinitrotoluene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
99-09-2	3-Nitroaniline	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
83-32-9	Acenaphthene	410.	U	1900.	U	2000.	U	2000.	U	110.	J	390.	U
51-28-5	2,4-Dinitrophenol	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
100-02-7	4-Nitrophenol	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
132-64-9	Dibenzofuran	410.	U	1900.	U	2000.	U	2000.	U	41.	J	390.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA													
	SAMPLE ID ------->	051-S-0001-02		051-S-0002-01		051-C-0002-01		051-S-0002-02		051-S-0003-01		051-S-0003-02	
	ORIGINAL ID ----->	051S000102		051S000201		051C000201		051S000202		051S000301		051S000302	
	LAB SAMPLE ID --->	136418		136412		136411		136419		136414		136420	
	ID FROM REPORT -->	051s000102		051s000201		051c000201		051s000202		051s000301		051s000302	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE EXTRACTED -->	10/19/95		10/19/95		10/19/95		10/19/95		10/19/95		10/19/95	
	DATE ANALYZED --->	11/02/95		11/02/95		11/02/95		11/02/95		11/02/95		11/06/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL
121-14-2	2,4-Dinitrotoluene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
84-66-2	Diethylphthalate	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
7005-72-3	4-Chlorophenylphenylether	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
86-73-7	Fluorene	410.	U	1900.	U	2000.	U	2000.	U	74.	J	390.	U
100-01-6	4-Nitroaniline	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
86-30-6	N-Nitrosodiphenylamine	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
101-55-3	4-Bromophenyl-phenylether	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
118-74-1	Hexachlorobenzene	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
87-86-5	Pentachlorophenol	1000.	U	4800.	U	4900.	U	5100.	U	970.	U	970.	U
85-01-8	Phenanthrene	410.	U	1900.	U	2000.	U	2000.	U	920.		390.	U
120-12-7	Anthracene	410.	U	1900.	U	2000.	U	2000.	U	240.	J	390.	U
86-74-8	Carbazole	410.	U	1900.	U	2000.	U	2000.	U	100.	J	390.	U
84-74-2	Di-n-butylphthalate	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
206-44-0	Fluoranthene	410.	U	280.	J	420.	J	270.	J	1200.		390.	U
129-00-0	Pyrene	410.	U	280.	J	360.	J	240.	J	890.		390.	U
85-68-7	Butylbenzylphthalate	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
56-55-3	Benzo(a)anthracene	410.	U	1900.	U	2000.	U	2000.	U	480.		390.	U
218-01-9	Chrysene	410.	U	1900.	U	2000.	U	2000.	U	510.		390.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	130.	J	1900.	U	2000.	U	2000.	U	390.	U	390.	U
117-84-0	Di-n-octyl phthalate	410.	U	1900.	U	2000.	U	2000.	U	390.	U	390.	U
205-99-2	Benzo(b)fluoranthene	410.	U	1900.	U	2000.	U	2000.	U	360.	J	390.	U
207-08-9	Benzo(k)fluoranthene	410.	U	1900.	U	2000.	U	2000.	U	410.		390.	U
50-32-8	Benzo(a)pyrene	410.	U	1900.	U	2000.	U	2000.	U	390.		390.	U
193-39-5	Indeno(1,2,3-cd)pyrene	410.	U	1900.	U	2000.	U	2000.	U	160.	J	390.	U
53-70-3	Dibenz(a,h)anthracene	410.	U	1900.	U	2000.	U	2000.	U	60.	J	390.	U
191-24-2	Benzo(g,h,i)perylene	410.	U	1900.	U	2000.	U	2000.	U	130.	J	390.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA								
	SAMPLE ID ------->	051-S-0004-01		051-S-0004-02				
	ORIGINAL ID ----->	051S000401		051S000402				
	LAB SAMPLE ID --->	136415		136421				
	ID FROM REPORT -->	051s000401		051s000402				
	SAMPLE DATE ----->	10/09/95		10/09/95				
	DATE EXTRACTED -->	10/19/95		10/19/95				
	DATE ANALYZED --->	11/02/95		11/06/95				
	MATRIX ---------->	Soil		Soil				
	UNITS ---------->	ug/Kg		ug/Kg				
CAS #	Parameter	1552	VAL	1552	VAL			
108-95-2	Phenol	400.	U	410.	U			
111-44-4	bis(2-Chloroethyl)ether	400.	U	410.	U			
95-57-8	2-Chlorophenol	400.	U	410.	U			
541-73-1	1,3-Dichlorobenzene	400.	U	410.	U			
106-46-7	1,4-Dichlorobenzene	400.	U	410.	U			
95-50-1	1,2-Dichlorobenzene	400.	U	410.	U			
95-48-7	2-Methylphenol (o-Cresol)	400.	U	410.	U			
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U	410.	U			
106-44-5	4-Methylphenol (p-Cresol)	400.	U	410.	U			
621-64-7	N-Nitroso-di-n-propylamine	400.	U	410.	U			
67-72-1	Hexachloroethane	400.	U	410.	U			
98-95-3	Nitrobenzene	400.	U	410.	U			
78-59-1	Isophorone	400.	U	410.	U			
88-75-5	2-Nitrophenol	400.	U	410.	U			
105-67-9	2,4-Dimethylphenol	400.	U	410.	U			
120-83-2	2,4-Dichlorophenol	400.	U	410.	U			
120-82-1	1,2,4-Trichlorobenzene	400.	U	410.	U			
91-20-3	Naphthalene	400.	U	410.	U			
106-47-8	4-Chloroaniline	400.	U	410.	U			
87-68-3	Hexachlorobutadiene	400.	U	410.	U			
111-91-1	bis(2-Chloroethoxy)methane	400.	U	410.	U			
59-50-7	4-Chloro-3-methylphenol	400.	U	410.	U			
91-57-6	2-Methylnaphthalene	400.	U	410.	U			
77-47-4	Hexachlorocyclopentadiene	400.	U	410.	U			
88-06-2	2,4,6-Trichlorophenol	400.	U	410.	U			
95-95-4	2,4,5-Trichlorophenol	1000.	U	1000.	U			
91-58-7	2-Chloronaphthalene	400.	U	410.	U			
88-74-4	2-Nitroaniline	1000.	U	1000.	U			
131-11-3	Dimethyl phthalate	400.	U	410.	U			
208-96-8	Acenaphthylene	400.	U	410.	U			
606-20-2	2,6-Dinitrotoluene	400.	U	410.	U			
99-09-2	3-Nitroaniline	1000.	U	1000.	U			
83-32-9	Acenaphthene	400.	U	410.	U			
51-28-5	2,4-Dinitrophenol	1000.	U	1000.	U			
100-02-7	4-Nitrophenol	1000.	U	1000.	U			
132-64-9	Dibenzofuran	400.	U	410.	U			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-SVOA								
	SAMPLE ID ------->	051-S-0004-01		051-S-0004-02				
	ORIGINAL ID ----->	051S000401		051S000402				
	LAB SAMPLE ID --->	136415		136421				
	ID FROM REPORT -->	051s000401		051s000402				
	SAMPLE DATE ----->	10/09/95		10/09/95				
	DATE EXTRACTED -->	10/19/95		10/19/95				
	DATE ANALYZED --->	11/02/95		11/06/95				
	MATRIX ---------->	Soil		Soil				
	UNITS ---------->	ug/Kg		ug/Kg				
CAS #	Parameter	1552	VAL	1552	VAL			
121-14-2	2,4-Dinitrotoluene	400.	U	410.	U			
84-66-2	Diethylphthalate	400.	U	410.	U			
7005-72-3	4-Chlorophenylphenylether	400.	U	410.	U			
86-73-7	Fluorene	400.	U	410.	U			
100-01-6	4-Nitroaniline	1000.	U	1000.	U			
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	1000.	U			
86-30-6	N-Nitrosodiphenylamine	400.	U	410.	U			
101-55-3	4-Bromophenyl-phenylether	400.	U	410.	U			
118-74-1	Hexachlorobenzene	400.	U	410.	U			
87-86-5	Pentachlorophenol	1000.	U	1000.	U			
85-01-8	Phenanthrene	400.	U	410.	U			
120-12-7	Anthracene	400.	U	410.	U			
86-74-8	Carbazole	400.	U	410.	U			
84-74-2	Di-n-butylphthalate	400.	U	410.	U			
206-44-0	Fluoranthene	39.	J	410.	U			
129-00-0	Pyrene	400.	U	410.	U			
85-68-7	Butylbenzylphthalate	400.	U	410.	U			
91-94-1	3,3'-Dichlorobenzidine	400.	U	410.	U			
56-55-3	Benzo(a)anthracene	400.	U	410.	U			
218-01-9	Chrysene	400.	U	410.	U			
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	400.	U	410.	U			
117-84-0	Di-n-octyl phthalate	400.	U	410.	U			
205-99-2	Benzo(b)fluoranthene	400.	U	410.	U			
207-08-9	Benzo(k)fluoranthene	400.	U	410.	U			
50-32-8	Benzo(a)pyrene	400.	U	410.	U			
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U	410.	U			
53-70-3	Dibenz(a,h)anthracene	400.	U	410.	U			
191-24-2	Benzo(g,h,i)perylene	400.	U	410.	U			

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-VOA													
	SAMPLE ID ------->	050-S-0001-01		050-C-0001-01		050-S-0001-02		050-S-0002-01		050-S-0002-02		050-S-0003-01	
	ORIGINAL ID ----->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	LAB SAMPLE ID --->	136393		136391		136401		136394		136402		136395	
	ID FROM REPORT -->	050S000101		050C000101		050S000102		050S000201		050S000202		050S000301	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE ANALYZED --->	10/13/95		10/12/95		10/12/95		10/12/95		10/12/95		10/12/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1551	VAL
74-87-3	Chloromethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
74-83-9	Bromomethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
75-01-4	Vinyl chloride	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
75-00-3	Chloroethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
75-09-2	Methylene chloride	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
67-64-1	Acetone	150.	U	12.	U	170.	U	150.	U	140.	U	250.	J
75-15-0	Carbon disulfide	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
75-35-4	1,1-Dichloroethylene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
75-34-3	1,1-Dichloroethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
67-66-3	Chloroform	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
107-06-2	1,2-Dichloroethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
78-93-3	2-Butanone (MEK)	16.		12.	U	12.	U	12.	U	12.	U	8.	J
71-55-6	1,1,1-Trichloroethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
56-23-5	Carbon tetrachloride	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
75-27-4	Bromodichloromethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
78-87-5	1,2-Dichloropropane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
79-01-6	Trichloroethene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
124-48-1	Dibromochloromethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
79-00-5	1,1,2-Trichloroethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
71-43-2	Benzene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
75-25-2	Bromoform	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
591-78-6	2-Hexanone	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
127-18-4	Tetrachloroethene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
108-88-3	Toluene	2.	J	3.	J	4.	J	5.	J	5.	J	3.	J
108-90-7	Chlorobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
100-41-4	Ethylbenzene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
100-42-5	Styrene	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U
1330-20-7	Xylene (Total)	12.	U	12.	U	12.	U	12.	U	12.	U	11.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-VOA													
	SAMPLE ID ------->	050-S-0003-02		050-S-0004-01		050-C-0004-01		050-S-0004-02		050-S-0005-01		050-S-0005-02	
	ORIGINAL ID ----->	050S000302		050S000401		050C000401		050S000402		050S000501		050S000502	
	LAB SAMPLE ID --->	136403		138199		138198		138200		136396		138201	
	ID FROM REPORT -->	050S000302		050S000401		050C000401		050S000402		050S000501		050S000502	
	SAMPLE DATE ----->	10/09/95		10/31/95		10/31/95		10/31/95		10/09/95		10/31/95	
	DATE ANALYZED --->	10/13/95		11/07/95		11/08/95		11/07/95		10/12/95		11/07/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1551	VAL	1606	VAL	1606	VAL	1606	VAL	1551	VAL	1606	VAL
74-87-3	Chloromethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
74-83-9	Bromomethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
75-01-4	Vinyl chloride	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
75-00-3	Chloroethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
75-09-2	Methylene chloride	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
67-64-1	Acetone	52.	U	320.	U	200.	U	76.	U	12.	U	19.	U
75-15-0	Carbon disulfide	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
75-35-4	1,1-Dichloroethylene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
75-34-3	1,1-Dichloroethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
67-66-3	Chloroform	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
107-06-2	1,2 Dichloroethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
78-93-3	2-Butanone (MEK)	12.	U	41.	J	26.		12.	U	12.	U	13.	U
71-55-6	1,1,1-Trichloroethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
56-23-5	Carbon tetrachloride	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
75-27-4	Bromodichloromethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
78-87-5	1,2-Dichloropropane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
79-01-6	Trichloroethene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
124-48-1	Dibromochloromethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
79-00-5	1,1,2-Trichloroethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
71-43-2	Benzene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
75-25-2	Bromoform	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
591-78-6	2-Hexanone	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
127-18-4	Tetrachloroethene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
108-88-3	Toluene	2.	J	79.		4.	J	4.	J	10.	J	7.	J
108-90-7	Chlorobenzene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
100-41-4	Ethylbenzene	12.	U	29.	J	20.	U	12.	U	12.	U	13.	U
100-42-5	Styrene	12.	U	61.	U	20.	U	12.	U	12.	U	13.	U
1330-20-7	Xylene (Total)	12.	U	61.	U	7.	J	12.	U	2.	J	13.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-VOA													
	SAMPLE ID ------->	050-S-0006-01		050-S-0006-02		050-S-0007-01		050-S-0007-02		050-S-0008-01		050-S-0008-02	
	ORIGINAL ID ----->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	LAB SAMPLE ID --->	136397		136405		136398		136406		138203		136407	
	ID FROM REPORT -->	050S000601		050S000602		050S000701		050S000702		050S000801		050S000802	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/31/95		10/09/95	
	DATE ANALYZED --->	10/12/95		10/13/95		10/20/95		10/13/95		11/07/95		10/19/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1551	VAL	1551	VAL	1551	VAL	1551	VAL	1606	VAL	1551	VAL
74-87-3	Chloromethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
74-83-9	Bromomethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
75-01-4	Vinyl chloride	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
75-00-3	Chloroethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
75-09-2	Methylene chloride	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
67-64-1	Acetone	140.	U	160.	U	890.		120.	U	27.	U	240.	
75-15-0	Carbon disulfide	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
75-35-4	1,1-Dichloroethylene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
75-34-3	1,1-Dichloroethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
67-66-3	Chloroform	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
107-06-2	1,2-Dichloroethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
78-93-3	2-Butanone (MEK)	12.	U	13.	U	48.	J	12.	U	11.	U	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
56-23-5	Carbon tetrachloride	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
75-27-4	Bromodichloromethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
78-87-5	1,2-Dichloropropane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
79-01-6	Trichloroethene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
124-48-1	Dibromochloromethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
71-43-2	Benzene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
75-25-2	Bromoform	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
591-78-6	2-Hexanone	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
127-18-4	Tetrachloroethene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
108-88-3	Toluene	10.	J	6.	J	60.	U	4.	J	22.		12.	U
108-90-7	Chlorobenzene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
100-41-4	Ethylbenzene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
100-42-5	Styrene	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U
1330-20-7	Xylene (Total)	12.	U	13.	U	60.	U	12.	U	11.	U	12.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-VOA													
	SAMPLE ID ------->	050-S-0009-01		050-S-0009-02		050-S-0010-01		050-C-0010-01		051-S-0001-01		051-S-0001-02	
	ORIGINAL ID ----->	050S000901		050S000902		050S001001		050C001001		051S000101		051S000102	
	LAB SAMPLE ID --->	136400		138204		136410		136392		136413		136418	
	ID FROM REPORT -->	050S000901		050S000902		050S001001		050C001001		051S000101		051S000102	
	SAMPLE DATE ----->	10/05/95		10/31/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE ANALYZED --->	10/12/95		11/07/95		10/13/95		10/12/95		10/15/95		10/20/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1551	VAL	1606	VAL	1552	VAL	1551	VAL	1552	VAL	1552	VAL
74-87-3	Chloromethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
74-83-9	Bromomethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
75-01-4	Vinyl chloride	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
75-00-3	Chloroethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
75-09-2	Methylene chloride	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
67-64-1	Acetone	320.	J	18.	U	17.	U	94.	U	40.	U	42.	U
75-15-0	Carbon disulfide	13.	U	11.	U	12.	U	12.	U	11.	U	2.	J
75-35-4	1,1-Dichloroethylene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
75-34-3	1,1-Dichloroethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
540-59-0	1,2-Dichloroethene (total)	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
67-66-3	Chloroform	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
107-06-2	1,2-Dichloroethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
78-93-3	2-Butanone (MEK)	12.	J	11.	U	12.	U	12.		11.	U	12.	U
71-55-6	1,1,1-Trichloroethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
56-23-5	Carbon tetrachloride	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
75-27-4	Bromodichloromethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
78-87-5	1,2-Dichloropropane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
10061-01-5	cis-1,3-Dichloropropene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
79-01-6	Trichloroethene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
124-48-1	Dibromochloromethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
79-00-5	1,1,2-Trichloroethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
71-43-2	Benzene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
10061-02-6	trans-1,3-Dichloropropene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
75-25-2	Bromoform	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
591-78-6	2-Hexanone	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
127-18-4	Tetrachloroethene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
108-88-3	Toluene	8.	J	11.	U	5.	J	12.	U	2.	J	12.	U
108-90-7	Chlorobenzene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
100-41-4	Ethylbenzene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
100-42-5	Styrene	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U
1330-20-7	Xylene (Total)	13.	U	11.	U	12.	U	12.	U	11.	U	12.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

SW846-VOA											
	SAMPLE ID ------->	051-S-0002-01		051-C-0002-01		051-S-0003-01		051-S-0003-02		051-S-0004-01	
	ORIGINAL ID ----->	051S000201		051C000201		051S000301		051S000302		051S000401	
	LAB SAMPLE ID --->	136412		136411		136414		136420		136415	
	ID FROM REPORT -->	051S000201		051C000201		051S000301		051S000302		051S000401	
	SAMPLE DATE ----->	10/09/95		10/09/95		10/09/95		10/09/95		10/09/95	
	DATE ANALYZED --->	10/15/95		10/15/95		10/13/95		10/16/95		10/20/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1552	VAL	1552	VAL	1552	VAL	1552	VAL	1552	VAL
74-87-3	Chloromethane	12.	U	12.	U	11.	U	12.	U	12.	U
74-83-9	Bromomethane	12.	U	12.	U	11.	U	12.	U	12.	U
75-01-4	Vinyl chloride	12.	U	12.	U	11.	U	12.	U	12.	U
75-00-3	Chloroethane	12.	U	12.	U	11.	U	12.	U	12.	U
75-09-2	Methylene chloride	12.	U	12.	U	11.	U	12.	U	12.	U
67-64-1	Acetone	12.	U	12.	U	11.	U	36.	U	110.	U
75-15-0	Carbon disulfide	12.	U	12.	U	11.	U	12.	U	12.	U
75-35-4	1,1-Dichloroethylene	12.	U	12.	U	11.	U	12.	U	12.	U
75-34-3	1,1-Dichloroethane	12.	U	12.	U	11.	U	12.	U	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	12.	U	11.	U	12.	U	12.	U
67-66-3	Chloroform	12.	U	12.	U	11.	U	12.	U	12.	U
107-06-2	1,2-Dichloroethane	12.	U	12.	U	11.	U	12.	U	12.	U
78-93-3	2-Butanone (MEK)	12.	U	12.	U	11.	U	12.	U	17.	
71-55-6	1,1,1-Trichloroethane	12.	U	12.	U	11.	U	12.	U	12.	U
56-23-5	Carbon tetrachloride	12.	U	12.	U	11.	U	12.	U	12.	U
75-27-4	Bromodichloromethane	12.	U	12.	U	11.	U	12.	U	12.	U
78-87-5	1,2-Dichloropropane	12.	U	12.	U	11.	U	12.	U	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	12.	U	11.	U	12.	U	12.	U
79-01-6	Trichloroethene	12.	U	12.	U	11.	U	12.	U	12.	U
124-48-1	Dibromochloromethane	12.	U	12.	U	11.	U	12.	U	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U	12.	U	11.	U	12.	U	12.	U
71-43-2	Benzene	12.	U	12.	U	11.	U	12.	U	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	12.	U	11.	U	12.	U	12.	U
75-25-2	Bromoform	12.	U	12.	U	11.	U	12.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	12.	U	11.	U	12.	U	12.	U
591-78-6	2-Hexanone	12.	U	12.	U	11.	U	12.	U	12.	U
127-18-4	Tetrachloroethene	12.	U	12.	U	11.	U	12.	U	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	12.	U	11.	U	12.	U	12.	U
108-88-3	Toluene	4.	J	3.	J	2.	J	4.	J	12.	U
108-90-7	Chlorobenzene	12.	U	12.	U	11.	U	12.	U	12.	U
100-41-4	Ethylbenzene	12.	U	12.	U	11.	U	12.	U	12.	U
100-42-5	Styrene	12.	U	12.	U	11.	U	12.	U	12.	U
1330-20-7	Xylene (Total)	12.	U	12.	U	11.	U	12.	U	12.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

TPH-DRO											
	SAMPLE ID ------->	050-S-0004-01		050-C-0004-01		050-S-0004-02		050-S-0005-02			
	ORIGINAL ID ----->	050S000401		050C000401		050S000402		050S000502			
	LAB SAMPLE ID --->	138199		138198		138200		138201			
	ID FROM REPORT -->	050S000401		050C000401		050S000402		050S000502			
	SAMPLE DATE ----->	10/31/95		10/31/95		10/31/95		10/31/95			
	DATE EXTRACTED -->	11/12/95		11/12/95		11/12/95		11/12/95			
	DATE ANALYZED --->	11/23/95		11/23/95		11/23/95		11/23/95			
	MATRIX ---------->	Soil		Soil		Soil		Soil			
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter	1606	VAL	1606	VAL	1606	VAL	1606	VAL		
9999900-02-6	TPH - Diesel Range Organics	15000.	J	38000.	J	5000.	U	5100.	U		

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMUs 50, 51, & 52

TPH-GRO											
	SAMPLE ID ------->	050-S-0004-01		050-C-0004-01		050-S-0004-02		050-S-0005-02			
	ORIGINAL ID ----->	050S000401		050C000401		050S000402		050S000502			
	LAB SAMPLE ID --->	138199		138198		138200		138201			
	ID FROM REPORT -->	050S000401		050C000401		050S000402		050S000502			
	SAMPLE DATE ----->	10/31/95		10/31/95		10/31/95		10/31/95			
	DATE ANALYZED --->	11/14/95		11/14/95		11/14/95		11/14/95			
	MATRIX ---------->	Soil		Soil		Soil		Soil			
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter	1606	VAL	1606	VAL	1606	VAL	1606	VAL		
9999900-02-5	TPH - Gasoline Range Organics	780.	J	390.	J	230.	J	64.	U		

*** Validation Complete ***

DATALCP3
03/21/96

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

APX9-METAL													
		SAMPLE ID ------->	064-S-0001-01		064-S-0001-03		064-S-0002-01		064-S-0002-03		064-S-0003-01		064-C-0003-01	
		ORIGINAL ID ----->	064S000101		064S000103		064S000201		064S000203		064S000301		064C000301	
		LAB SAMPLE ID --->	9-136239S		9-136240S		3-136320S		3-136321S		3-136322S		3-136319S	
		ID FROM REPORT -->	064S000101		064S000103		064S000201		064S000203		064S000301		064C000301	
		SAMPLE DATE ----->	10/05/95				10/06/95		10/06/95		10/06/95		10/06/95	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
SB	Antimony		11.2	UR	11.5	UR	10.9	UR	11.6	UR	11.2	UR	11.1	UR
AS	Arsenic		10.2	J	8.9	J	0.44	UJ	0.46	UJ	9.5	J	9.8	J
BA	Barium		139.		151.		98.		123.		91.3		102.	
BE	Beryllium		0.47	J	0.57	J	0.36	J	0.47	J	0.41	J	0.49	J
CD	Cadmium		3.5		3.1		4.9		1.1	J	1.4		1.3	
CR	Chromium		14.		14.6		8.1		8.9		8.4		9.3	
CO	Cobalt		9.1	J	13.6		7.4	J	10.1	J	8.7	J	8.6	J
CU	Copper		24.6		16.4		27.		15.2		14.9		19.	
PB	Lead		127.		20.5		0.56	J	11.5		31.7		24.	
HG	Mercury		0.11	U	0.12	U	0.11	U	0.12	U	0.11	U	0.11	U
NI	Nickel		17.1		18.1		12.9		17.8		8.2	J	16.4	
SE	Selenium		0.22	UJ	0.23	UJ	0.22	UJ	0.23	UJ	0.35	J	1.2	J
AG	Silver		0.67	UJ	0.69	UJ	0.66	UJ	0.69	UJ	0.67	UJ	0.67	UJ
TL	Thallium		0.45	UJ	0.46	UJ	0.44	UJ	0.46	UJ	0.45	UJ	0.45	UJ
V	Vanadium		26.5		30.		16.9		19.		16.9		20.1	
ZN	Zinc		111.		60.8		155.		55.4		51.9		73.	
SN	Tin		4.5	U	4.6	U	4.4	U	4.6	U	4.5	U	4.5	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

APX9-METAL													
	SAMPLE ID ------->	064-S-0003-03		064-S-0004-01		064-S-0004-03		064-S-0005-01		064-S-0005-03		064-S-0006-01	
	ORIGINAL ID ----->	064S000303		064S000401		064S000403		064S000501		064S000503		064S000601	
	LAB SAMPLE ID --->	3-136323S		3-136324S		3-136325S		3-136326S		3-136327S		3-136328S	
	ID FROM REPORT -->	064S000303		064S000401		064S000403		064S000501		064S000503		064S000601	
	SAMPLE DATE ----->	10/06/95		10/06/95		10/06/95		10/06/95		10/06/95		10/06/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
SB	Antimony	12.5	UR	11.	UR	11.4	UR	11.8	UR	12.8	UR	12.1	UR
AS	Arsenic	0.5	UJ	0.44	UJ	0.46	UJ	7.3	J	6.6	J	9.9	J
BA	Barium	123.		188.		156.		111.		111.		125.	
BE	Beryllium	0.52	J	0.4	J	0.5	J	0.52	J	0.54	J	0.59	J
CD	Cadmium	2.4		2.		2.6		1.3		1.	J	2.6	
CR	Chromium	10.5		10.		9.2		11.5		14.2		15.8	
CO	Cobalt	11.1	J	6.7	J	10.9	J	8.3	J	9.6	J	10.5	J
CU	Copper	17.8		34.9		17.3		19.5		14.9		20.3	
PB	Lead	12.3		5.8		44.5		39.1		12.7		52.8	
HG	Mercury	0.12	U	0.11	U	0.11	U	1.6	J	0.12	U	0.15	J
NI	Nickel	20.		12.3		20.1		13.6		17.5		16.8	
SE	Selenium	0.25	UJ	0.22	UJ	0.23	UJ	0.24	UJ	0.26	UJ	0.24	UJ
AG	Silver	0.75	UJ	0.66	UJ	0.68	UJ	0.71	UJ	0.79	UJ	0.73	UJ
TL	Thallium	0.5	UJ	0.44	UJ	0.46	UJ	0.47	UJ	0.51	UJ	0.48	UJ
V	Vanadium	23.5		16.		20.7		21.5		27.8		25.3	
ZN	Zinc	61.5		672.		73.5		76.1		56.5		161.	
SN	Tin	5.	U	4.4	U	4.6	U	4.7	U	5.1	U	4.8	U

*** Validation Complete ***

NAS MEMPHIS
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SWMU 64

APX9-METAL																	
		SAMPLE ID ------->	064-S-0006-03		064-S-0007-01		064-S-0007-03		064-S-0008-01		064-S-0008-03		064-S-0009-01	
		ORIGINAL ID ----->	064S000603		064S000701		064S000703		064S000801		064S000803		064S000901	
		LAB SAMPLE ID --->	3-136329S		3-136330S		3-136331S		3-136332S		3-136333S		137833S	
		ID FROM REPORT -->	064S000603		064S000701		064S000703		064S000801		064000803		064S000901	
		SAMPLE DATE ----->	10/06/95		10/06/95		10/06/95		10/06/95		10/06/95		10/25/95	
		MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter		1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1592	VAL
SB	Antimony		13.1	UR	12.3	UR	12.5	UR	13.	UR	13.3	UR	12.2	UJ
AS	Arsenic		8.	J	13.3	J	10.	J	11.8	J	11.	J	6.2	J
BA	Barium		141.		132.		157.		178.		165.		91.1	
BE	Beryllium		0.53	J	0.32	J	0.6	J	0.59	J	0.55	J	0.46	J
CD	Cadmium		2.		1.9		1.3		1.3		2.7		3.7	
CR	Chromium		11.6		13.5		10.2		14.5		13.2		10.3	
CO	Cobalt		12.7	J	5.3	J	11.1	J	10.5	J	9.3	J	15.7	
CU	Copper		17.4		23.4		20.2		20.7		75.		15.4	
PB	Lead		11.5		1210.		12.7		28.5		22.3		11.	J
HG	Mercury		0.13	U	0.12	U	0.12	U	0.13	U	0.13	U	0.12	U
NI	Nickel		24.		14.6		20.		21.6		21.3		17.9	
SE	Selenium		0.26	UJ	0.25	UJ	0.25	UJ	0.26	UJ	0.27	UJ	0.24	U
AG	Silver		0.79	UJ	0.74	UJ	0.75	UJ	0.78	UJ	0.8	UJ	0.73	UJ
TL	Thallium		0.52	UJ	0.49	UJ	0.5	UJ	0.52	UJ	0.53	UJ	0.49	UJ
V	Vanadium		24.		22.7		22.3		26.3		23.2		26.1	
ZN	Zinc		60.5		103.		91.		85.6		89.3		50.9	
SN	Tin		5.2	U	4.9	U	5.	U	5.2	U	5.3	U	7.7	U

*** Validation Complete ***

NAS MEMPHIS
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SWMU 64

APX9-METAL

SAMPLE ID ------->	064-S-0009-03
ORIGINAL ID ----->	064S000903
LAB SAMPLE ID --->	137834S
ID FROM REPORT -->	064S000903
SAMPLE DATE ----->	10/25/95
MATRIX ---------->	Soil
UNITS ----------->	MG/KG

CAS #	Parameter	1592	VAL
SB	Antimony	12.6	UJ
AS	Arsenic	6.8	J
BA	Barium	101.	
BE	Beryllium	0.49	J
CD	Cadmium	3.3	
CR	Chromium	7.1	
CO	Cobalt	8.7	J
CU	Copper	16.8	
PB	Lead	10.9	J
HG	Mercury	0.13	U
NI	Nickel	15.7	
SE	Selenium	0.25	U
AG	Silver	0.75	UJ
TL	Thallium	0.5	UJ
V	Vanadium	21.7	
ZN	Zinc	53.2	
SN	Tin	5.	U

*** Validation Complete ***

NAS MEMPHIS
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SWMU 64

SW846-PEST													
	SAMPLE ID ------->	064-S-0001-01		064-S-0001-03		064-S-0002-01		064-S-0002-03		064-S-0003-01		064-C-0003-01	
	ORIGINAL ID ----->	064S000101		064S000103		064S000201		064S000203		064S000301		064C000301	
	LAB SAMPLE ID --->	136239		136240		136320		136321		136322		136319	
	ID FROM REPORT -->	064S000101		064S000103		064S000201		064S000203		064S000301		064C000301	
	SAMPLE DATE ----->	10/05/95		10/05/95		10/06/95		10/06/95		10/06/95		10/06/95	
	DATE EXTRACTED -->	10/20/95		10/20/95		10/25/95		10/25/95		10/25/95		10/25/95	
	DATE ANALYZED --->	10/27/95		10/27/95		11/01/95		10/29/95		11/02/95		11/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
319-84-6	alpha-BHC	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U
319-85-7	beta-BHC	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U
319-86-8	delta-BHC	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U
76-44-8	Heptachlor	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U
309-00-2	Aldrin	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	4.5	J
1024-57-3	Heptachlor epoxide	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U
959-98-8	Endosulfan I	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U
60-57-1	Dieldrin	3.7	U	3.9	U	3.7	U	3.9	U	190.	D	230.	D
72-55-9	4,4'-DDE	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
72-20-8	Endrin	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
33213-65-9	Endosulfan II	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
72-54-8	4,4'-DDD	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
1031-07-8	Endosulfan sulfate	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
50-29-3	4,4'-DDT	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
72-43-5	Methoxychlor	19.	U	19.	U	19.	U	19.	U	19.	U	19.	U
53494-70-5	Endrin ketone	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
7421-93-4	Endrin aldehyde	3.7	U	3.9	U	3.7	U	3.9	U	3.7	U	3.8	U
5103-71-9	alpha-Chlordane	11.	J	5.1		1.9	U	1.9	U	1.9	U	1.9	U
5103-74-2	gamma-Chlordane	13.	J	5.6		1.9	U	1.9	U	1.9	U	1.9	U
8001-35-2	Toxaphene	37.	U	39.	U	37.	U	39.	U	37.	U	38.	U
12674-11-2	Aroclor-1016	37.	U	39.	U	37.	U	39.	U	37.	U	38.	U
11104-28-2	Aroclor-1221	37.	U	39.	U	37.	U	39.	U	37.	U	38.	U
53469-21-9	Aroclor-1242	37.	U	39.	U	37.	U	39.	U	37.	U	38.	U
12672-29-6	Aroclor-1248	37.	U	39.	U	37.	U	39.	U	37.	U	38.	U
11097-69-1	Aroclor-1254	37.	U	39.	U	37.	U	39.	U	37.	U	38.	U
11096-82-5	Aroclor-1260	510.	J	250.		12000.	D	810.		5000.	D	7200.	D
12789-03-6	Technical Chlordane	37.	U	39.	U	37.	U	39.	U	37.	U	38.	U
11141-16-5	Aroclor-1232	37.	U	39.	U	3.7	U	39.	U	37.	U	38.	U

*** Validation Complete ***

NAS MEMPHIS
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SWMU 64

SW846-PEST															
	SAMPLE ID ------->	064-S-0003-03		064-S-0004-01		064-S-0004-03		064-S-0005-01 DL		064-S-0005-03 DL		064-S-0006-01 DL	
	ORIGINAL ID ----->	064S000303		064S000401		064S000403		064S000501		064S000503		064S000601	
	LAB SAMPLE ID --->	136323		136324		136325		136326_10		136327_5		136328_10	
	ID FROM REPORT -->	064S000303		064S000401		064S000403		064S000501		064S000503		064S000601	
	SAMPLE DATE ----->	10/06/95		10/06/95		10/06/95							
	DATE EXTRACTED -->	10/25/95		10/25/95		10/25/95		10/14/95		10/14/95		10/14/95	
	DATE ANALYZED --->	10/29/95		11/02/95		10/29/95		11/02/95		11/02/95		11/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
319-84-6	alpha-BHC	2.1	U	1.9	U	1.9	U	20.	U	11.	U	20.	U
319-85-7	beta-BHC	2.1	U	1.9	U	1.9	U	20.	U	11.	U	20.	U
319-86-8	delta-BHC	2.1	U	1.9	U	1.9	U	20.	U	11.	U	20.	U
58-89-9	gamma-BHC (Lindane)	2.1	U	1.9	U	1.9	U	20.	U	11.	U	20.	U
76-44-8	Heptachlor	2.1	U	1.9	U	1.9	U	20.	U	11.	U	20.	U
309-00-2	Aldrin	2.1	U	3.	J	1.9	U	21.	DJ	11.	U	20.	U
1024-57-3	Heptachlor epoxide	2.1	U	1.9	U	1.9	U	20.	U	11.	U	20.	U
959-98-8	Endosulfan I	2.1	U	1.9	U	1.9	U	20.	U	11.	U	20.	U
60-57-1	Dieldrin	6.2		85.	D	3.8	U	140.	DJ	13.	DJ	330.	D
72-55-9	4,4'-DDE	4.2	U	32.	J	3.8	U	23.	DJ	22.	U	40.	U
72-20-8	Endrin	4.2	U	3.7	U	3.8	U	39.	U	22.	U	40.	U
33213-65-9	Endosulfan II	4.2	U	3.7	U	3.8	U	39.	U	22.	U	40.	U
72-54-8	4,4'-DDD	4.2	U	3.7	U	3.8	U	39.	U	22.	U	40.	U
1031-07-8	Endosulfan sulfate	4.2	U	3.7	U	3.8	U	39.	U	22.	U	40.	U
50-29-3	4,4'-DDT	4.2	U	120.	D	3.8	U	39.	U	22.	U	40.	U
72-43-5	Methoxychlor	21.	U	19.	U	19.	U	200.	U	110.	U	200.	U
53494-70-5	Endrin ketone	4.2	U	3.7	U	3.8	U	39.	U	22.	U	40.	U
7421-93-4	Endrin aldehyde	4.2	U	19.	U	3.8	U	39.	U	22.	U	40.	U
5103-71-9	alpha-Chlordane	2.1	U	62.	D	1.1	J	20.	U	11.	U	20.	U
5103-74-2	gamma-Chlordane	2.1	U	62.	D	0.97	J	20.	U	11.	U	20.	U
8001-35-2	Toxaphene	42.	U	37.	U	38.	U	390.	U	220.	U	400.	U
12674-11-2	Aroclor-1016	42.	U	37.	U	38.	U	390.	U	220.	U	400.	U
11104-28-2	Aroclor-1221	42.	U	37.	U	38.	U	390.	U	220.	U	400.	U
53469-21-9	Aroclor-1242	42.	U	37.	U	38.	U	390.	U	220.	U	400.	U
12672-29-6	Aroclor-1248	42.	U	37.	U	38.	U	390.	U	220.	U	400.	U
11097-69-1	Aroclor-1254	42.	U	37.	U	38.	U	390.	U	220.	U	400.	U
11096-82-5	Aroclor-1260	220.		4600.	D	150.		4400.	D	220.	U	8500.	D
12789-03-6	Technical Chlordane	42.	U	37.	U	37.	U	390.	U	220.	U	400.	U
11141-16-5	Aroclor-1232	42.	U	37.	U	38.	U	390.	U	220.	U	400.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-PEST													
	SAMPLE ID ------->	064-S-0006-03 DL		064-S-0007-01 DL		064-S-0007-03 DL		064-S-0008-01 DL		064-S-0008-03 DL		064-S-0009-01 DL	
	ORIGINAL ID ----->	064S000603		064S000701		064S000703		064S000801		064S000803		064S000901	
	LAB SAMPLE ID --->	136329_5		136330_10		136331_5		136332_10		136333_10		137833	
	ID FROM REPORT -->	064S000603		064S000701		064S000703		064S000801		064S000803		064S000901	
	SAMPLE DATE ----->											10/25/95	
	DATE EXTRACTED -->	10/14/95		10/14/95		10/14/95		10/14/95		10/14/95		11/02/95	
	DATE ANALYZED --->	11/02/95		11/02/95		11/02/95		11/02/95		11/02/95		11/21/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1592	VAL
319-84-6	alpha-BHC	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
319-85-7	beta-BHC	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
319-86-8	delta-BHC	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
58-89-9	gamma-BHC (Lindane)	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
76-44-8	Heptachlor	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
309-00-2	Aldrin	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
1024-57-3	Heptachlor epoxide	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
959-98-8	Endosulfan I	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
60-57-1	Dieldrin	22.	D	95.	D	21.	U	54.	D	44.	U	41.	U
72-55-9	4,4'-DDE	22.	U	41.	U	21.	U	44.	U	44.	U	41.	U
72-20-8	Endrin	22.	U	41.	U	21.	U	44.	U	44.	U	41.	U
33213-65-9	Endosulfan II	22.	U	41.	U	21.	U	44.	U	44.	U	41.	U
72-54-8	4,4'-DDD	22.	U	41.	U	21.	U	44.	U	44.	U	41.	U
1031-07-8	Endosulfan sulfate	22.	U	41.	U	21.	U	44.	U	44.	U	41.	U
50-29-3	4,4'-DDT	22.	U	22.	DJ	21.	U	44.	U	44.	U	41.	U
72-43-5	Methoxychlor	110.	U	200.	U	100.	U	220.	U	220.	U	200.	U
53494-70-5	Endrin ketone	22.	U	41.	U	21.	U	44.	U	44.	U	41.	U
7421-93-4	Endrin aldehyde	22.	U	41.	U	21.	U	44.	U	44.	U	25.	DJ
5103-71-9	alpha-Chlordane	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
5103-74-2	gamma-Chlordane	11.	U	20.	U	10.	U	22.	U	22.	U	20.	U
8001-35-2	Toxaphene	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U
12674-11-2	Aroclor-1016	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U
11104-28-2	Aroclor-1221	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U
53469-21-9	Aroclor-1242	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U
12672-29-6	Aroclor-1248	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U
11097-69-1	Aroclor-1254	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U
11096-82-5	Aroclor-1260	470.	D	650.	D	210.	U	2700.	D	440.	U	410.	U
12789-03-6	Technical Chlordane	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U
11141-16-5	Aroclor-1232	220.	U	410.	U	210.	U	440.	U	440.	U	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-PEST

SAMPLE ID ------->	064-S-0009-03
ORIGINAL ID ----->	064S000903
LAB SAMPLE ID --->	137834
ID FROM REPORT -->	064S000903
SAMPLE DATE ----->	10/25/95
DATE EXTRACTED -->	11/08/95
DATE ANALYZED --->	11/21/95
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	1592	VAL
319-84-6	alpha-BHC	2.	U
319-85-7	beta-BHC	2.	U
319-86-8	delta-BHC	2.	U
58-89-9	gamma-BHC (Lindane)	2.	U
76-44-8	Heptachlor	2.	U
309-00-2	Aldrin	2.	U
1024-57-3	Heptachlor epoxide	2.	U
959-98-8	Endosulfan I	2.	U
60-57-1	Dieldrin	4.1	U
72-55-9	4,4'-DDE	4.1	U
72-20-8	Endrin	4.1	U
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	4.1	U
72-43-5	Methoxychlor	20.	U
53494-70-5	Endrin ketone	4.1	U
7421-93-4	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	2.	U
5103-74-2	gamma-Chlordane	2.	U
8001-35-2	Toxaphene	41.	U
12674-11-2	Aroclor-1016	41.	U
11104-28-2	Aroclor-1221	41.	U
53469-21-9	Aroclor-1242	41.	U
12672-29-6	Aroclor-1248	41.	U
11097-69-1	Aroclor-1254	41.	U
11096-82-5	Aroclor-1260	41.	U
12789-03-6	Technical Chlordane	41.	U
11141-16-5	Aroclor-1232	41.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA															
	SAMPLE ID ------->	064-S-0001-01		064-S-0001-03		064-S-0002-01		064-S-0002-03		064-S-0003-01		064-C-0003-01	
	ORIGINAL ID ----->	064S000101		064S000103		064S000201		064S000203		064S000301		064C000301	
	LAB SAMPLE ID --->	136239		136240		136320		136321		136322		136319	
	ID FROM REPORT -->	064s000101		064s000103		064s000201		064s000203		064s000301		064c000301	
	SAMPLE DATE ----->	10/05/95		10/05/95		10/06/95		10/06/95		10/06/95		10/06/95	
	DATE EXTRACTED -->	10/11/95		10/11/95		10/13/95		10/13/95		10/13/95		10/13/95	
	DATE ANALYZED --->	10/30/95		10/30/95		10/31/95		10/31/95		10/31/95		10/31/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
108-95-2	Phenol	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
111-44-4	bis(2-Chloroethyl)ether	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
95-57-8	2-Chlorophenol	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
541-73-1	1,3-Dichlorobenzene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
106-46-7	1,4-Dichlorobenzene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
95-50-1	1,2-Dichlorobenzene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
95-48-7	2-Methylphenol (o-Cresol)	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
106-44-5	4-Methylphenol (p-Cresol)	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
621-64-7	N-Nitroso-di-n-propylamine	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
67-72-1	Hexachloroethane	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
98-95-3	Nitrobenzene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
78-59-1	Isophorone	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
88-75-5	2-Nitrophenol	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
105-67-9	2,4-Dimethylphenol	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
120-83-2	2,4-Dichlorophenol	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
120-82-1	1,2,4-Trichlorobenzene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
91-20-3	Naphthalene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
106-47-8	4-Chloroaniline	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
87-68-3	Hexachlorobutadiene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
111-91-1	bis(2-Chloroethoxy)methane	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
59-50-7	4-Chloro-3-methylphenol	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
91-57-6	2-Methylnaphthalene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
77-47-4	Hexachlorocyclopentadiene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
88-06-2	2,4,6-Trichlorophenol	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
95-95-4	2,4,5-Trichlorophenol	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
91-58-7	2-Chloronaphthalene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
88-74-4	2-Nitroaniline	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
131-11-3	Dimethyl phthalate	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
208-96-8	Acenaphthylene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
606-20-2	2,6-Dinitrotoluene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
99-09-2	3-Nitroaniline	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
83-32-9	Acenaphthene	370.	U	390.	U	370.	U	390.	U	370.	U	190.	J
51-28-5	2,4-Dinitrophenol	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
100-02-7	4-Nitrophenol	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
132-64-9	Dibenzofuran	370.	U	390.	U	370.	U	390.	U	370.	U	62.	J

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA															
	SAMPLE ID ------->	064-S-0001-01		064-S-0001-03		064-S-0002-01		064-S-0002-03		064-S-0003-01		064-C-0003-01	
	ORIGINAL ID ----->	064S000101		064S000103		064S000201		064S000203		064S000301		064C000301	
	LAB SAMPLE ID --->	136239		136240		136320		136321		136322		136319	
	ID FROM REPORT -->	064s000101		064s000103		064s000201		064s000203		064s000301		064c000301	
	SAMPLE DATE ----->	10/05/95		10/05/95		10/06/95		10/06/95		10/06/95		10/06/95	
	DATE EXTRACTED -->	10/11/95		10/11/95		10/13/95		10/13/95		10/13/95		10/13/95	
	DATE ANALYZED --->	10/30/95		10/30/95		10/31/95		10/31/95		10/31/95		10/31/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
121-14-2	2,4-Dinitrotoluene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
84-66-2	Diethylphthalate	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
7005-72-3	4-Chlorophenylphenylether	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
86-73-7	Fluorene	370.	U	390.	U	370.	U	390.	U	370.	U	170.	J
100-01-6	4-Nitroaniline	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
86-30-6	N-Nitrosodiphenylamine	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
101-55-3	4-Bromophenyl-phenylether	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
118-74-1	Hexachlorobenzene	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
87-86-5	Pentachlorophenol	940.	U	970.	U	940.	U	970.	U	940.	U	950.	U
85-01-8	Phenanthrene	370.	U	390.	U	370.	U	390.	U	100.	J	2100.	
120-12-7	Anthracene	370.	U	390.	U	370.	U	390.	U	370.	U	540.	
86-74-8	Carbazole	370.	U	390.	U	370.	U	390.	U	370.	U	180.	J
84-74-2	Di-n-butylphthalate	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
206-44-0	Fluoranthene	38.	J	390.	U	37.	J	390.	U	170.	J	2600.	
129-00-0	Pyrene	46.	J	38.	J	36.	J	390.	U	150.	J	2500.	
85-68-7	Butylbenzylphthalate	370.	U	390.	U	370.	UJ	390.	UJ	370.	UJ	380.	UJ
91-94-1	3,3'-Dichlorobenzidine	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
56-55-3	Benzo(a)anthracene	370.	U	390.	U	370.	U	390.	U	86.	J	1400.	
218-01-9	Chrysene	46.	J	43.	J	41.	J	390.	U	96.	J	1400.	
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
117-84-0	Di-n-octyl phthalate	370.	U	390.	U	370.	U	390.	U	370.	U	380.	U
205-99-2	Benzo(b)fluoranthene	51.	J	42.	J	48.	J	390.	U	72.	J	940.	
207-08-9	Benzo(k)fluoranthene	45.	J	44.	J	38.	J	390.	U	72.	J	930.	
50-32-8	Benzo(a)pyrene	45.	J	41.	J	370.	U	390.	U	73.	J	1100.	
193-39-5	Indeno(1,2,3-cd)pyrene	50.	J	38.	J	370.	U	390.	U	44.	J	570.	
53-70-3	Dibenz(a,h)anthracene	370.	U	390.	U	370.	U	390.	U	370.	U	240.	J
191-24-2	Benzo(g,h,i)perylene	66.	J	43.	J	370.	U	390.	U	91.	J	660.	

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA													
	SAMPLE ID ------->	064-S-0003-03		064-S-0004-01		064-S-0004-03		064-S-0005-01		064-S-0005-03		064-S-0006-01	
	ORIGINAL ID ----->	064S000303		064S000401		064S000403		064S000501		064S000503		064S000601	
	LAB SAMPLE ID --->	136323		136324		136325		136326		136327		136328	
	ID FROM REPORT -->	064s000303		064s000401		064s000403		064s000501		064s000503		064s000601	
	SAMPLE DATE ----->	10/06/95		10/06/95		10/06/95		10/06/95		10/06/95		10/06/95	
	DATE EXTRACTED -->	10/13/95		10/13/95		10/13/95		10/13/95		10/13/95		10/13/95	
	DATE ANALYZED --->	10/31/95		10/31/95		11/01/95		10/31/95		11/01/95		11/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
108-95-2	Phenol	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
111-44-4	bis(2-Chloroethyl)ether	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
95-57-8	2-Chlorophenol	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
541-73-1	1,3-Dichlorobenzene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
106-46-7	1,4-Dichlorobenzene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
95-50-1	1,2-Dichlorobenzene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
95-48-7	2-Methylphenol (o-Cresol)	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
106-44-5	4-Methylphenol (p-Cresol)	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
621-64-7	N-Nitroso-di-n-propylamine	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
67-72-1	Hexachloroethane	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
98-95-3	Nitrobenzene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
78-59-1	Isophorone	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
88-75-5	2-Nitrophenol	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
105-67-9	2,4-Dimethylphenol	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
120-83-2	2,4-Dichlorophenol	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
120-82-1	1,2,4-Trichlorobenzene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
91-20-3	Naphthalene	420.	U	370.	U	380.	U	110.	J	430.	U	410.	U
106-47-8	4-Chloroaniline	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
87-68-3	Hexachlorobutadiene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
111-91-1	bis(2-Chloroethoxy)methane	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
59-50-7	4-Chloro-3-methylphenol	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
91-57-6	2-Methylnaphthalene	420.	U	370.	U	380.	U	140.	J	430.	U	410.	U
77-47-4	Hexachlorocyclopentadiene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
88-06-2	2,4,6-Trichlorophenol	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
91-58-7	2-Chloronaphthalene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
88-74-4	2-Nitroaniline	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
131-11-3	Dimethyl phthalate	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
208-96-8	Acenaphthylene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
606-20-2	2,6-Dinitrotoluene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
99-09-2	3-Nitroaniline	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
83-32-9	Acenaphthene	420.	U	370.	U	380.	U	790.		430.	U	410.	U
51-28-5	2,4-Dinitrophenol	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
100-02-7	4-Nitrophenol	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
132-64-9	Dibenzofuran	420.	U	370.	U	380.	U	480.		430.	U	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA													
	SAMPLE ID ------->	064-S-0003-03		064-S-0004-01		064-S-0004-03		064-S-0005-01		064-S-0005-03		064-S-0006-01	
	ORIGINAL ID ----->	064S000303		064S000401		064S000403		064S000501		064S000503		064S000601	
	LAB SAMPLE ID --->	136323		136324		136325		136326		136327		136328	
	ID FROM REPORT -->	064s000303		064s000401		064s000403		064s000501		064s000503		064s000601	
	SAMPLE DATE ----->	10/06/95		10/06/95		10/06/95		10/06/95		10/06/95		10/06/95	
	DATE EXTRACTED -->	10/13/95		10/13/95		10/13/95		10/13/95		10/13/95		10/13/95	
	DATE ANALYZED --->	10/31/95		10/31/95		11/01/95		10/31/95		11/01/95		11/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
121-14-2	2,4-Dinitrotoluene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
84-66-2	Diethylphthalate	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
7005-72-3	4-Chlorophenylphenylether	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
86-73-7	Fluorene	420.	U	370.	U	380.	U	770.		430.	U	410.	U
100-01-6	4-Nitroaniline	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
86-30-6	N-Nitrosodiphenylamine	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
101-55-3	4-Bromophenyl-phenylether	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
118-74-1	Hexachlorobenzene	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
87-86-5	Pentachlorophenol	1000.	U	940.	U	960.	U	980.	U	1100.	U	1000.	U
85-01-8	Phenanthrene	420.	U	80.	J	380.	U	4600.		430.	U	81.	J
120-12-7	Anthracene	420.	U	370.	U	380.	U	1400.		430.	U	410.	U
86-74-8	Carbazole	420.	U	370.	U	380.	U	830.		430.	U	410.	U
84-74-2	Di-n-butylphthalate	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
206-44-0	Fluoranthene	420.	U	160.	J	380.	U	3900.		430.	U	260.	J
129-00-0	Pyrene	420.	U	130.	J	380.	U	3500.		430.	U	200.	J
85-68-7	Butylbenzylphthalate	420.	UJ	370.	UJ	380.	U	390.	UJ	430.	U	410.	U
91-94-1	3,3'-Dichlorobenzidine	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
56-55-3	Benzo(a)anthracene	420.	U	62.	J	380.	U	2000.		430.	U	50.	J
218-01-9	Chrysene	420.	U	110.	J	380.	U	2000.		430.	U	140.	J
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
117-84-0	Di-n-octyl phthalate	420.	U	370.	U	380.	U	390.	U	430.	U	410.	U
205-99-2	Benzo(b)fluoranthene	420.	U	100.	J	380.	U	1500.		430.	U	130.	J
207-08-9	Benzo(k)fluoranthene	420.	U	88.	J	380.	U	1100.		430.	U	96.	J
50-32-8	Benzo(a)pyrene	420.	U	78.	J	380.	U	1400.		430.	U	55.	J
193-39-5	Indeno(1,2,3-cd)pyrene	420.	U	43.	J	380.	U	760.		430.	U	410.	U
53-70-3	Dibenz(a,h)anthracene	420.	U	370.	U	380.	U	340.	J	430.	U	410.	U
191-24-2	Benzo(g,h,i)perylene	420.	U	46.	J	380.	U	800.		430.	U	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA															
	SAMPLE ID ------->	064-S-0006-03		064-S-0007-01		064-S-0007-03		064-S-0008-01		064-S-0008-03		064-S-0009-01	
	ORIGINAL ID ----->	064S000603		064S000701		064S000703		064S000801		064S000803		064S000901	
	LAB SAMPLE ID --->	136329		136330		136331		136332		136333		137833	
	ID FROM REPORT -->	064s000603		064s000701		064s000703		064s000801		064s000803		064s000901	
	SAMPLE DATE ----->	10/06/95		10/06/95		10/06/95		10/06/95		10/06/95		10/25/95	
	DATE EXTRACTED -->	10/13/95		10/13/95		10/13/95		10/13/95		10/13/95		10/30/95	
	DATE ANALYZED --->	11/01/95		11/01/95		11/01/95		11/01/95		11/01/95		11/10/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1592	VAL
108-95-2	Phenol	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
111-44-4	bis(2-Chloroethyl)ether	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
95-57-8	2-Chlorophenol	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
541-73-1	1,3-Dichlorobenzene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
106-46-7	1,4-Dichlorobenzene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
95-50-1	1,2-Dichlorobenzene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
95-48-7	2-Methylphenol (o-Cresol)	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
106-44-5	4-Methylphenol (p-Cresol)	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
621-64-7	N-Nitroso-di-n-propylamine	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
67-72-1	Hexachloroethane	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
98-95-3	Nitrobenzene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
78-59-1	Isophorone	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
88-75-5	2-Nitrophenol	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
105-67-9	2,4-Dimethylphenol	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
120-83-2	2,4-Dichlorophenol	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
120-82-1	1,2,4-Trichlorobenzene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
91-20-3	Naphthalene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
106-47-8	4-Chloroaniline	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
87-68-3	Hexachlorobutadiene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
111-91-1	bis(2-Chloroethoxy)methane	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
59-50-7	4-Chloro-3-methylphenol	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
91-57-6	2-Methylnaphthalene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
77-47-4	Hexachlorocyclopentadiene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	UJ
88-06-2	2,4,6-Trichlorophenol	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
95-95-4	2,4,5-Trichlorophenol	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
91-58-7	2-Chloronaphthalene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
88-74-4	2-Nitroaniline	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
131-11-3	Dimethyl phthalate	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
208-96-8	Acenaphthylene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
606-20-2	2,6-Dinitrotoluene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
99-09-2	3-Nitroaniline	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
83-32-9	Acenaphthene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
51-28-5	2,4-Dinitrophenol	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
100-02-7	4-Nitrophenol	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
132-64-9	Dibenzofuran	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA													
	SAMPLE ID ------->	064-S-0006-03		064-S-0007-01		064-S-0007-03		064-S-0008-01		064-S-0008-03		064-S-0009-01	
	ORIGINAL ID ----->	064S000603		064S000701		064S000703		064S000801		064S000803		064S000901	
	LAB SAMPLE ID --->	136329		136330		136331		136332		136333		137833	
	ID FROM REPORT -->	064s000603		064s000701		064s000703		064s000801		064s000803		064s000901	
	SAMPLE DATE ----->	10/06/95		10/06/95		10/06/95		10/06/95		10/06/95		10/25/95	
	DATE EXTRACTED -->	10/13/95		10/13/95		10/13/95		10/13/95		10/13/95		10/30/95	
	DATE ANALYZED --->	11/01/95		11/01/95		11/01/95		11/01/95		11/01/95		11/10/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1592	VAL
121-14-2	2,4-Dinitrotoluene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
84-66-2	Diethylphthalate	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
7005-72-3	4-Chlorophenylphenylether	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
86-73-7	Fluorene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
100-01-6	4-Nitroaniline	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
86-30-6	N-Nitrosodiphenylamine	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
101-55-3	4-Bromophenyl-phenylether	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
118-74-1	Hexachlorobenzene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
87-86-5	Pentachlorophenol	1100.	U	1000.	U	1000.	U	1100.	U	1100.	U	1000.	U
85-01-8	Phenanthrene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
120-12-7	Anthracene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
86-74-8	Carbazole	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
84-74-2	Di-n-butylphthalate	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
206-44-0	Fluoranthene	430.	U	410.	U	420.	U	46.	J	440.	U	410.	U
129-00-0	Pyrene	430.	U	410.	U	420.	U	43.	J	440.	U	410.	U
85-68-7	Butylbenzylphthalate	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
91-94-1	3,3'-Dichlorobenzidine	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
56-55-3	Benzo(a)anthracene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
218-01-9	Chrysene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
117-84-0	Di-n-octyl phthalate	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
205-99-2	Benzo(b)fluoranthene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
207-08-9	Benzo(k)fluoranthene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
50-32-8	Benzo(a)pyrene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
193-39-5	Indeno(1,2,3-cd)pyrene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
53-70-3	Dibenz(a,h)anthracene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U
191-24-2	Benzo(g,h,i)perylene	430.	U	410.	U	420.	U	440.	U	440.	U	410.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA

SAMPLE ID ------->	064-S-0009-03
ORIGINAL ID ----->	064S000903
LAB SAMPLE ID --->	137834
ID FROM REPORT -->	064s000903
SAMPLE DATE ----->	10/25/95
DATE EXTRACTED -->	10/30/95
DATE ANALYZED --->	11/10/95
MATRIX ---------->	Soil
UNITS ---------->	ug/Kg

CAS #	Parameter	1592	VAL
108-95-2	Phenol	420.	U
111-44-4	bis(2-Chloroethyl)ether	420.	U
95-57-8	2-Chlorophenol	420.	U
541-73-1	1,3-Dichlorobenzene	420.	U
106-46-7	1,4-Dichlorobenzene	420.	U
95-50-1	1,2-Dichlorobenzene	420.	U
95-48-7	2-Methylphenol (o-Cresol)	420.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420.	U
106-44-5	4-Methylphenol (p-Cresol)	420.	U
621-64-7	N-Nitroso-di-n-propylamine	420.	U
67-72-1	Hexachloroethane	420.	U
98-95-3	Nitrobenzene	420.	U
78-59-1	Isophorone	420.	U
88-75-5	2-Nitrophenol	420.	U
105-67-9	2,4-Dimethylphenol	420.	U
120-83-2	2,4-Dichlorophenol	420.	U
120-82-1	1,2,4-Trichlorobenzene	420.	U
91-20-3	Naphthalene	420.	U
106-47-8	4-Chloroaniline	420.	U
87-68-3	Hexachlorobutadiene	420.	U
111-91-1	bis(2-Chloroethoxy)methane	420.	U
59-50-7	4-Chloro-3-methylphenol	420.	U
91-57-6	2-Methylnaphthalene	420.	U
77-47-4	Hexachlorocyclopentadiene	420.	UJ
88-06-2	2,4,6-Trichlorophenol	420.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	420.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethyl phthalate	420.	U
208-96-8	Acenaphthylene	420.	U
606-20-2	2,6-Dinitrotoluene	420.	U
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	420.	U
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	420.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-SVOA

SAMPLE ID ------->	064-S-0009-03
ORIGINAL ID ----->	064S000903
LAB SAMPLE ID --->	137834
ID FROM REPORT -->	064s000903
SAMPLE DATE ----->	10/25/95
DATE EXTRACTED -->	10/30/95
DATE ANALYZED --->	11/10/95
MATRIX ---------->	Soil
UNITS ----------->	ug/Kg

CAS #	Parameter	1592	VAL
121-14-2	2,4-Dinitrotoluene	420.	U
84-66-2	Diethylphthalate	420.	U
7005-72-3	4-Chlorophenylphenylether	420.	U
86-73-7	Fluorene	420.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1000.	U
86-30-6	N-Nitrosodiphenylamine	420.	U
101-55-3	4-Bromophenyl-phenylether	420.	U
118-74-1	Hexachlorobenzene	420.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	420.	U
120-12-7	Anthracene	420.	U
86-74-8	Carbazole	420.	U
84-74-2	Di-n-butylphthalate	420.	U
206-44-0	Fluoranthene	420.	U
129-00-0	Pyrene	420.	U
85-68-7	Butylbenzylphthalate	420.	U
91-94-1	3,3'-Dichlorobenzidine	420.	U
56-55-3	Benzo(a)anthracene	420.	U
218-01-9	Chrysene	420.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	420.	U
117-84-0	Di-n-octyl phthalate	420.	U
205-99-2	Benzo(b)fluoranthene	420.	U
207-08-9	Benzo(k)fluoranthene	420.	U
50-32-8	Benzo(a)pyrene	420.	U
193-39-5	Indeno(1,2,3-cd)pyrene	420.	U
53-70-3	Dibenz(a,h)anthracene	420.	U
191-24-2	Benzo(g,h,i)perylene	420.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-VOA													
	SAMPLE ID ------->	064-S-0001-01		064-S-0001-03		064-S-0003-01		064-C-0003-01		064-S-0004-01		064-S-0005-01	
	ORIGINAL ID ----->	064S000101		064S000103		064S000301		064C000301		064S000401		064S000501	
	LAB SAMPLE ID --->	136239		136240		136322		136319		136324		136326	
	ID FROM REPORT -->	064S000101		064S000103		064S000301		064C000301		064S000401		064S000501	
	SAMPLE DATE ----->	10/05/95				10/06/95		10/06/95		10/06/95		10/06/95	
	DATE ANALYZED --->	10/10/95		10/10/95		10/11/95		10/11/95		10/14/95		10/14/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL	1549	VAL
74-87-3	Chloromethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
74-83-9	Bromomethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
75-01-4	Vinyl chloride	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
75-00-3	Chloroethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
75-09-2	Methylene chloride	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
67-64-1	Acetone	11.	U	76.	U	11.	U	11.	U	11.	U	12.	U
75-15-0	Carbon disulfide	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
75-35-4	1,1-Dichloroethylene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
75-34-3	1,1-Dichloroethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
540-59-0	1,2-Dichloroethene (total)	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
67-66-3	Chloroform	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
107-06-2	1,2-Dichloroethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
78-93-3	2-Butanone (MEK)	11.	U	11.	U	11.	U	11.	U	11.	U	12.	U
71-55-6	1,1,1-Trichloroethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
56-23-5	Carbon tetrachloride	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
75-27-4	Bromodichloromethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
78-87-5	1,2-Dichloropropane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
79-01-6	Trichloroethene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
124-48-1	Dibromochloromethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
79-00-5	1,1,2-Trichloroethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
71-43-2	Benzene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
75-25-2	Bromoform	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
591-78-6	2-Hexanone	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
127-18-4	Tetrachloroethene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
108-88-3	Toluene	11.	U	12.	U	4.	J	1.	J	2.	J	12.	U
108-90-7	Chlorobenzene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
100-41-4	Ethylbenzene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
100-42-5	Styrene	11.	U	12.	U	11.	U	11.	U	11.	U	12.	U
1330-20-7	Xylene (Total)	11.	U	12.	U	5.	J	2.	J	3.	J	12.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-VOA													
	SAMPLE ID ------->	064-S-0006-01		064-S-0007-01		064-S-0009-01		064-S-0009-03		064-S-2002-01		064-S-2002-03	
	ORIGINAL ID ----->	064S000601		064S000701		064S000901		064S000903		064S200201		064S200203	
	LAB SAMPLE ID --->	136328		136330		137833		137834		137604		137605	
	ID FROM REPORT -->	064S000601		064S000701		064S000901		064S000903		064S200201		064S200203	
	SAMPLE DATE ----->	10/06/95		10/06/95		10/25/95		10/25/95		10/23/95		10/23/95	
	DATE ANALYZED --->	10/12/95		10/15/95		10/31/95		10/31/95		10/29/95		10/29/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1549	VAL	1549	VAL	1592	VAL	1592	VAL	1592	VAL	1592	VAL
74-87-3	Chloromethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
74-83-9	Bromomethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
75-01-4	Vinyl chloride	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
75-00-3	Chloroethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
75-09-2	Methylene chloride	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
67-64-1	Acetone	29.	U	17.	U	26.	U	27.	U	13.	U	11.	U
75-15-0	Carbon disulfide	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
75-35-4	1,1-Dichloroethylene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
75-34-3	1,1-Dichloroethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
67-66-3	Chloroform	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
107-06-2	1,2-Dichloroethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
78-93-3	2-Butanone (MEK)	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
71-55-6	1,1,1-Trichloroethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
56-23-5	Carbon tetrachloride	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
75-27-4	Bromodichloromethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
78-87-5	1,2-Dichloropropane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
79-01-6	Trichloroethene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
124-48-1	Dibromochloromethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
79-00-5	1,1,2-Trichloroethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
71-43-2	Benzene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
75-25-2	Bromoform	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
591-78-6	2-Hexanone	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
127-18-4	Tetrachloroethene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
108-88-3	Toluene	12.	U	1.	J	12.	U	12.	U	13.	U	11.	U
108-90-7	Chlorobenzene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
100-41-4	Ethylbenzene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
100-42-5	Styrene	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U
1330-20-7	Xylene (Total)	12.	U	12.	U	12.	U	12.	U	13.	U	11.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-VOA													
	SAMPLE ID ------->	064-S-2003-03		064-S-2004-03		064-S-2005-03		064-S-2006-03		064-S-2007-03		064-S-2008-01	
	ORIGINAL ID ----->	064S200303		064S200403		064S200503		064S200603		064S200703		064S200801	
	LAB SAMPLE ID --->	137606		137607		137608		137609		137610		137611	
	ID FROM REPORT -->	064S200303		064S200403		064S200503		064S200603		064S200703		064S200801	
	SAMPLE DATE ----->	10/23/95		10/23/95		10/23/95		10/23/95		10/23/95		10/23/95	
	DATE ANALYZED --->	10/29/95		10/30/95		10/30/95		10/30/95		10/30/95		11/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	1592	VAL	1592	VAL	1592	VAL	1592	VAL	1592	VAL	1592	VAL
74-87-3	Chloromethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
74-83-9	Bromomethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
75-01-4	Vinyl chloride	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
75-00-3	Chloroethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
75-09-2	Methylene chloride	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
67-64-1	Acetone	210.		16.	U	18.	U	210.		47.	U	12.	U
75-15-0	Carbon disulfide	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
75-35-4	1,1-Dichloroethylene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
75-34-3	1,1-Dichloroethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
67-66-3	Chloroform	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
107-06-2	1,2-Dichloroethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
78-93-3	2-Butanone (MEK)	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
56-23-5	Carbon tetrachloride	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
75-27-4	Bromodichloromethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
78-87-5	1,2-Dichloropropane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
79-01-6	Trichloroethene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
124-48-1	Dibromochloromethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
71-43-2	Benzene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
75-25-2	Bromoform	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	3.	J	12.	U	13.	U	13.	U	13.	U	12.	U
591-78-6	2-Hexanone	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
127-18-4	Tetrachloroethene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
108-88-3	Toluene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
108-90-7	Chlorobenzene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
100-41-4	Ethylbenzene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
100-42-5	Styrene	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U
1330-20-7	Xylene (Total)	12.	U	12.	U	13.	U	13.	U	13.	U	12.	U

*** Validation Complete ***

NAS MEMPHIS
NAS MEMPHIS, RFI, ASSEMBLY D
SWMU 64

SW846-VOA

SAMPLE ID ------->	064-S-2008-03
ORIGINAL ID ----->	064S200803
LAB SAMPLE ID --->	137612
ID FROM REPORT -->	064S200803
SAMPLE DATE ----->	10/23/95
DATE ANALYZED --->	10/30/95
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	1592	VAL
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene chloride	12.	U
67-64-1	Acetone	120.	U
75-15-0	Carbon disulfide	12.	U
75-35-4	1,1-Dichloroethylene	12.	U
75-34-3	1,1-Dichloroethane	12.	U
540-59-0	1,2-Dichloroethene (total)	12.	U
67-66-3	Chloroform	12.	U
107-06-2	1,2-Dichloroethane	12.	U
78-93-3	2-Butanone (MEK)	12.	U
71-55-6	1,1,1-Trichloroethane	12.	U
56-23-5	Carbon tetrachloride	12.	U
75-27-4	Bromodichloromethane	12.	U
78-87-5	1,2-Dichloropropane	12.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U
79-01-6	Trichloroethene	12.	U
124-48-1	Dibromochloromethane	12.	U
79-00-5	1,1,2-Trichloroethane	12.	U
71-43-2	Benzene	12.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U
75-25-2	Bromoform	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	12.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U
108-88-3	Toluene	12.	U
108-90-7	Chlorobenzene	12.	U
100-41-4	Ethylbenzene	12.	U
100-42-5	Styrene	12.	U
1330-20-7	Xylene (Total)	12.	U

*** Validation Complete ***

Attachment 3
Land Surface Elevation Map

LEGEND

52 SWMU NO.

880 CONTOURS (4' INTERVAL)

RIDING TRAILS

600 0 500
SCALE FEET

SOURCE: U.S. NAVY

ASSEMBLY D CSI REPORT
NSA MEMPHIS
MILLINGTON, TN.

ATTACHMENT 3
LAND SURFACE ELEVATION MAP
NORTHSIDE OF NAS MEMPHIS

Dr by E/AH	Tr by E/AH	
Ck by: A CHOATE	App by E/AH	Sheet 1
Date: 05/08/96	DWG Name: 94LSEMNS	Of 1

00607E01X

Attachment 4
Miscellaneous Boring Logs

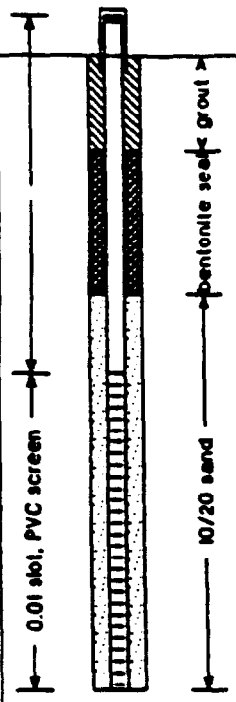
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-1S

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1015 on 2-07-95	TOC Elevation: feet msl
Completed at on 2-07-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 20.0 feet
Geologist: Ben Brantley	Well Screen: 10 to 20 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, grayish blue green, moist.	
5			1	80	BG				
								Clayey silt, moderate brown, medium stiff.	
10									
							ML	Clayey silt, moderate brown to dark yellowish brown, mottled pale yellowish brown.	
15			2	100	BG				
								Clayey silt, light brown to reddish brown, stiff, dry.	
20								Clayey silt, moderate brown, stiff.	
25			3	100	BG				
								Log information taken from the boring for the Cockfield well at SWMU#7 site 1.	
30									
35									
40									

WELL DIAGRAM



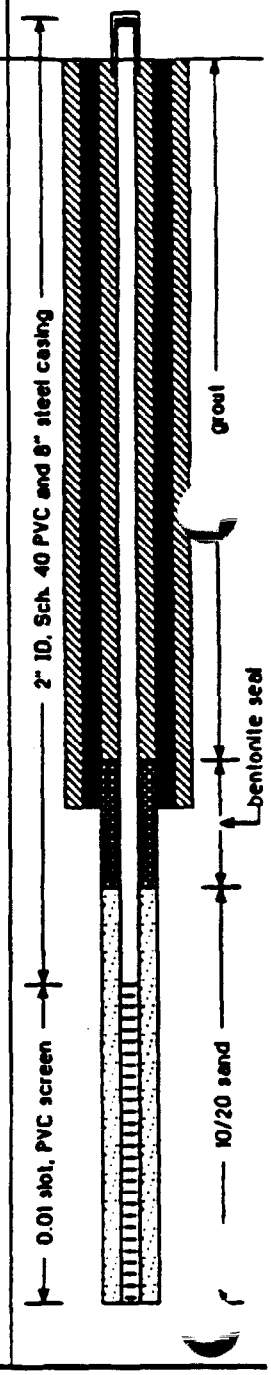
EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-1UF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1015 on 2-07-95	TOC Elevation: feet msl
Completed at on 2-07-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 40.0 feet
Geologist: Ben Brantley	Well Screen: 29 to 39 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, grayish blue green, moist.	
5			1	80	86				
								Clayey silt, moderate brown, medium stiff.	
10									
							ML	Clayey silt, moderate brown to dark yellowish brown, mottled pale yellowish brown.	
15			2	100	86				
								Clayey silt, light brown to reddish brown, stiff, dry.	
20								Clayey silt, moderate brown, stiff.	
25			3	100	86				
								Clayey sand, fine to medium, dark yellowish brown to light brown.	
30							SC		
35			4	95	86				
40									

WELL DIAGRAM



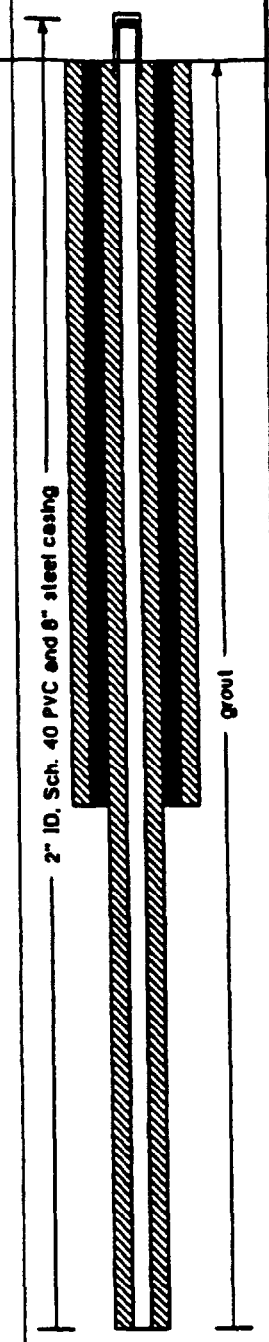
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-1LF

Project: NAS Memphis	Location: Millington, TN SWMU7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1016 on 2-07-95	TOC Elevation: feet msl
Completed at on 2-07-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 70 feet
Geologist: Ben Brantley	Well Screen: 59 to 69 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							ML	Clayey silt, grayish blue green, moist.	
5			1	80	BG				
								Clayey silt, moderate brown, medium stiff.	
10									
								Clayey silt, moderate brown to dark yellowish brown, mottled pale yellowish brown.	
15			2	100	BG				
								Clayey silt, light brown to reddish brown, stiff, dry.	
20								Clayey silt, moderate brown, stiff.	
25			3	100	BG		SC	Clayey sand, fine to medium, dark yellowish brown to light brown.	
30									
35			4	95	BG				
40									

WELL DIAGRAM



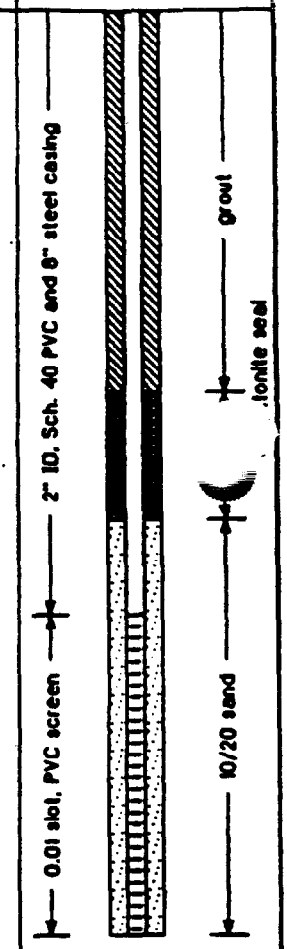
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-1LF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1015 on 2-07-95*	TOC Elevation: *feet msl*
Completed at *on 2-07-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *70 feet*
Geologist: *Ben Brantley*	Well Screen: *59 to 69 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
45							SC		
50									
55			5	90	BG		GP	Gravelly sand, coarse, grayish orange to yellowish orange.	
60									
65									
70								Log information taken from the boring for the Cockfield well at SWMU#7 site L	
75			6	87	BG				
80									

WELL DIAGRAM



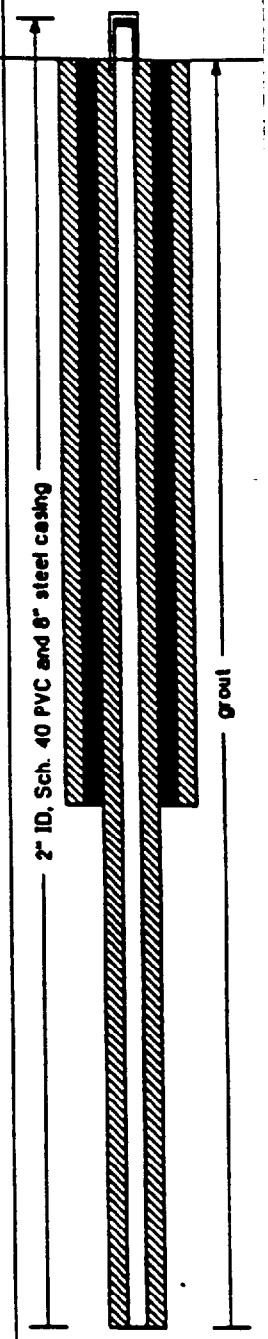
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-1UC

Project: NAS Memphis	Location: Millington, TN Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1015 on 2-07-95	TOC Elevation: feet msl
Completed at on 2-07-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 110.0 feet
Geologist: Ben Brantley	Well Screen: 97 to 107 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
		■	1		146		ML	Clayey silt, grayish blue green, moist.	
			2		89.4				
5				80					
			3		55				
		■	4		9.1			Clayey silt, moderate brown, medium stiff.	
10			5		8.3				
		■	6		2.9			Clayey silt, moderate brown to dark yellowish brown, mottled pale yellowish brown.	
			8		24.8				
15				100					
			9		12.3			Clayey silt, light brown to reddish brown, stiff, dry.	
			10		0.3				
20			11		BG			Clayey silt, moderate brown, stiff.	
			12		BG				
25			13	100	BG		SC	Clayey sand, fine to medium, dark yellowish brown to light brown.	
		■	14		BG				
			15		BG				
30			16		BG				
			17		BG				
35			18	95	BG				
			19		BG				
			20		BG				
40									

WELL DIAGRAM

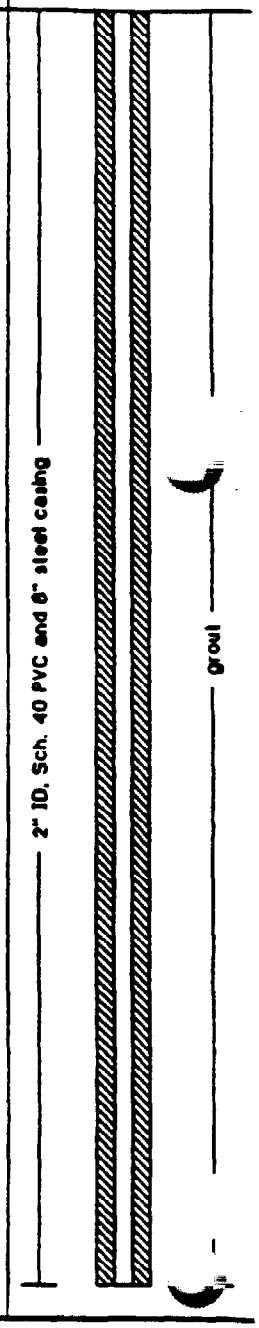


Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-1UC

Project: *NAS Memphis*	Location: *Millington, TN. Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1015 on 2-07-95*	TOC Elevation: *feet msl*
Completed at *on 2-07-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *100.0 feet*
Geologist: *Ben Brantley*	Well Screen: *97 to 107 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			21		BG					
			22		BG					
45			23		BG					
			24		BG		SC			
			25		BG					
50			26		BG					
			27		BG			Gravelly sand, coarse, grayish orange to yellowish orange.		
55			28	90	BG					
			29		0.8					
			30							
60			31		1.0		GP			
			32		0.8					
65			33		0.8					
			34		0.8					
			35		BG			Sand clayey, fine, pale yellowish orange to moderate orange.		
70			36		BG			Silty clayey sand, fine, medium gray to olive gray, contains marcasite nodules.		
			37		BG					
75			38	87	BG		SC	Sand, fine, yellowish gray to light gray, lignite at 79.5'.		
			39		BG					
80			40		BG					



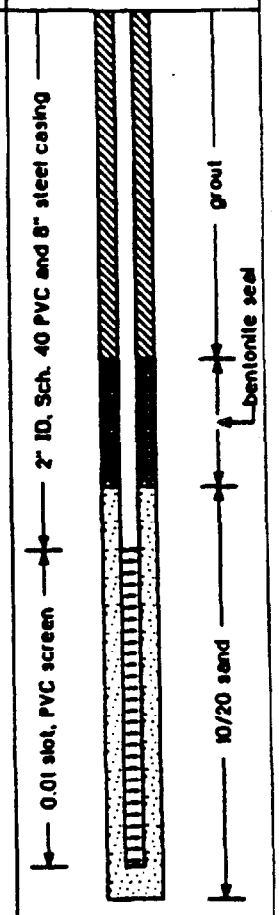
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-1UC

Project: *NAS Memphis*	Location: *Millington, TN Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1015 on 2-07-95*	TOC Elevation: *feet msl*
Completed at *on 2-07-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *110.0 feet*
Geologist: *Ben Brantley*	Well Screen: *97 to 107 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			41		BG			Sand, fine, medium gray to olive gray, micaceous.	
			42		BG				
85			43		BG			Sand, fine, light olive gray to gray with dusky brown clay lenses.	
			44		BG				
			45		BG				
90			46		BG				
			47		BG		SC		
95			48	110	BG				
			49		BG				
			50		BG			Same as above but increasing amounts of clay from 99' to 105'.	
100			51		BG				
			53		BG				
105			54		BG				
			55		BG		CL	Clay, waxy, dusky brown, hard, has olive gray sand lenses.	
			56		BG				
110			57	100				End of boring at 110'.	
115									
120									

WELL DIAGRAM



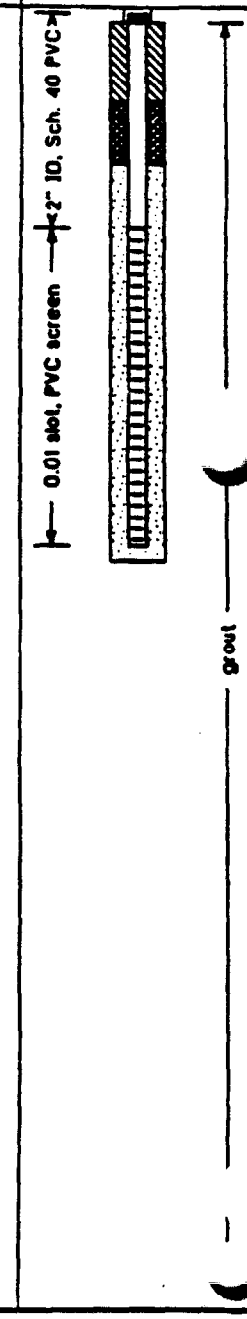
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-2S

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at on 2-07-95	TOC Elevation: feet msl
Completed at on 2-07-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 20.0 feet
Geologist: Ben Brantley	Well Screen: to feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, grayish green with dark yellow brown.	
5			1	90	BG				
10							ML	Clayey silt, dark yellowish brown to light olive gray.	
15			2	100	BG			Clayey silt, dark yellowish orange to light brown, medium stiff, dry.	
20			3	100	BG			Clayey silt, moderate brown with organics. End of boring at 20'.	
25									
30									
35									
40									

WELL DIAGRAM



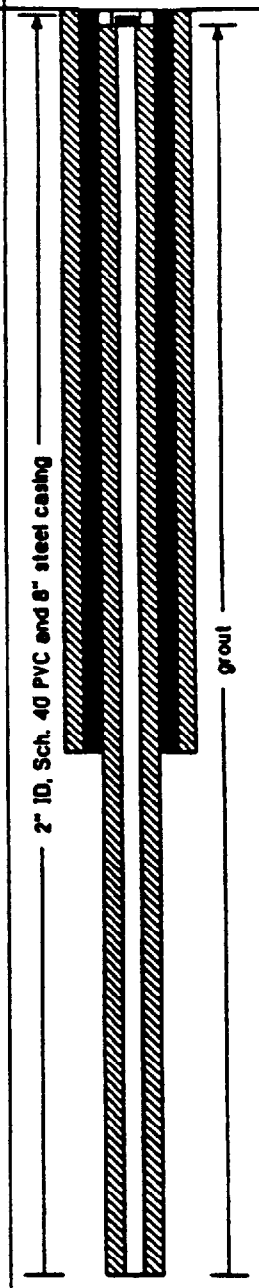
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-2UC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N00094*	Surface Elevation: *feet msl*
Started at *1150 on 2-07-95*	TOC Elevation: *feet msl*
Completed at *on 2-07-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *125.0 feet*
Geologist: *Ben Brantley*	Well Screen: *106 to 116 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1		BG			Clayey silt, grayish green with dark yellow brown.	
			2		BG				
5				90					
			3		BG				
			4		41.9				
10			5		20.0				
			6		BG		ML	Clayey silt, dark yellowish brown to light olive gray.	
15			7	100	BG				
			8		BG			Clayey silt, dark yellowish orange to light brown, medium stiff, dry.	
			9		BG				
20			10	100	BG			Clayey silt, moderate brown with organics.	
			11		BG				
			12		33.4				
25				100				Sandy clay, moderate reddish to light brown, medium stiff, fine.	
			13		BG				
			14		BG				
30			15		BG		GM	Silty clayey sand, medium, brown to yellowish orange, a few small gravels.	
			16		BG				
35			17	80	BG				
			18		BG				
			19		BG		GP	Sand, medium, yellowish gray to grayish orange, micaceous.	
40									

WELL DIAGRAM

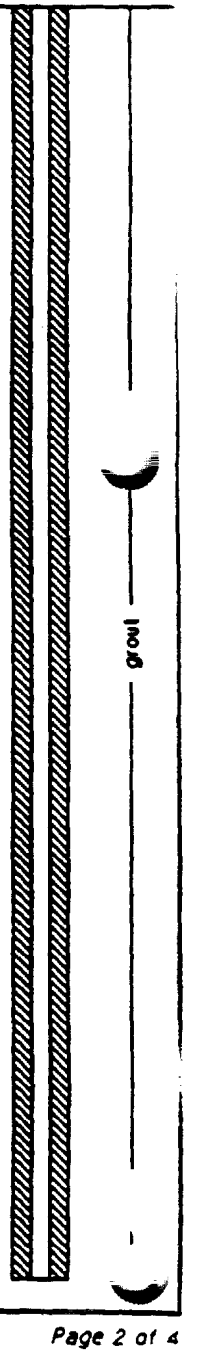


Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-2UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1150 on 2-07-95	TOC Elevation: feet msl
Completed at on 2-07-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 125.0 feet
Geologist: Ben Brantley	Well Screen: 106 to 116 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			20		BG					
			21		BG					
45			22		BG					
			23		BG					
			24		BG			Sand, coarse, gravelly, grayish orange to dark yellowish orange, gravels up to 2" in diameter.		
50			25		BG					
			26		BG					
55			27	87	BG					
			28		BG					
			29		BG					
60			30		BG		GP			
			31		BG					
65			32		BG					
			33		BG					
			34		BG					
70			35		BG					
			36		BG					
75			37	90	BG			Sand, fine, light gray to pale yellowish orange, with light gray clay lenses.		
80										



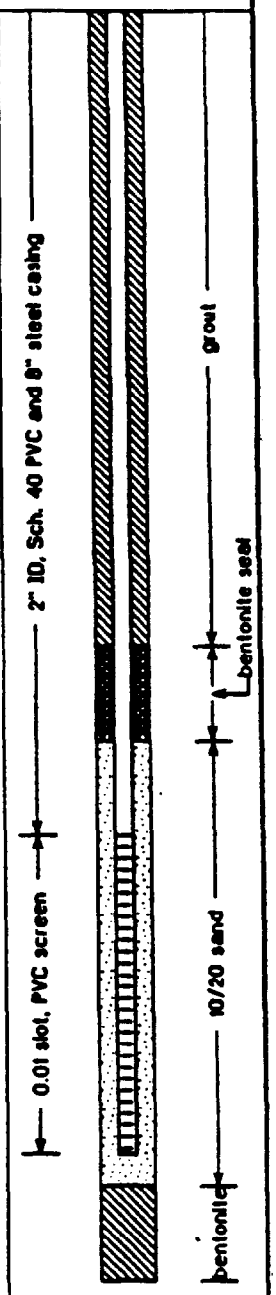
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-2UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1150 on 2-07-96	TOC Elevation: feet msl
Completed at on 2-07-96	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 125.0 feet
Geologist: Ben Brantley	Well Screen: 106 to 116 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							GP		
								Silty sand, fine, light olive gray to grayish brown, conatains dusky brown clay lenses.	
85									
90									
95			47	90	BG			Lignite laminations from 94'-95'.	
								Marcasite present at 98'.	
100							SM		
105									
110									
115			9	95	BG				
							OL	Clay, dusky brown, hard, waxy, with thin sand laminations.	
120									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-2UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1150 on 2-07-95	TOC Elevation: feet msl
Completed at on 2-07-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 125.0 feet
Geologist: Ben Brantley	Well Screen: 106 to 116 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
	X						OL			bentonite
125			10	90	BG			End of boring at 125'.		
130										
135										
140										
145										
150										
155										
160										

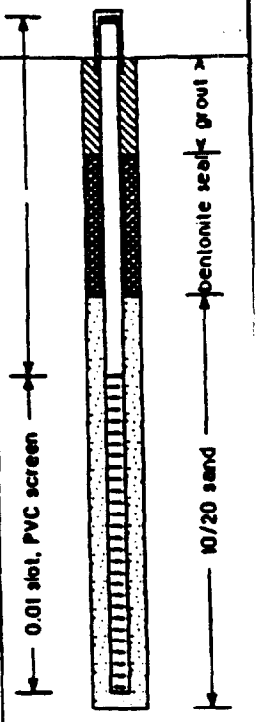
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3S

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1630 on 2-07-95	TOC Elevation: feet msl
Completed at 1500 on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 20.0 feet
Geologist: Ben Brantley	Well Screen: 10 to 20 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown to moderate yellowish brown, moist.	
5			1	40	BG				
10			2	120	BG		ML		
15			3	100	BG			Clayey silt, olive black, moist, soft.	
20			4	90	BG			Log information taken from the boring for the Cockfield well at SWMU#7 Site 3.	
25									
30									
35									
40									

WELL DIAGRAM



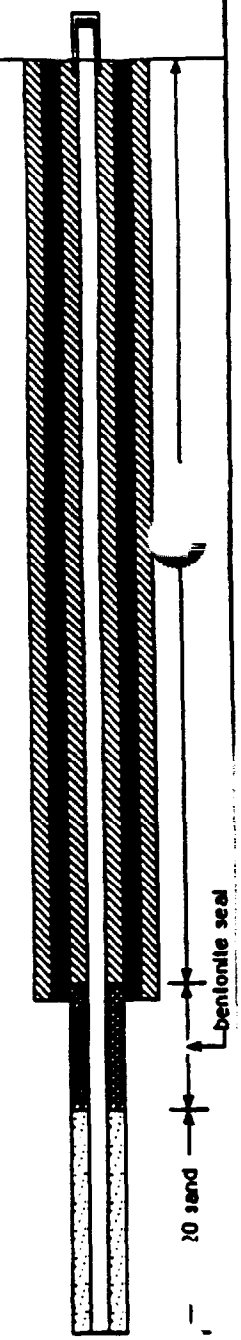
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3UF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1630 on 2-07-95	TOC Elevation: feet msl
Completed at 1500 on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 45.0 feet
Geologist: Ben Brantley	Well Screen: to feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown to moderate yellowish brown, moist.	
5			1	40	BG				
10			2	120	BG				
15			3	100	BG		ML	Clayey silt, olive black, moist, soft.	
20			4	90	BG			Clayey silt, dark yellowish brown, medium stiff.	
25			5	90	BG			Clayey silt, moderate brown with yellow gray silt, organics.	
30			6	100	BG			Clayey silt with sand, moderate brown.	
								Silty clayey sand, yellowish orange to yellowish brown.	
35			7	100	BG		SC	Silty sand, yellowish orange to reddish brown, fine to medium grained.	
40			8	120	BG				

WELL DIAGRAM

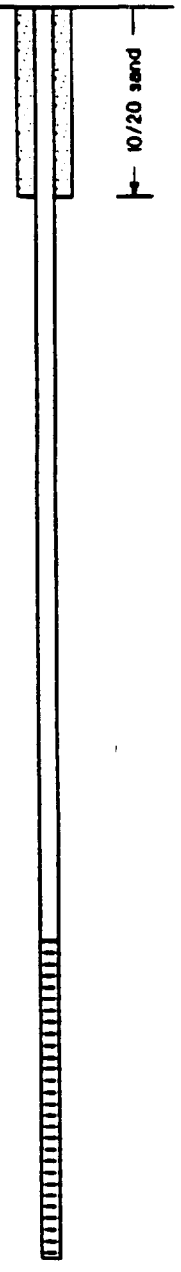


Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3UF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1630 on 2-07-95	TOC Elevation: feet msl
Completed at 1500 on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 45.0 feet
Geologist: Ben Brantley	Well Screen: to feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
							SC			
								Sand, yellowish gray, fine.		
								Sand, medium, yellowish orange to yellowish brown.		
45			9	120	86			Log information taken from the boring for the Cockfield well at SWMU#7 Site 3.		
50										
55										
60										
65										
70										
75										
80										



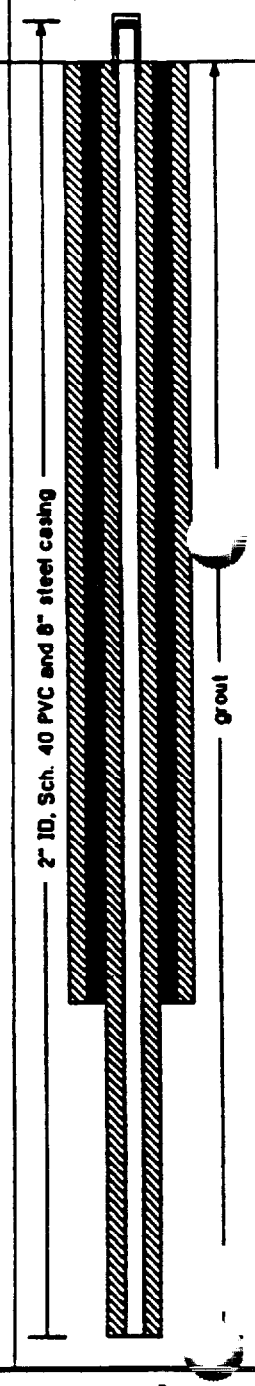
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3LF

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-128*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1630 on 2-07-95*	TOC Elevation: *feet msl*
Completed at *1500 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *80.0 feet*
Geologist: *Ben Brantley*	Well Screen: *69.5 to 79.5 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown to moderate yellowish brown, moist.	
5			1	40	BG				
10			2	120	BG				
15			3	100	BG		ML	Clayey silt, olive black, moist, soft.	
20			4	90	BG			Clayey silt, dark yellowish brown, medium stiff.	
25			5	90	BG			Clayey silt, moderate brown with yellow gray silt, organics.	
30			6	100	BG			Clayey silt with sand, moderate brown.	
								Silty clayey sand, yellowish orange to yellowish brown.	
35			7	100	BG		SC	Silty sand, yellowish orange to reddish brown, fine to medium grained.	
40			8	120	BG				

WELL DIAGRAM



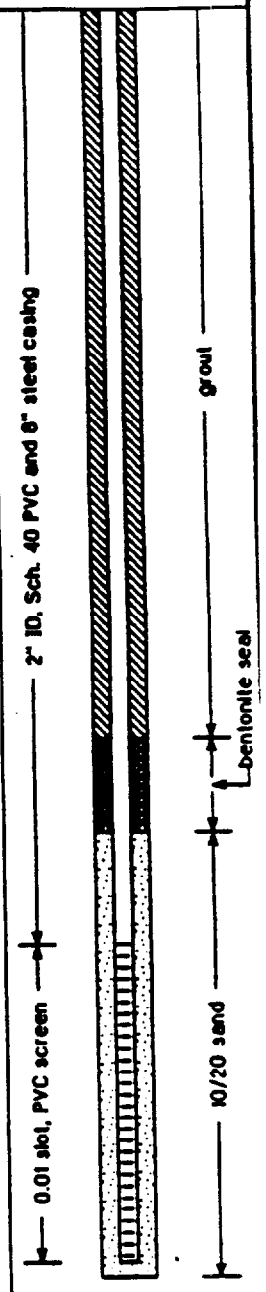
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3LF

Project: NAS Memphis	Location: Millington, TN. SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1630 on 2-07-95	TOC Elevation: feet msl
Completed at 1500 on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 80.0 feet
Geologist: Ben Brantley	Well Screen: 69.5 to 79.5 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							SC		
								Sand, yellowish gray, fine.	
								Sand, medium, yellowish orange to yellowish brown.	
45			9	120	BG			Sand, medium to coarse, grayish orange to yellow gray, with gravels.	
50									
55			10	75	BG				
60							GP		
65			11	80	BG				
70									
75			12	80	BG				
80							SC	Silty sand, fine, yellowish orange to yellow gray.	

WELL DIAGRAM



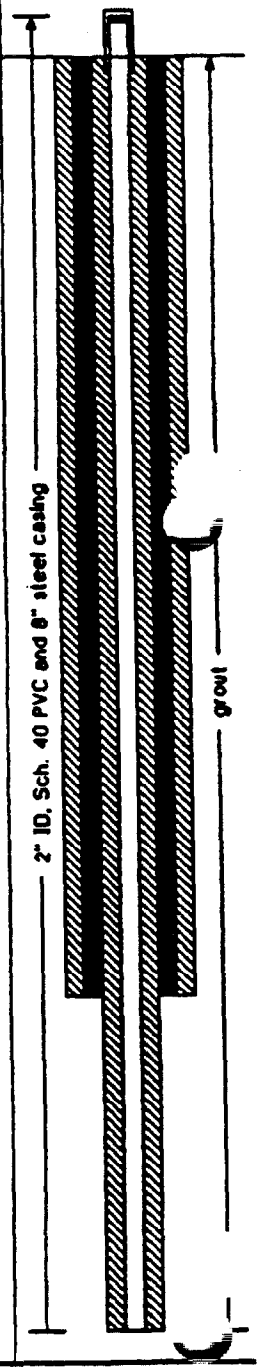
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1630 on 2-07-95	TOC Elevation: feet msl
Completed at 1500 on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 115.0 feet
Geologist: Ben Brantley	Well Screen: 97 to 107 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1		BG			Clayey silt, moderate brown to moderate yellowish brown, moist.	
			2		BG				
5				40					
			3		BG				
			4		BG				
10			5	120	BG				
			6		BG				
			7		BG				
15				100			ML	Clayey silt, olive black, moist, soft.	
			9		BG				
			10		BG				
20			11	90	BG			Clayey silt, dark yellowish brown, medium stiff.	
			12		BG				
			13		BG				
25				90				Clayey silt, moderate brown with yellow gray silt, organics.	
			14		BG				
			15		BG				
30			16	100	BG			Clayey silt with sand, moderate brown.	
			17		BG			Silty clayey sand, yellowish orange to yellowish brown.	
			18		BG				
35				100			SC	Silty sand, yellowish orange to reddish brown, fine to medium grained.	
			19		BG				
			20		BG				
40			21	120	BG				

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3UC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-128*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1630 on 2-07-95*	TOC Elevation: *feet msl*
Completed at *1500 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *115.0 feet*
Geologist: *Ben Brantley*	Well Screen: *97 to 107 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			22		0.2		SC			
			23		0.2			Sand, yellowish gray, fine. Sand, medium, yellowish orange to yellowish brown.		
45			24	120	BG			Sand, medium to coarse, grayish orange to yellow gray, with gravels.		
			25		0.2					
			26		0.2					
50			27		0.2					
			28		BG					
55			29	75	BG					
			30		BG					
			31		BG		GP			
60			32		BG					
			33		BG					
65			34	80	BG					
			35		BG					
			36		BG					
70			37		BG					
			38		0.2					
75			39	80	0.2					
			40		BG					
			41		BG		SC	Silty sand, fine, yellowish orange to yellow gray.		
80							CL			

WELL DIAGRAM: 2" ID, Sch. 40 PVC and 8" steel casing; grout

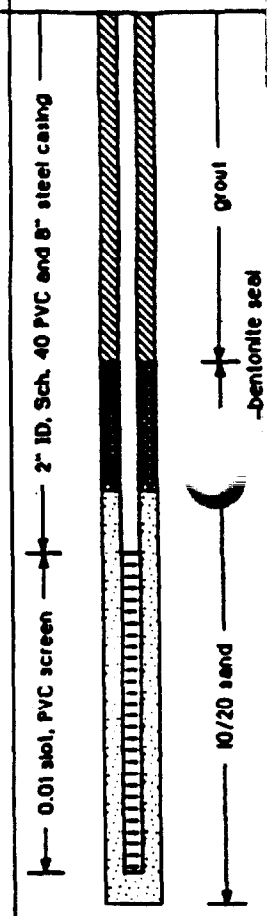
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-3UC

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1630 on 2-07-95*	TOC Elevation: *feet msl*
Completed at *1500 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *115.0 feet*
Geologist: *Ben Brantley*	Well Screen: *97 to 107 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			42		BG			Clay, dusky brown to olive gray, with light gray sand.	
			43		BG				
85			44	105	BG				
			45		BG				
			46		BG				
90			47		BG			Lignitic from 91'-93'.	
			48		BG				
95			49	105	BG				
			50		BG		CL		
			51		BG				
100			52		BG				
			53		BG				
105			54	100	BG			Clay, dusky brown, wavy, contains less sand.	
			55		BG				
			56		BG				
110			57		BG				
			58		BG				
115			59	110	BG			End of boring at 115'.	
120									

WELL DIAGRAM



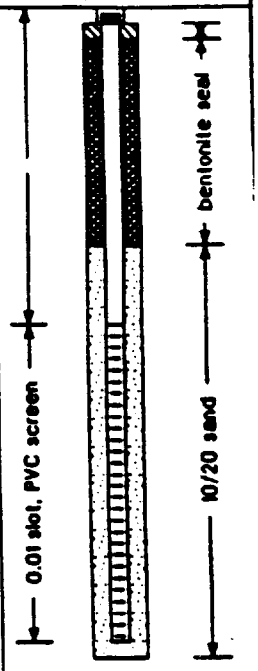
EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4S

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N00194*	Surface Elevation: *feet msl*
Started at *0900 on 1-09-95*	TOC Elevation: *feet msl*
Completed at *0910 on 2-16-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *10 to 20 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1	62.5	BG			Clayey silt, moderate brown, stiff.	
5									
10			2	50	BG		ML		
15			3	60	BG			Clayey silt, dark yellow brown, medium stiff, moist.	
								Clayey silt, moderate yellow with reddish brown, hard.	
20			4	80	BG			Log information taken from the boring for the Cockfield well at SWMU#7 Site 4.	
25									
30									
35									
40									

WELL DIAGRAM



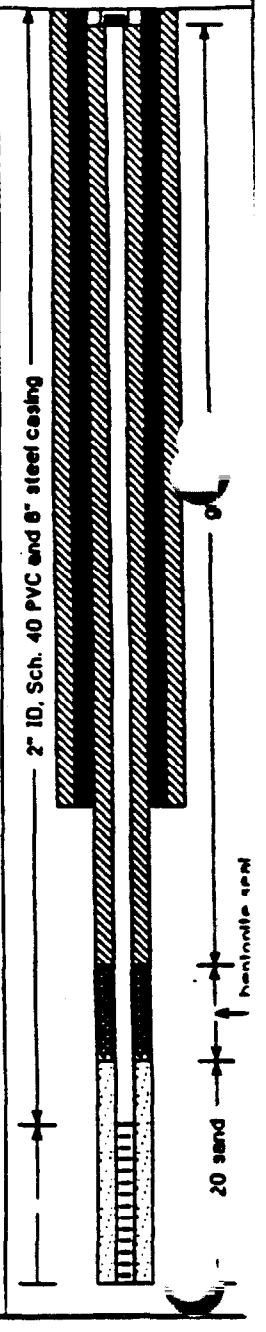
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4UF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 0900 on 1-09-95	TOC Elevation: feet msl
Completed at 0910 on 2-15-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 45.0 feet
Geologist: Jack Carmichael	Well Screen: 35 to 45 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown, stiff.	
5			1	62.5	BG				
10			2	50	BG				
							ML		
15			3	60	BG			Clayey silt, dark yellow brown, medium stiff, moist.	
								Clayey silt, moderate yellow with reddish brown, hard.	
20			4	80	BG				
25			5	80	BG			Clay, silty, trace sand, very fine, moderate reddish brown, stiff.	
								Sand, clayey, silty, finely micaceous, moderate reddish orange to moderate reddish brown.	
30									
							SC		
35			6	110	BG			Sand, very fine to fine, silty, clayey, laminated, small clay casts, pale orange to moderate red.	
40									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4UF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 1-09-95*	TOC Elevation: *feet msl*
Completed at *0910 on 2-16-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *45.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *35 to 45 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
	X						SC	Sand, very fine to fine, silty, some clay, dark yellowish orange to grayish orange, wet.		10/20 sand
45			7	105	86			Log information taken from the boring for the Cockfield well at SWMU#7 Site 4.		
50										
55										
60										
65										
70										
75										
80										

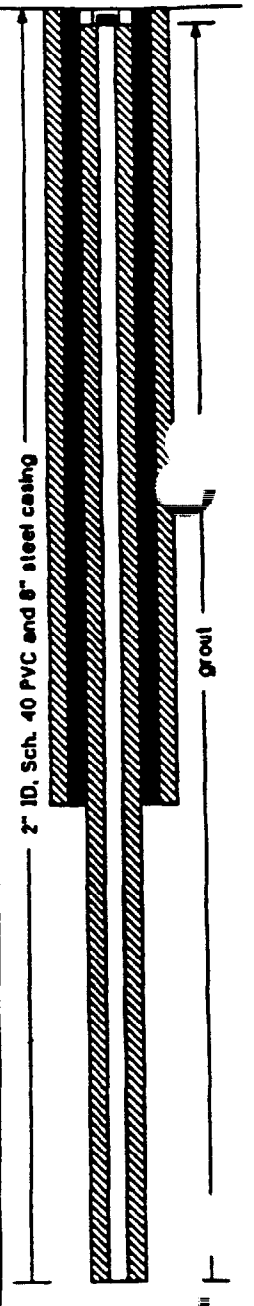
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4LF

Project: NAS Memphis	Location: Millington, TN. SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 0900 on 1-09-95	TOC Elevation: feet msl
Completed at 0910 on 2-16-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 70.0 feet
Geologist: Jack Carmichael	Well Screen: 60 to 70 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							ML	Clayey silt, moderate brown, stiff.	
5			1	62.5	BG				
10			2	50	BG				
15			3	60	BG			Clayey silt, dark yellow brown, medium stiff, moist..	
								Clayey silt, moderate yellow with reddish brown, hard.	
20			4	80	BG				
25			5	80	BG			Clay, silty, trace sand, very fine, moderate reddish brown, stiff.	
							SC	Sand, clayey, silty, finely micaceous, moderate reddish orange to moderate reddish brown.	
30									
35			6	110	BG			Sand, very fine to fine, silty, clayey, laminated, small clay casts, pale orange to moderate red.	
40									

WELL DIAGRAM



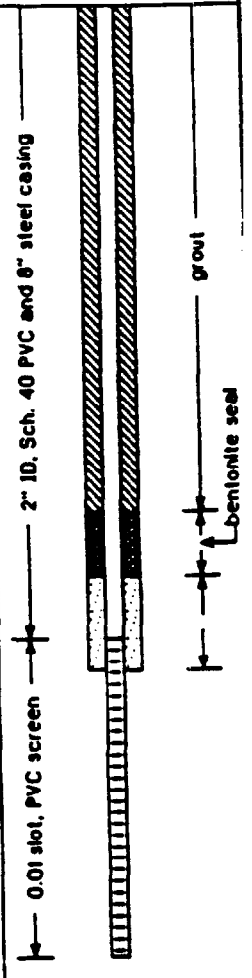
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4LF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 1-09-95*	TOC Elevation: *feet msl*
Completed at *0910 on 2-16-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *70.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *60 to 70 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							SC	Sand, very fine to fine, silty, some clay, dark yellowish orange to grayish orange, wet.	
45			7	105	BG			Sand, gravelly, clay balls, grayish orange to moderate yellowish brown.	
50									
55			8	100	BG		GP	Sand with gravel, fine to coarse, grayish orange to moderate yellowish brown, wet.	
60									
65			9	100	BG			Gravel, sandy, moderate yellowish brown to dark yellowish orange.	
70								Log information taken from the boring for the Cockfield well at SWMU#7 Site 4.	
75			10	100	BG				
80									

WELL DIAGRAM



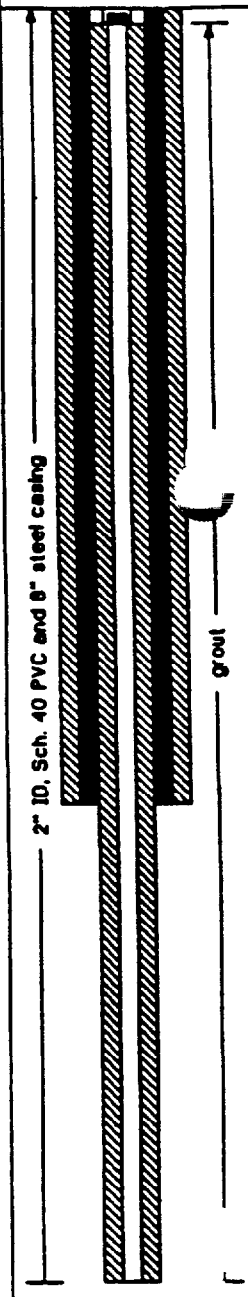
EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4MC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 1-09-95*	TOC Elevation: *feet msl*
Completed at *0910 on 2-16-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *145.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *128 to 138 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1		BG			Clayey silt, moderate brown, stiff.	
			2		BG				
5			3	62.5	BG				
			4		BG				
			5		BG				
10			6	50	BG				
			7		BG				
			8		BG		ML		
15				60				Clayey silt, dark yellow brown, medium stiff, moist.	
			9		BG				
			10		BG			Clayey silt, moderate yellow with reddish brown, hard.	
20			11	80	BG				
			12		BG				
25			13	80	BG			Clay, silty, trace sand, very fine, moderate reddish brown, stiff.	
			14		BG			Sand, clayey, silty, finely micaceous, moderate reddish orange to moderate reddish brown.	
			15		BG				
30			16		BG				
			17		BG		SC		
35			18	110	BG			Sand, very fine to fine, silty, clayey, laminated, small clay casts, pale orange to moderate red.	
			19		BG				
40			20		BG				

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4MC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 1-09-95*	TOC Elevation: *feet msl*
Completed at *0910 on 2-16-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *145.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *128 to 138 feet*

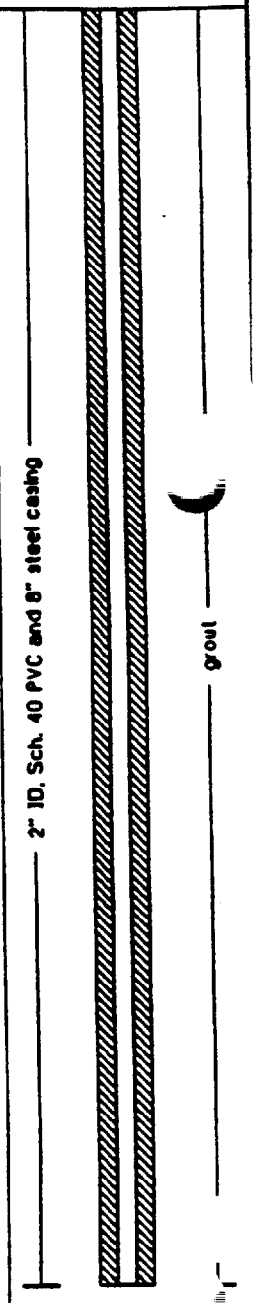
DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			21		BG		SC	Sand, very fine to fine, silty, some clay, dark yellowish orange to grayish orange, wet.		2" ID, Sch. 40 PVC and 8" steel casing; grout
			22		BG					
45			23	105	BG		GP	Sand, gravelly, clay balls, grayish orange to moderate yellowish brown.		
			24		BG					
			25		BG					
50			26		BG					
			27		BG					
55			28	100	BG			Sand with gravel, fine to coarse, grayish orange to moderate yellowish brown, wet.		
			29		BG					
			30		BG					
60			31		BG					
			32		BG					
65			33	100	BG			Gravel, sandy, moderate yellowish brown to dark yellowish orange.		
			34		BG					
			35		BG					
70			36		BG		SC	Sand, very fine to fine, silty, clayey, laminated, light brownish gray to grayish brown, stiff, micaceous, moist.		
			37		BG					
75			38	100	BG			Sand, very fine to fine with clay streaks, pale orange to yellowish gray stained dark yellowish orange.		
			39		BG					
			40		BG					
80										

Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4MC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 1-09-95*	TOC Elevation: *feet msl*
Completed at *0910 on 2-16-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *145.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *128 to 138 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			41		BG					
			42		BG			Sand, very fine to fine, with clay streaks, yellowish gray to very pale orange, stained dark yellowish orange, very wet.		
85			43	100	BG					
			44		BG			Sand, very fine to fine, clayey, laminated, pale brown to moderate brown, wet.		
			45		BG			Sand, very fine to fine, laminated, medium gray to grayish brown, with occassional lignite chips.		
90			46		BG					
			47		BG					
95			48	100	BG					
			49		BG					
			50		BG					
100			51		BG		SC			
			52		BG					
105			53		BG					
			54	109	BG					
			55		BG					
110			56		BG					
			57		BG					
115			58	100	BG			Sand, very fine to fine, clayey with lignitic chips, light brownish gray to grayish brown, clayey zones are stiff, wet.		
			59		BG					
120			60		BG					



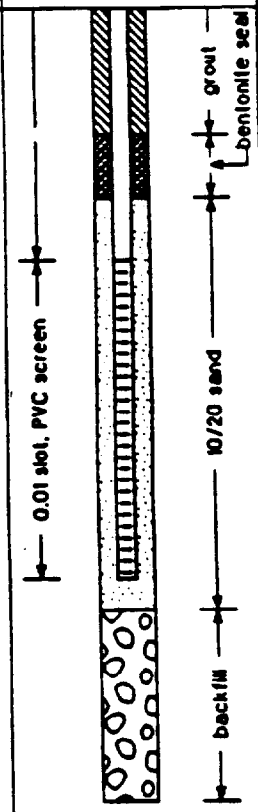
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-4MC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 0900 on 1-09-95	TOC Elevation: feet msl
Completed at 0910 on 2-16-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 145.0 feet
Geologist: Jack Carmichael	Well Screen: 128 to 138 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			61		BG				
			62		BG				
125			63	100	BG				
			64		BG				
			65		BG				
130			66		BG		SC		
			67		BG				
135			68	120	BG			Sand, very fine to fine, lignitic, light brownish gray to grayish brown, cohesive in clayey zones, wet.	
			69		BG			Lignitic, dusky brown, hard.	
			70		BG				
140			71		BG			Clay, silty, traces of sand, laminated dark brownish gray, color changes below 141', stiff.	
			72		BG		CL		
145			73	100	BG			End of boring at 145'.	
150									
155									
160									

WELL DIAGRAM



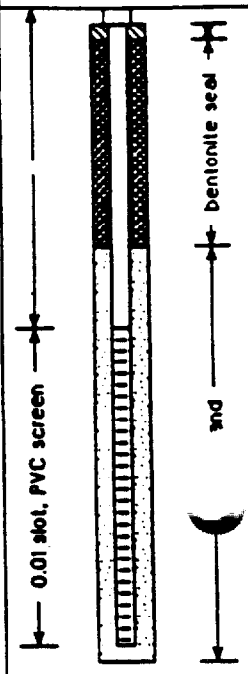
EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-5S

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at on 1-09-95	TOC Elevation: feet msl
Completed at on 2-21-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 20.0 feet
Geologist: Jack Carmichael	Well Screen: 10 to 20 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
	X							Clayey silt, moderate brown to yellowish brown, trace of organics.	
5	X		1	75	BG				
10	X		2	60	BG		ML		
15	X		3	100	BG			Clayey silt, dark yellowish brown, stiff, hard.	
20	X		4	90	BG				
								Log information taken from the boring for the Cockfield well at SWMU#7 Site 5.	
25									
30									
35									
40									

WELL DIAGRAM



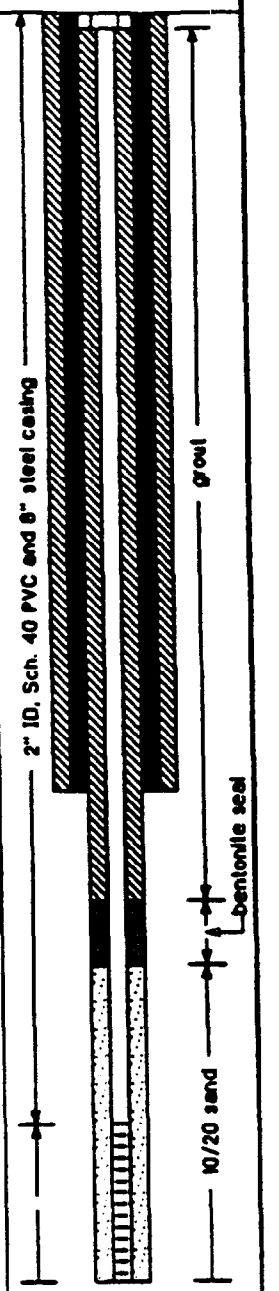
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-UF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-128*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *on 1-09-95*	TOC Elevation: *feet msl*
Completed at *on 2-21-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *45.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *35 to 45 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1	75	BG			Clayey silt, moderate brown to yellowish brown, trace of organics.	
5									
10			2	80	BG				
15			3	100	BG		ML	Clayey silt, dark yellowish brown, stiff, hard.	
20			4	90	BG				
25									
30			5	90	BG				
35			6	90	BG		SC	Sandy clay, fine, medium light brown, soft, wet. Silty sand, medium, light brown, grayish orange to yellow gray.	
40									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-UF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at on 1-09-95	TOC Elevation: feet msl
Completed at on 2-21-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 45.0 feet
Geologist: Jack Carmichael	Well Screen: 35 to 45 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
	X						SC	Silty sand, medium, yellowish orange to light brown.		10/20 sand
45								Log information taken from the boring for the Cockfield well at SWMU#7 Site 5.		
50										
55			7	60	86					
60										
65										
70										
75										
80										

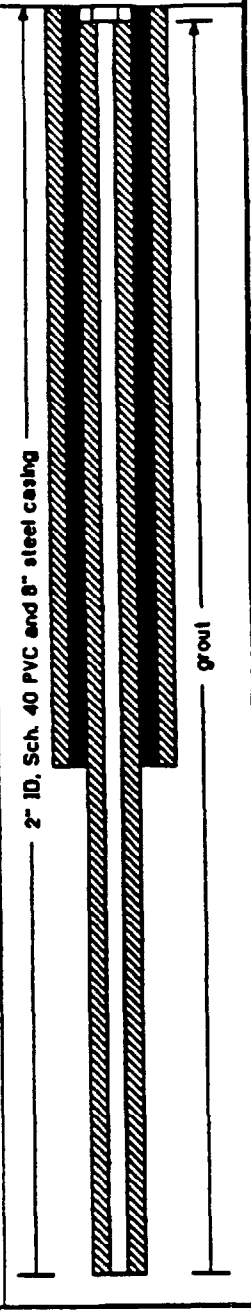
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-5LF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *on 1-09-95*	TOC Elevation: *feet msl*
Completed at *on 2-21-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *76.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *66 to 76 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown to yellowish brown, trace of organics.	
5			1	75	BG				
10			2	60	BG				
15			3	100	BG		ML	Clayey silt, dark yellowish brown, stiff, hard.	
20			4	90	BG				
25									
30			5	90	BG				
								Sandy clay, fine, medium light brown, soft, wet.	
35			6	90	BG		SC	Silty sand, medium, light brown, grayish orange to yellow gray.	
40									

WELL DIAGRAM



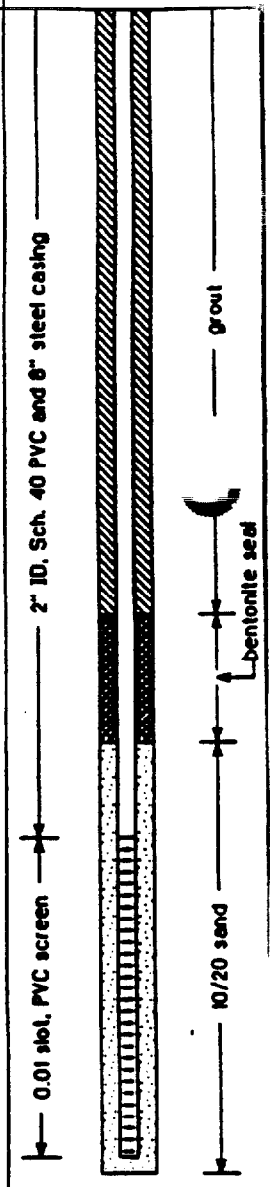
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-5LF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building
Project No.: N00894	Surface Elevation: feet msl
Started at on 1-09-95	TOC Elevation: feet msl
Completed at on 2-21-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 76.0 feet
Geologist: Jack Carmichael	Well Screen: 66 to 76 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							SC	Silty sand, medium, yellowish orange to light brown.	
45								Sand, medium, micaceous, yellowish orange to light brown.	
50								Sand, medium, grayish orange, micaceous.	
55			7	60	BG				
60							GP		
65								Gravelly sand, coarse to very coarse, dark yellowish orange.	
70									
75			8	87.5	BG				
								Log information taken from the boring for the Cockfield well at SWMU#7 Site 5.	
80									

WELL DIAGRAM



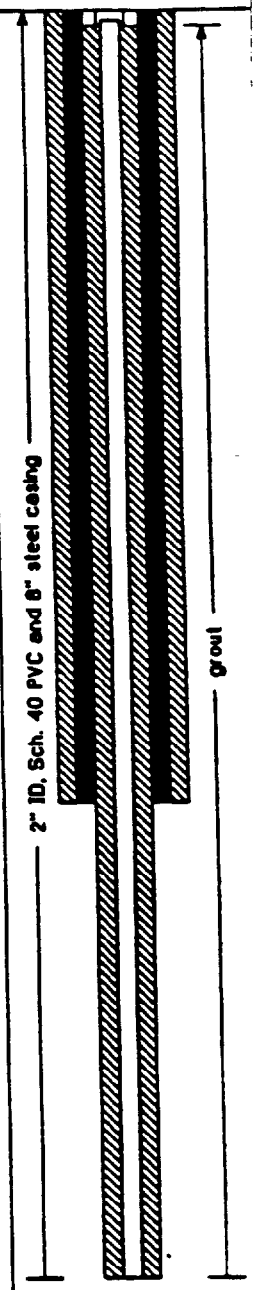
EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-5UC

Project: *NAS Memphis*	Location: *Memphis, TN*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *on 1-09-95*	TOC Elevation: *feet msl*
Completed at *on 2-21-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *135.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *122 to 132 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1		BG			Clayey silt, moderate brown to yellowish brown, trace of organics.	
			2		BG				
5			3	75	BG				
			4		BG				
10			5	80	BG				
			6		BG				
			7		BG				
15			8	100	BG		ML	Clayey silt, dark yellowish brown, stiff, hard.	
			9		BG				
20			10	90	BG				
			11		BG				
			12		BG				
25			13		BG				
			14		BG				
30			15	90	BG				
			16		BG				
			17		BG			Sandy clay, fine, medium light brown, soft, wet.	
35			18	90	BG		SC	Silty sand, medium, light brown, grayish orange to yellow gray.	
			19		BG				
40			20		BG				

WELL DIAGRAM

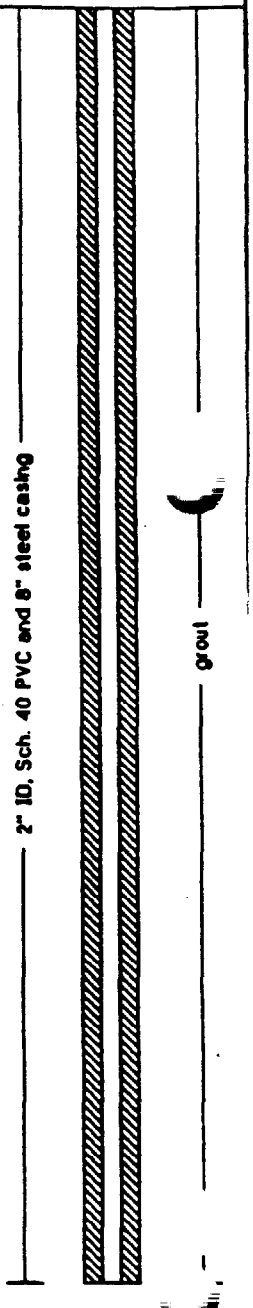


Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-5UC

Project: *NAS Memphis*	Location: *Memphis, TN*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *on 1-09-95*	TOC Elevation: *feet msl*
Completed at *on 2-21-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *135.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *122 to 132 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			21		BG		SC	Silty sand, medium, yellowish orange to light brown.		
			22		BG					
45			23		BG			Sand, medium, micaceous, yellowish orange to light brown.		
			24		BG					
50			25		BG			Sand, medium, grayish orange, micaceous.		
			26		BG					
			27		BG					
55				60						
			28		BG					
			29		BG					
60			30		BG		GP			
			31		BG					
			32		BG					
65			33		BG			Gravelly sand, coarse to very coarse, dark yellowish orange.		
			34		BG					
70			35		BG					
			36		BG					
			38		BG					
75				87.5						
			39		BG		SC	Silty sand, fine, brownish gray, with thin dark yellow clay lenses.		
			40		BG					
80			41		BG					



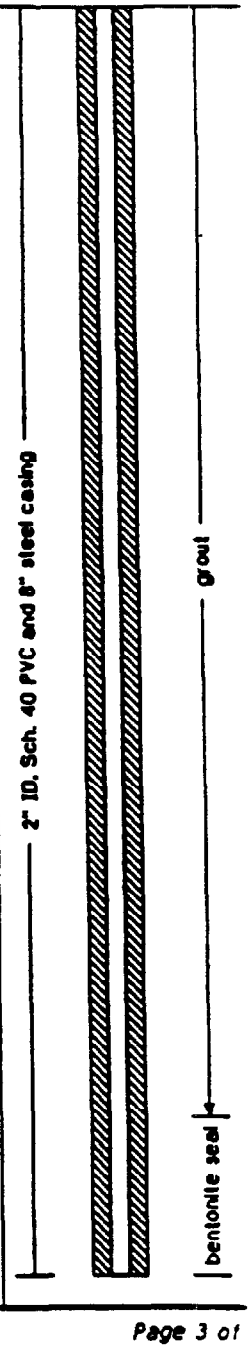
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-5UC

Project: NAS Memphis	Location: Memphis, TN
Project No.: N0094	Surface Elevation: feet msl
Started at on 1-09-95	TOC Elevation: feet msl
Completed at on 2-21-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 135.0 feet
Geologist: Jack Carmichael	Well Screen: 122 to 132 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			42		BG				
			43		BG				
85			44		BG				
			45		BG				
90			46		BG				
			47		BG				
			48		BG				
95				80					
			49		BG				
			50		BG				
100			51		BG		SC	Sand, fine, brownish gray with dark yellow brown clay lenses.	
			52		BG				
			53		BG				
105			54		BG				
			56		BG				
110			57		BG				
			58		BG				
			59		BG				
115				90					
			60		BG				
			61		BG				
120			62		BG			Clay, dusky brown, wary, from 119' to 119.5'. Sand, fine, brownish gray with clay lenses described above.	

WELL DIAGRAM



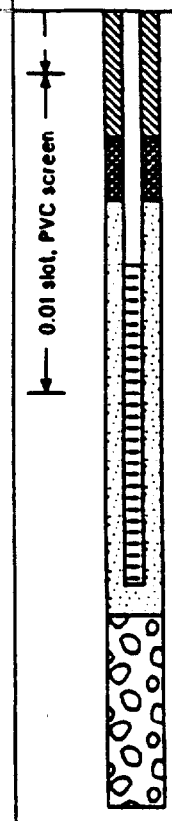
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-5UC

Project: *NAS Memphis*	Location: *Memphis, TN*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *on 1-09-95*	TOC Elevation: *feet msl*
Completed at *on 2-21-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *135.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *122 to 132 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			63		BG		SC		
125			64		BG				
			65		BG				
			66		BG				
130			67		BG		CL	Clay, dusky brown, waxy, mixed with lignitic sand.	
			68		BG				
			69		BG				
135				90				End of boring at 135'.	
140									
145									
150									
155									
160									

WELL DIAGRAM



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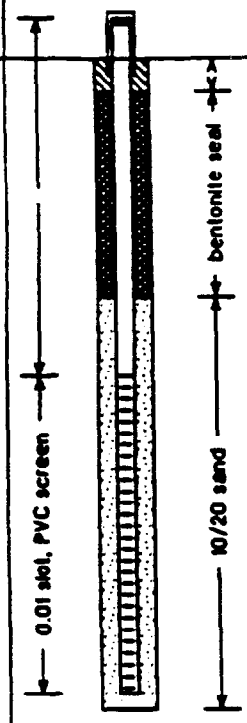
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6S

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-128*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0820 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *1010 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.0 feet*
Geologist: *Ben Brantley*	Well Screen: *10 to 20 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
	X							Fill and brick.	
	X		1	88	BG			Clayey silt, moderate yellowish brown, mottled with yellow gray.	
5	X								
10	X		2	70	BG		ML		
15	X		3	70	BG				
20	X							Log information taken from the boring for the Cockfield well at SWMU#7 site 8.	
25			4	60	BG				
30									
35									
40									

WELL DIAGRAM



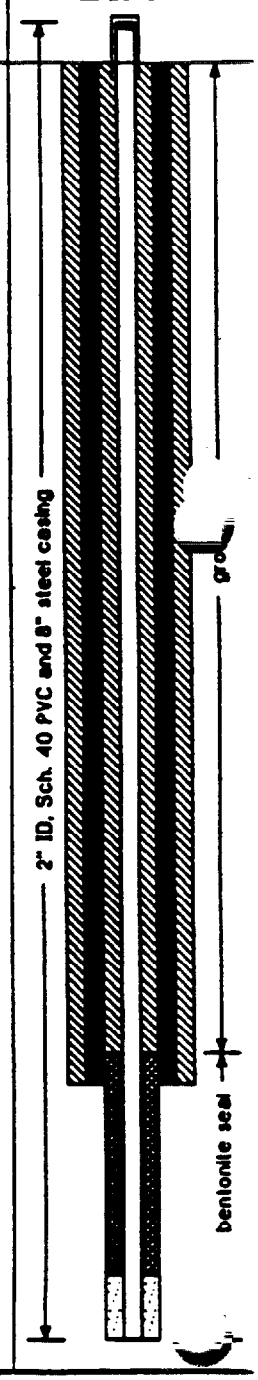
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6UF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0820 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *1010 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *55.0 feet*
Geologist: *Ben Brantley*	Well Screen: *40 to 50 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Fill and brick.	
			1	66	BG			Clayey silt, moderate yellowish brown, mottled with yellow gray.	
5									
10			2	70	BG				
15			3	70	BG		ML		
20									
25			4	60	BG			Clayey silt, olive brown to olive gray, hard, stiff.	
30								Clayey silt, light brown to yellowish brown, medium stiff.	
			5	85	BG				
35							SC	Silty clayey sand, fine to very fine, yellowish orange to reddish brown.	
40									

WELL DIAGRAM



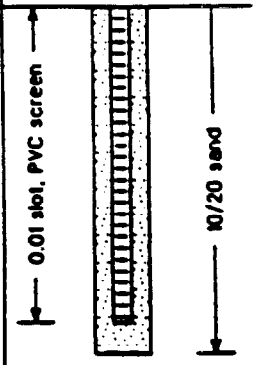
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6UF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0820 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *1010 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *55.0 feet*
Geologist: *Ben Brantley*	Well Screen: *40 to 50 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
45			6	54	B6		SC	Silty sand, very fine to fine, traces of clay casts, grayish orange to pale yellowish orange.	
50									
55			7	100	B6			Log information taken from the boring for the Cockfield well at SWMU#7 site 6.	
60									
65									
70									
75									
80									

WELL DIAGRAM



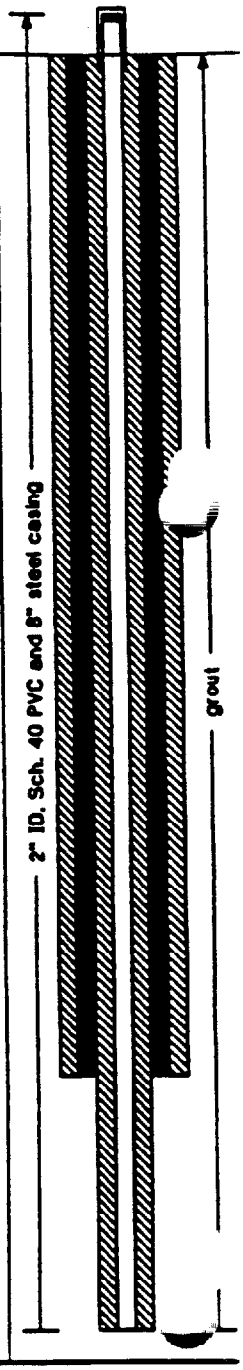
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6LF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 0820 on 2-10-95	TOC Elevation: feet msl
Completed at 1010 on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 78.0 feet
Geologist: Ben Brantley	Well Screen: 67 to 77 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Fill and brick.	
			1	66	BG			Clayey silt, moderate yellowish brown, mottled with yellow gray.	
5									
10			2	70	BG				
15			3	70	BG				
							ML		
20									
25			4	60	BG			Clayey silt, olive brown to olive gray, hard, stiff.	
								Clayey silt, light brown to yellowish brown, medium stiff.	
30									
			5	85	BG				
35								Silty clayey sand, fine to very fine, yellowish orange to reddish brown.	
							SC		
40									

WELL DIAGRAM



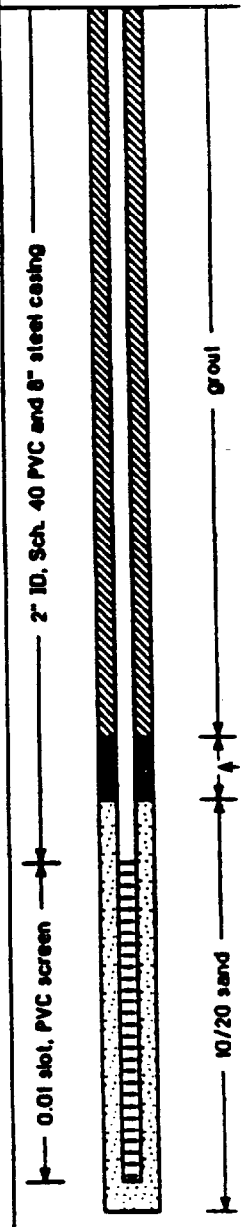
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6LF

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0820 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *1010 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *78.0 feet*
Geologist: *Ben Brantley*	Well Screen: *67 to 77 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
45			6	54	BG		SC	Silty sand, very fine to fine, traces of clay casts, grayish orange to pale yellowish orange.	
50									
55			7	100	BG		GP	Sand, fine to coarse, pale yellowish brown to moderate yellowish brown.	
60									
65			8	70	BG				
70									
75			9	100	BG				
80								Log information taken from the boring for the Cockfield well at SWMU#7 site 6.	

WELL DIAGRAM



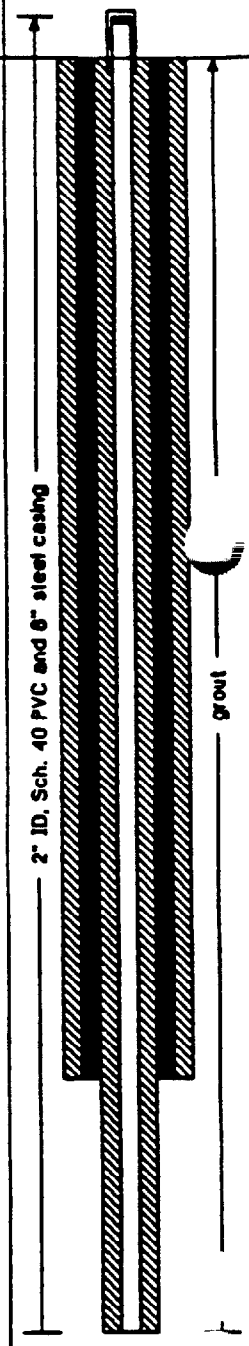
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6UC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0820 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *1010 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *101.0 feet*
Geologist: *Ben Brantley*	Well Screen: *84.5 to 94.5 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Fill and brick.	
				66				Clayey silt, moderate yellowish brown, mottled with yellow gray.	
5			1		BG				
			2		BG				
			3		BG				
10			4	70	BG				
			5		BG				
15			6	70	BG				
			7		BG		ML		
			8		BG				
20			9		BG				
			10		BG				
25			11	60	BG			Clayey silt, olive brown to olive gray, hard, stiff.	
			12		BG				
			13		BG			Clayey silt, light brown to yellowish brown, medium stiff.	
30			14		BG				
			15	85	BG				
35			16		BG			Silty clayey sand, fine to very fine, yellowish orange to reddish brown.	
			17		BG		SC		
40			18		BG				

WELL DIAGRAM



EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6UC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0820 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *1010 on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *101.0 feet*
Geologist: *Ben Brantley*	Well Screen: *84.5 to 94.5 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			19		BG					
			20		BG					
45			21	54	BG			Silty sand, very fine to fine, traces of clay casts, grayish orange to pale yellowish orange.		
			22		BG		SC			
			23		BG					
50			24		BG					
			25		BG					
55			26	100	BG					
			27		BG			Sand, fine to coarse, pale yellowish brown to moderate yellowish brown.		
			28		BG					
60			29		BG					
			30		BG					
65			31	70	BG					
			32		BG		GP			
			33		BG					
70			34		BG					
			35		BG					
75			36	100	BG					
			37		BG			Silt clayey, finely laminated, pale yellowish orange to dark yellowish orange.		
			38		BG		SC			
80								Silty clay with fine sand, light brownish gray to grayish brown, micaceous, soft to stiff, moist.		

2" ID, Sch. 40 PVC and 8" steel casing

grout

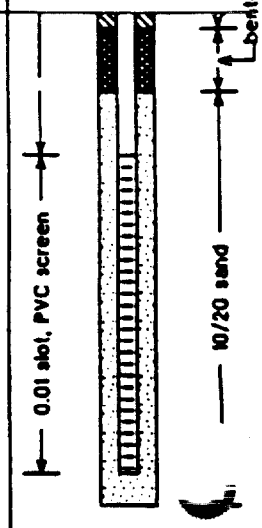
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-6UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 0820 on 2-10-95	TOC Elevation: feet msl
Completed at 1010 on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 101.0 feet
Geologist: Ben Brantley	Well Screen: 84.5 to 94.5 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			39		BG				
			40		BG				
85			41	100	BG				
			42		BG		SC		
			43		BG				
90			44		BG				
			45		BG				
95			46	120	BG			Clay, interbedded very fine sand with silt, becoming more waxy.	
			47		BG		CL		
			48		BG				
100			49	120	BG			End of boring	
105									
110									
115									
120									

WELL DIAGRAM



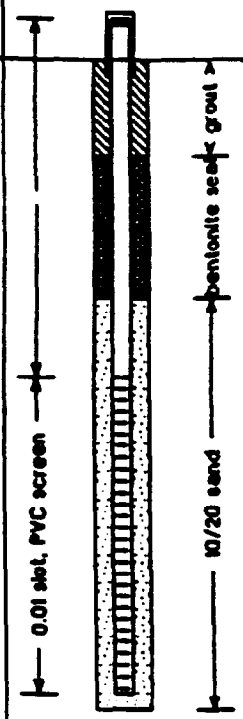
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7S

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1750 on 2-10-95	TOC Elevation: feet msl
Completed at on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 20.0 feet
Geologist: Ben Brantley	Well Screen: 10.0 to 20.0 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate yellowish brown, organics, mottled with yellowish gray silt.	
5			1	125	BG				
10			2	70	BG		ML		
15			3	80	BG			Clayey silt, light olive gray to olive brown, soft, moist.	
20								Log information taken from the boring for the Cockfield well at SWMU#7 site 7.	
25			4	65	BG				
30									
35									
40									

WELL DIAGRAM



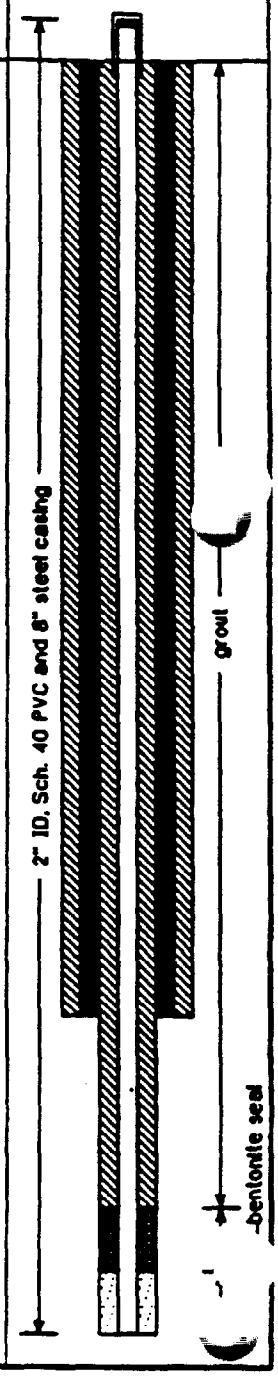
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7UF

Project: NAS Memphis	Location: Millington, TN SWMU7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1750 on 2-10-95	TOC Elevation: feet msl
Completed at on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 50.0 feet
Geologist: Ben Brantley	Well Screen: 40.0 to 50.0 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate yellowish brown, organics, mottled with yellowish gray silt.	
5			1	125	86				
10			2	70	86				
15			3	80	86			Clayey silt, light olive gray to olive brown, soft, moist.	
20							ML		
25			4	85	86				
30								Silty clay, light brown to moderate yellowish brown.	
35			5	90	86				
							SC	Silty sand, moderate yellowish brown to dark yellowish orange, stained reddish brown.	
40							GP	Sand, fine to medium, silty, grayish orange to dark yellowish orange, at 39' there is some gray sand.	

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7UF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1750 on 2-10-95	TOC Elevation: feet msl
Completed at on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 50.0 feet
Geologist: Ben Brantley	Well Screen: 40.0 to 50.0 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
45			6	110	BG		GP			0.01 slot, PVC screen; 10/20 sand
50								Log information taken from the boring for the Cockfield well at SWMU#7 site 7.		
55			7	90	BG					
60										
65										
70										
75										
80										

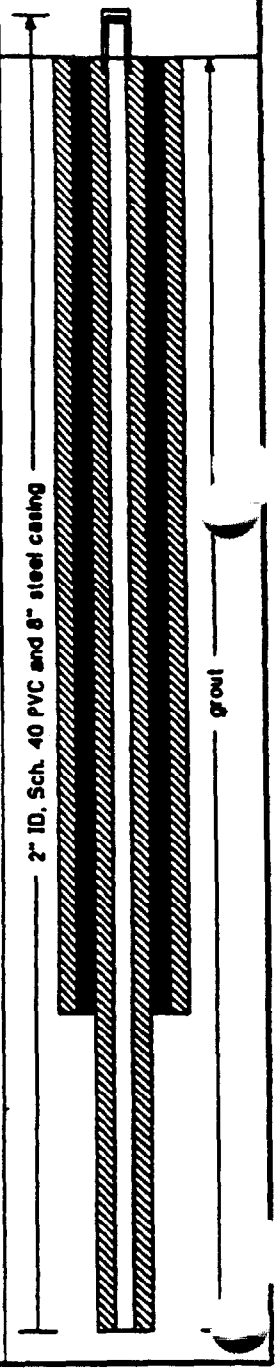
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7LF

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1750 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *77.0 feet*
Geologist: *Ben Brantley*	Well Screen: *68.0 to 78.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate yellowish brown, organics, mottled with yellowish gray silt.	
5			1	125	BG				
10			2	70	BG				
15			3	80	BG			Clayey silt, light olive gray to olive brown, soft, moist.	
							ML		
20									
25			4	65	BG				
								Silty clay, light brown to moderate yellowish brown.	
30									
35			5	90	BG				
							SC	Silty sand, moderate yellowish brown to dark yellowish orange, stained reddish brown.	
40							GP	Sand, fine to medium, silty, grayish orange to dark yellowish orange, at 39' there is some gray sand.	

WELL DIAGRAM



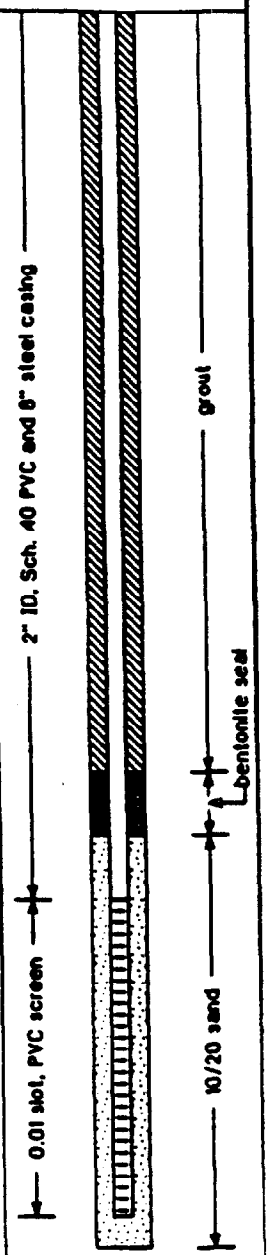
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7LF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-128*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1750 on 2-10-95*	TOC Elevation: *feet msl*
Completed at *on 2-14-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *77.0 feet*
Geologist: *Ben Brantley*	Well Screen: *68.0 to 78.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
45			6	110	BG				
50									
55			7	90	BG				
60							GP	Sand and gravel, fine to very coarse grained, grayish orange to dark yellowish orange.	
65			8	110	BG				
70								Sand with interdisbursed clay, fine to medium grained. Clay is pinkish gray, moist.	
75			9	95	BG				
80								Log information taken from the boring for the Cockfield well at SWMU#7 site 7.	

WELL DIAGRAM



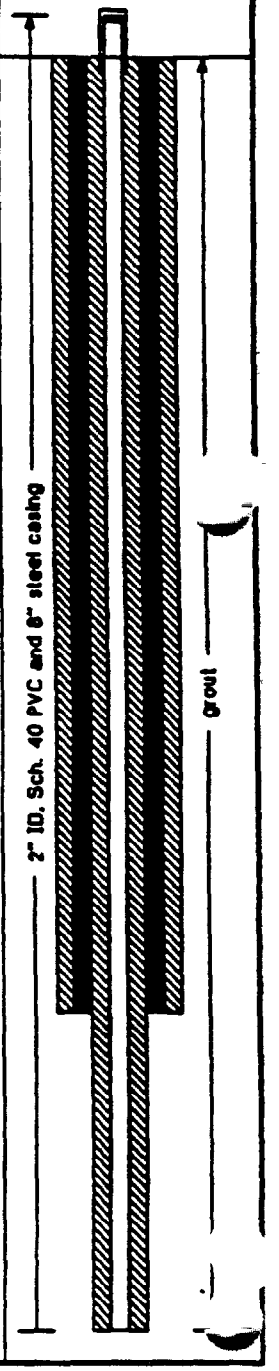
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1750 on 2-10-95	TOC Elevation: feet msl
Completed at on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 105.0 feet
Geologist: Ben Brandley	Well Screen: 92.5 to 102.5 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1		0.4			Clayey silt, moderate yellowish brown, organics, mottled with yellowish gray silt.	
			2		86				
5				125					
			3		86				
			4		86				
10			5	70	86				
			6		86				
			7		86				
15				80				Clayey silt, light olive gray to olive brown, soft, moist.	
			8		86				
			9		86		ML		
20			10		86				
			11		86				
			12		86				
25				65					
			13		86				
			14		86			Silty clay, light brown to moderate yellowish brown.	
30			15		86				
			16		86				
			17		86				
35				90					
			18		86		SC	Silty sand, moderate yellowish brown to dark yellowish orange, stained reddish brown.	
			19		86				
40							GP	Sand, fine to medium, silty, grayish orange to dark yellowish orange, at 39' there is some gray sand.	

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-128
Project No.: N0094	Surface Elevation: feet msl
Started at 1750 on 2-10-95	TOC Elevation: feet msl
Completed at on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 105.0 feet
Geologist: Ben Brantley	Well Screen: 92.5 to 102.5 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			20		BG					
			21		BG					
45			22	110	BG					
			23		BG					
			24		BG					
50			25		BG					
			26		BG					
55			27	90	BG					
			28		BG					
			29		BG		GP			
60			30		BG			Sand and gravel, fine to very coarse grained, grayish orange to dark yellowish orange.		
			31		BG					
65			32	110	BG					
			33		BG					
			34		BG					
70			35		BG			Sand with interdisbursed clay, fine to medium grained. Clay is pinkish gray, moist.		
			36		BG					
75			37	95	BG					
			38		BG					
			39		BG		SC	Sand, interbedded with clay, grayish orange, then becomes silty sand, very fine grained, clay is dark yellowish orange.		
80										

WELL DIAGRAM: 2" ID, Sch. 40 PVC and 8" steel casing; grout

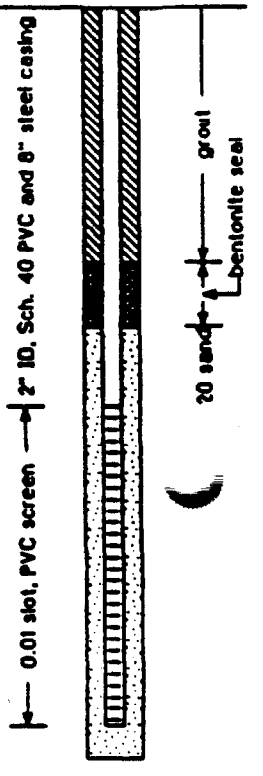
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-7UC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-128
Project No.: N0094	Surface Elevation: feet msl
Started at 1750 on 2-10-95	TOC Elevation: feet msl
Completed at on 2-14-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 105.0 feet
Geologist: Ben Brantley	Well Screen: 92.5 to 102.5 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			40		BG				
			41		BG				
85			42	100	BG			Silty sand, with interbedded clay, very fine sand, dusky yellowish brown clay to moderate brown, mottled with light olive to olive gray sand.	
			43		BG				
			44		BG				
90			45		BG		SC		
			46		BG				
95			47	120	BG				
			48		BG				
			49		BG				
100			50		BG				
			51		BG		CL	Clay, laminations of sand, dusky yellowish brown to moderate brown clay, light olive to olive gray sand, waxy.	
105			52	115	BG			End of boring at 105'.	
110									
115									
120									

WELL DIAGRAM



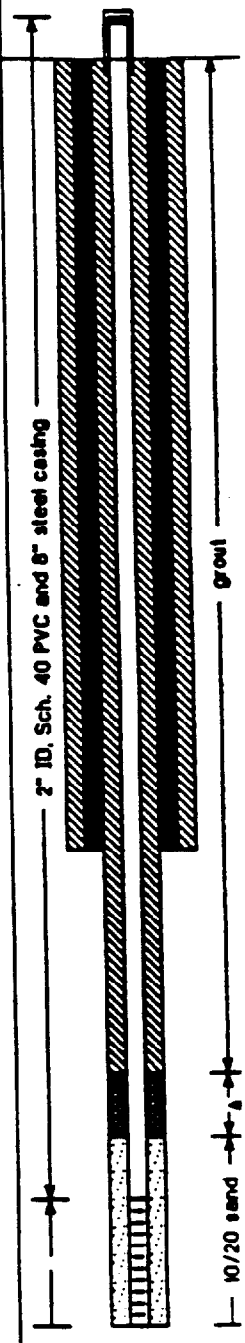
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-8UF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *1210 on 2-24-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *45 feet*
Geologist: *David Ladd*	Well Screen: *36.0 to 46.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, yellowish brown, mottled yellowish gray.	
5			1	140	BG			Clayey silt, moderate brown, moist, soft.	
10			2	98	BG				
15			3	98	BG		ML	Clayey silt, olive gray, medium stiff to soft.	
20								Silt, light olive gray with brown mottling.	
25			4	85	BG			Silt, moderate to light brown, hard.	
30			5	80	BG			Sandy silt, moderate yellowish brown.	
35			6	120	BG		GP	Sand, fine, dark yellowish orange mottled with grayish orange, silty. Sand, pale yellowish brown.	
40									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-8UF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *1210 on 2-24-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *45 feet*
Geologist: *David Ladd*	Well Screen: *36.0 to 46.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
45	X		7	80	BG		GP	Log information taken form the boring for the Cockfield well at SWMU#7 site 8.		10/20 sand
50										
55										
60										
65										
70										
75										
80										

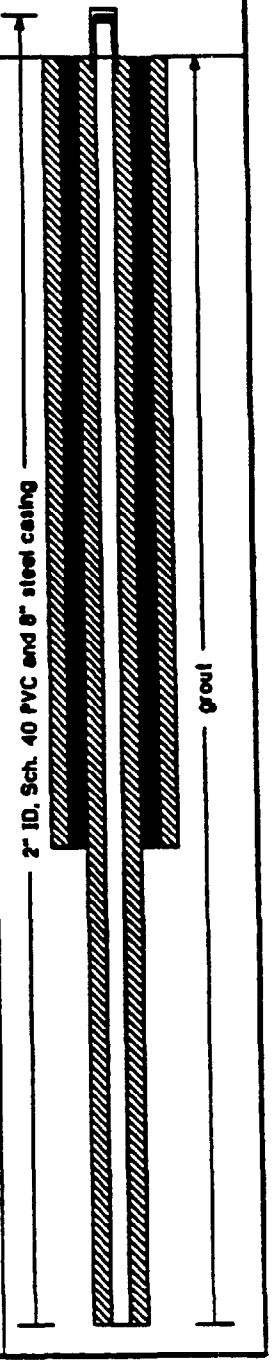
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-8LF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-128
Project No.: N0094	Surface Elevation: feet msl
Started at 0900 on 2-11-95	TOC Elevation: feet msl
Completed at 1210 on 2-24-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 76 feet
Geologist: David Ladd	Well Screen: 68.0 to 78.0 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, yellowish brown, mottled yellowish gray.	
5			1	140	BG			Clayey silt, moderate brown, moist, soft.	
10			2	98	BG				
15			3	98	BG		ML	Clayey silt, olive gray, medium stiff to soft.	
20								Silt, light olive gray with brown mottling.	
25			4	85	BG			Silt, moderate to light brown, hard.	
30			5	80	BG			Sandy silt, moderate yellowish brown.	
35			6	120	BG		GP	Sand, fine, dark yellowish orange mottled with grayish orange, silty. Sand, pale yellowish brown.	
40									

WELL DIAGRAM



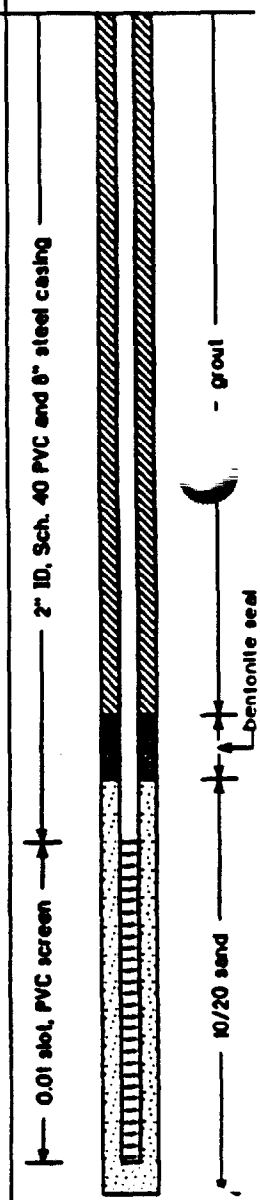
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-8LF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 0900 on 2-11-95	TOC Elevation: feet msl
Completed at 1210 on 2-24-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 78 feet
Geologist: David Ladd	Well Screen: 68.0 to 78.0 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
45			7	80	BG			Sand, fine, grayish orange to dark yellowish orange, wet, scattered gravel.	
50									
55			8	96	BG		GP		
60									
65			9	90	BG			Sand and gravel, fine to very coarse grained, grayish orange to dark yellowish orange, gravel.	
70									
75			10	90	BG				
80								Log information taken form the boring for the Cockfield well at SWMU#7 site 8.	

WELL DIAGRAM



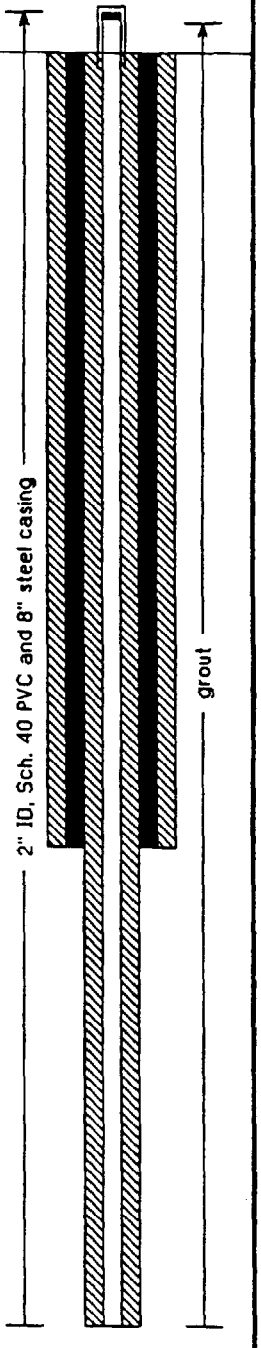
Environmental & Safety Designs, Inc.

Log of Monitoring Well 07-MW-8U

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *1210 on 2-24-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *125 feet*
Geologist: *David Ladd*	Well Screen: *113.5 below grade to 123.5 below grade feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1		BG			Clayey silt, yellowish brown, mottled yellowish gray.	
			2		BG				
5				140	BG			Clayey silt, moderate brown, moist, soft.	
			3		BG				
			4		BG				
10			5	98	BG				
			6		BG				
			7		BG				
15				98					
			8		BG		ML		
			9		BG			Clayey silt, olive gray, medium stiff to soft.	
20			10		BG				
			11		BG			Silt, light olive gray with brown mottling.	
25				85				Silt, moderate to light brown, hard.	
			13		BG				
			14		BG				
30				80					
			15		BG			Sandy silt, moderate yellowish brown.	
			16		BG				
35			17	120	BG			Sand, fine, dark yellowish orange mottled with grayish orange, silty.	
			18		BG		GP	Sand, pale yellowish brown.	
			19		BG				
40									

WELL DIAGRAM



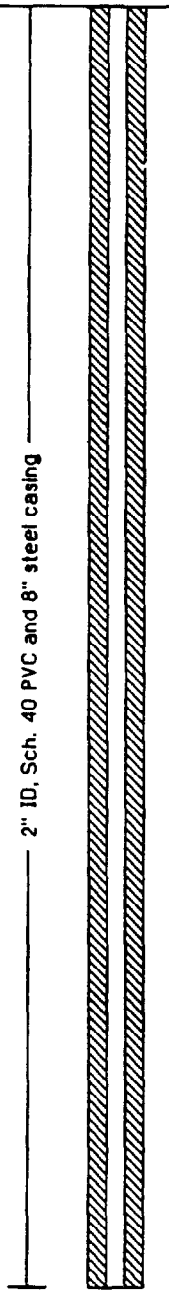
Environmental & Safety Designs, Inc.

Log of Monitoring Well 07-MW-8U

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *1210 on 2-24-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *125 feet*
Geologist: *David Ladd*	Well Screen: *113.5 below grade to 123.5 below grade feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			20		BG				
			21		BG				
45			22	80	BG			Sand, fine, grayish orange to dark yellowish orange, wet, scattered gravel.	
			23		BG				
			24		BG				
50			25		BG				
			26		BG				
55			27	95	BG				
			28		BG				
			29		BG		GP		
60			30		BG				
			31		BG				
65			32	90	BG			Sand and gravel, fine to very coarse grained, grayish orange to dark yellowish orange, gravel.	
			33		BG				
			34		BG				
70			35		BG				
			36		BG				
75			37	90	BG				
			38		BG		SC	Sand, silty, very fine grained, dark yellowish orange mottled with light gray, wet.	
			39		BG				
80									

WELL DIAGRAM



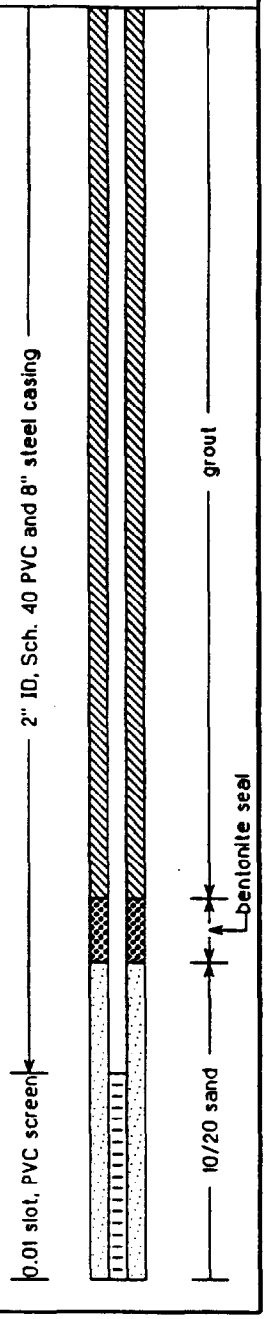
Environmental & Safety Designs, Inc.

Log of Monitoring Well 07-MW-8U

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *1210 on 2-24-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *125 feet*
Geologist: *David Ladd*	Well Screen: *113.5 below grade to 123.5 below grade feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			40		BG				
			41		BG			Sand, silty, very fine grained, dark yellowish orange to very pale orange.	
85			42	85	BG				
			43		BG			Sand, silty, very fine grained, dark yellowish orange mottled with light gray, interbedded with gray clay, wet from 94'-95'.	
			44		BG				
90									
			45		BG				
			46		BG				
95			47	100	BG			Sand with interbedded clay, very fine, dusky brown to moderate brown, mottled with light olive gray, rare marcasite nodules.	
			48		BG				
			49		BG				
100			50		BG		SC		
			51		BG				
105			52	110	BG				
			53		BG				
			54		BG				
110			55		BG				
			56		BG				
115			57	110	BG				
			58		BG				
			59		BG				
120									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Log of Monitoring Well 07-MW-8U

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0900 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *1210 on 2-24-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *125 feet*
Geologist: *David Ladd*	Well Screen: *113.5 below grade to 123.5 below grade feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
	X		60		BG		SC			
	X		61		BG		CL	Clay, laminations of sand, dusky yellowish brown to moderate brown clay, light olive to olive brown sand, waxy.		10/20 sand
125	X		62	105	BG			End of boring at 125'.		
130										
135										
140										
145										
150										
155										
160										

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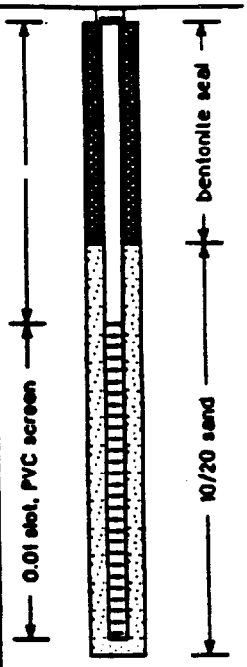
Monitoring Well 07-MW-9S

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1550 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *on 2-25-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.5 feet*
Geologist: *Ben Brantley*	Well Screen: *10 to 20 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown with yellow gray streaks, moist, soft.	
5			1	100	B6				
10			2	70	B6		ML		
15			3	100	B6			Silty clay, reddish brown, stiff and plastic.	
20								Clayey silt, light brown with clay inclusions.	
								Log information taken from the boring for the Cockfield well at SWMU#7 site 9.	
25			4	95	B6				
30									
35									
40									

WELL DIAGRAM



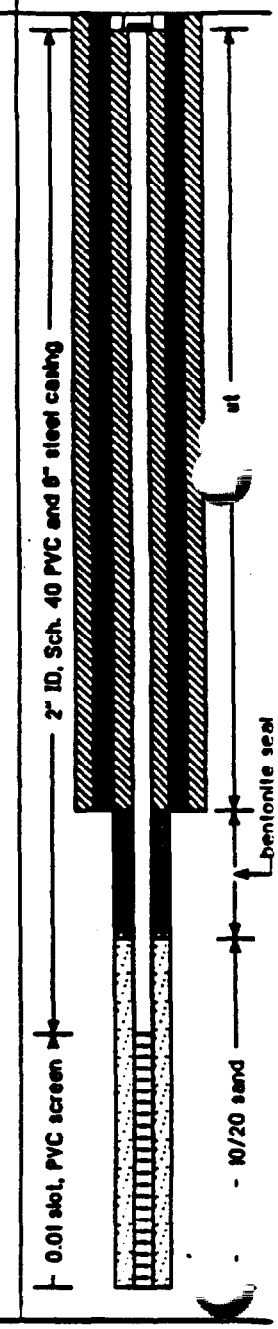
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-9UF

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-128*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1550 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *on 2-25-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *42 feet*
Geologist: *Ben Brantley*	Well Screen: *32 to 42 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown with yellow gray streaks, moist, soft.	
5			1	100	BG				
10			2	70	BG				
15			3	100	BG				
							ML	Silty clay, reddish brown, stiff and plastic.	
20								Clayey silt, light brown with clay inclusions.	
								Silty clay, moderate brown to reddish brown.	
25			4	95	BG				
30									
								Sand, fine, yellow orange to light brown.	
35			5	80	BG		GP		
								Sand, medium, yellowish gray, micaceous.	
40									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-9UF

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1550 on 2-11-95	TOC Elevation: feet msl
Completed at on 2-25-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 42 feet
Geologist: Ben Brantley	Well Screen: 32 to 42 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
	X						GP			
								Log information taken from the boring for the Cockfield well at SWMU#7 site 9.		
45			6	95	BG					
50										
55										
60										
65										
70										
75										
80										

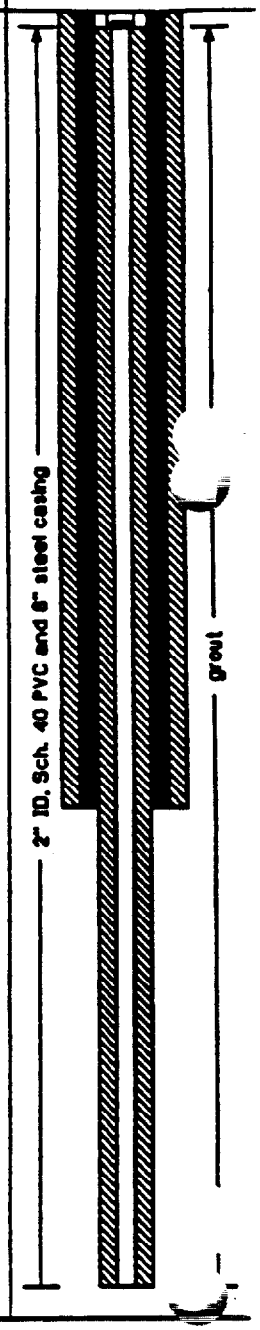
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-9LF

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1550 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *on 2-25-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *77 feet*
Geologist: *Ben Brantley*	Well Screen: *67 to 77 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown with yellow gray streaks, moist, soft.	
5			1	100	BG				
10			2	70	BG				
15			3	100	BG				
							ML	Silty clay, reddish brown, stiff and plastic.	
20								Clayey silt, light brown with clay inclusions.	
								Silty clay, moderate brown to reddish brown.	
25			4	95	BG				
30									
								Sand, fine, yellow orange to light brown.	
35			5	80	BG		GP		
								Sand, medium, yellowish gray, micaceous.	
40									

WELL DIAGRAM



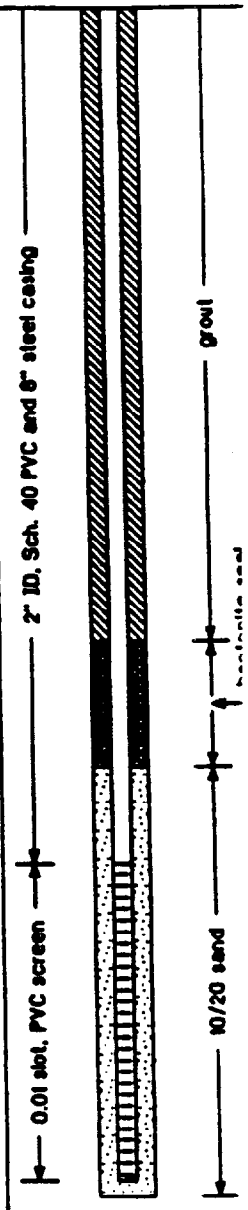
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-9LF

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1550 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *on 2-25-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *77 feet*
Geologist: *Ben Brantley*	Well Screen: *67 to 77 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
45			6	95	86				
50									
55							GP		
60								Sand, Coarse to gravelly, grayish orange to yellowish orange.	
65			7	90	86				
70									
75							SC	Silty sand, very fine, yellowish orange banded with yellowish gray.	
80								Log information taken from the boring for the Cockfield well at SWMU#7 site 9.	

WELL DIAGRAM



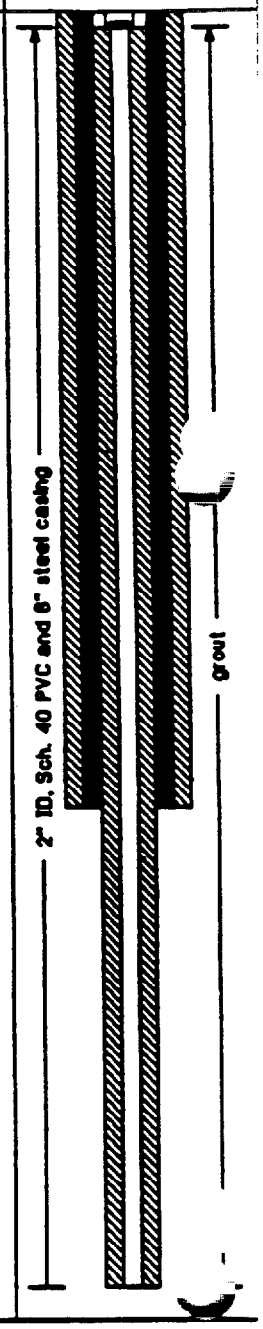
Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-9MC

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1550 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *on 2-25-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *115 feet*
Geologist: *Ben Brantley*	Well Screen: *102 to 112 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Clayey silt, moderate brown with yellow gray streaks, moist, soft.	
			1		BG				
5			2	100	BG				
			3		BG				
			4		BG				
10				70					
			5		BG				
			6		BG				
15			7	100	BG				
			8		BG		ML	Silty clay, reddish brown, stiff and plastic.	
			9		BG				
20			10		BG			Clayey silt, light brown with clay inclusions.	
			11		BG				
25			12	95	BG			Silty clay, moderate brown to reddish brown.	
			13		BG				
			14		BG				
30			15		BG				
			16		BG			Sand, fine, yellow orange to light brown.	
35			17	80	BG				
			18		BG		GP		
			19		BG			Sand, medium, yellowish gray, micaceous.	
40									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 07-MW-9MC

Project: *NAS Memphis*	Location: *Millington, TN SWMU#7 - Building N-126*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1550 on 2-11-95*	TOC Elevation: *feet msl*
Completed at *on 2-25-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *85 feet*
Geologist: *Ben Brantley*	Well Screen: *102 to 112 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
			20		BG					
			21		BG					
45			22	95	BG					
			23		BG					
			24		BG					
50			25		BG					
			26		BG					
55			27		BG					
			28		BG		GP			
			29		BG					
60			30		BG			Sand, Coarse to gravelly, grayish orange to yellowish orange.		
			31		BG					
65			32	90	BG					
			33		BG					
			34		BG					
70			35		BG					
			36		BG					
75			37		BG			Silty sand, very fine, yellowish orange banded with yellowish gray.		
			38		BG		SC			
			39		BG			Clayey silty sand, grayish brown, dusky brown layers of clay with light gray sand.		
80										

WELL DIAGRAM: 2" ID, Sch. 40 PVC and 8" steel casing; grout

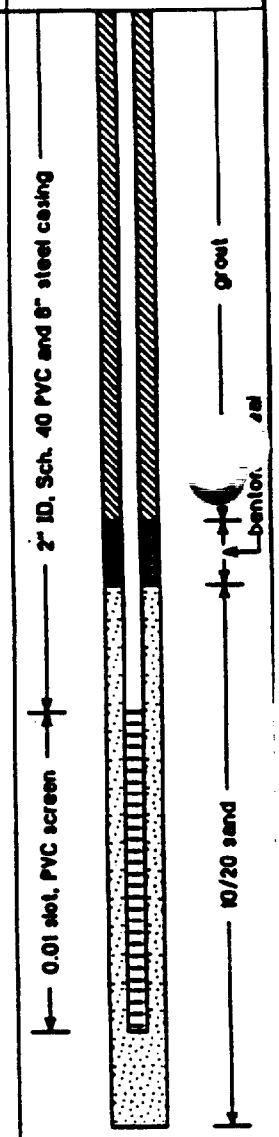
Environmental & Safety Designs, Inc.

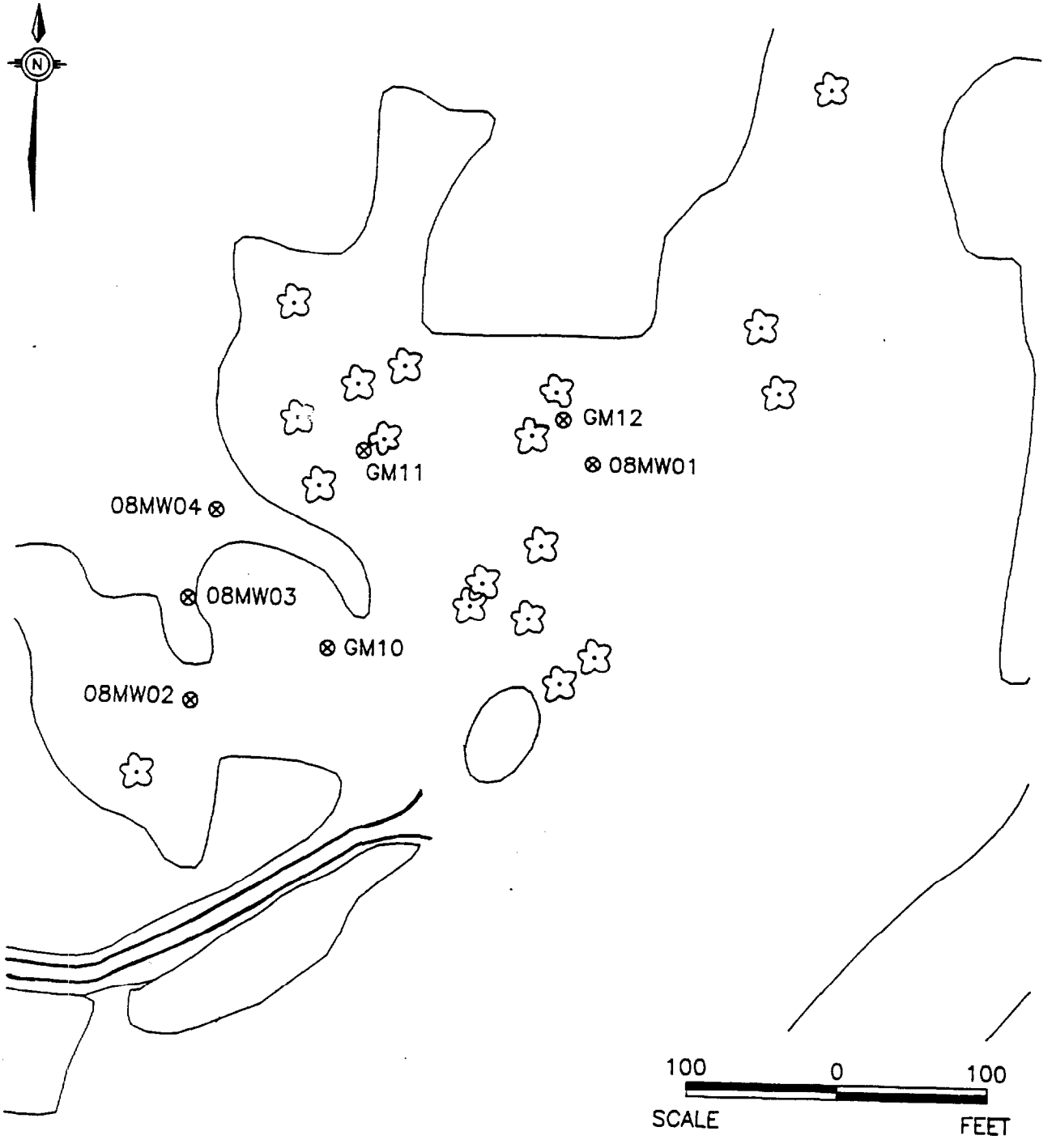
Monitoring Well 07-MW-9MC

Project: NAS Memphis	Location: Millington, TN SWMU#7 - Building N-126
Project No.: N0094	Surface Elevation: feet msl
Started at 1550 on 2-11-95	TOC Elevation: feet msl
Completed at on 2-25-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 115 feet
Geologist: Ben Brantley	Well Screen: 102 to 112 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			40		BG				
			41		BG				
85			42	95	BG				
			43		BG				
			44		BG				
90			45		BG				
			46		BG				
95			47		BG				
			48		BG		SC		
			49		BG				
100			50		BG				
			51		BG				
105			52	90	BG				
			53		BG				
			54		BG				
110			55		BG				
			56		BG		CL	Clay, dusky brown, hard and waxy, with medium gray sand lenses.	
115			57	110	BG			End of boring at 115'.	
120									

WELL DIAGRAM





LEGEND

⊗ EXISTING MONITORING WELL

NAS MEMPHIS
RCRA FACILITY
INVESTIGATION

SITE MAP
SWMU 8
CEMETERY DISPOSAL AREA

DWG DATE: 07/05/95 | DWG NAME: 94CDAS

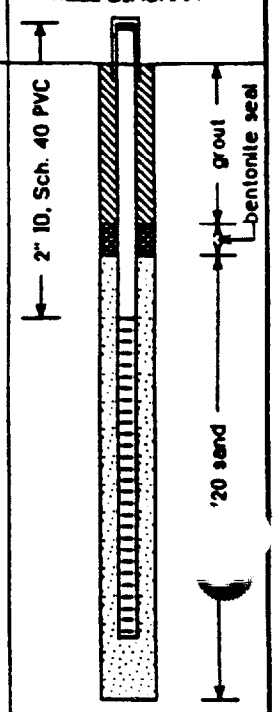
Environmental & Safety Designs, Inc.

Monitoring Well 08-MW-1S

Project: *NAS Memphis*	Location: *Millington, TN SWMU#8 - Cemetary Disposal Area*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *on 2-10-95*	TOC Elevation: *feet msl*
Completed at *on 2-10-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *18.0 (below grade) feet*
Geologist: *William Parks*	Well Screen: *8 to 18 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
5	X		1	50	BG		ML	Silt, yellowish brown, mottled yellowish gray; contains small iron- mangnesium nodules, moist from 12'-15'.	
10	X		2	110	BG				
15	X		3	70	BG			Silt, moderate yellowish brown; contains some gravels from 19'-20'.	
20	X		4	140	BG		GM	End of boring at 20'. Monitoring well closed in place on 3/07/95 due to the absence of groundwater. Well was closed by drilling out the well and grouting up the remaining borehole.	
25									
30									
35									
40									

WELL DIAGRAM



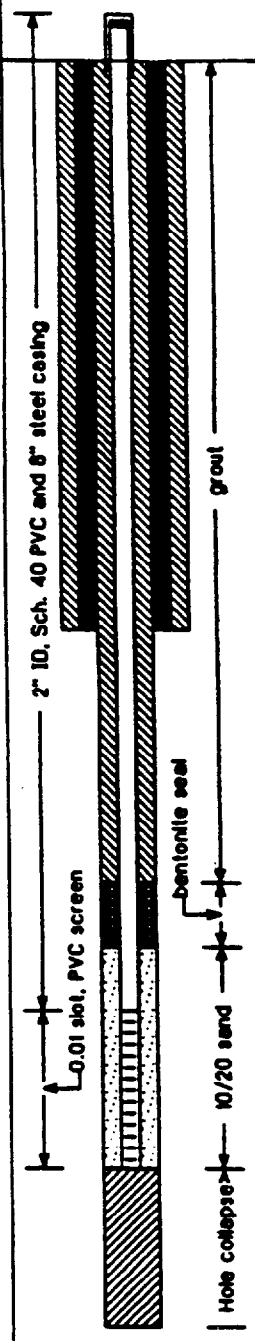
Environmental & Safety Designs, Inc.

Monitoring Well 08-MW-1F

Project: NAS Memphis	Location: Millington, TN SWMU#8-Cemetary Disposal Area
Project No.: N0094	Surface Elevation: feet msl
Started at 1415 on 1-31-95	TOC Elevation: feet msl
Completed at 1515 on 1-31-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 50.0 feet
Geologist: William Parks	Well Screen: 30 to 35 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
5			1	50	BG		ML	Silt, yellowish brown, mottled yellowish gray; contains small iron- anganese nodules, moist from 12'-15'.	
10			2	110	BG				
15			3	70	BG			Silt, moderate yellowish brown; contains some gravels from 19'-20'.	
20			4	140	BG		GM	Sand, silty with gravel; moderate reddish brown to dark yellowish orange, wet.	
25			5	22	BG				
30			6	150	BG			Same as above with gravels increasing in size and slightly less silt and clay.	
35			7	100	BG				
40			8	110	BG				

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 08-MW-1F

Project: NAS Memphis	Location: Millington, TN SWMU8-Cemetary Disposal Area
Project No.: N0094	Surface Elevation: feet msl
Started at 1415 on 1-31-95	TOC Elevation: feet msl
Completed at 1515 on 1-31-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 50.0 feet
Geologist: William Parks	Well Screen: 30 to 35 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
							GM			
							CL	Clay, silty, soft, mottled very pale orange to pale yellowish orange.		
45							GM	Sand, laminated with pale orange to medium reddish orange. At 47'-48' there is a change to dusky yellowish orange fine sand with silt.		Hole collapse
50			9	100	BG			End of boring at 50'.		
55								BG = Background (1.1 ppm)		
60										
65										
70										
75										
80										

Environmental & Safety Designs, Inc.

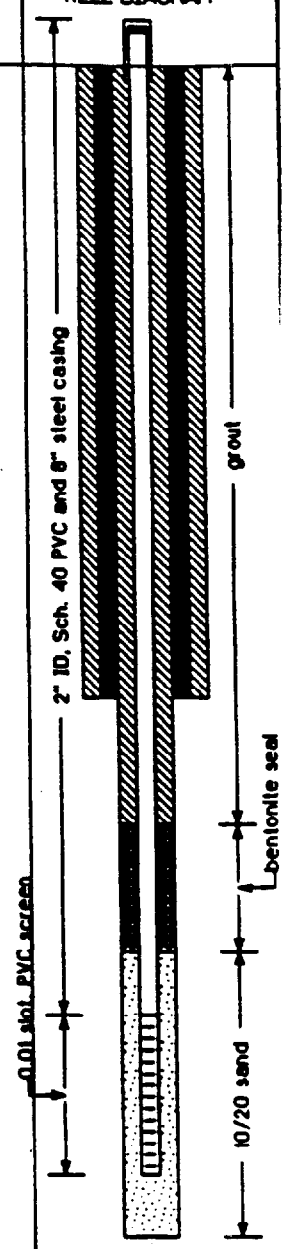
Monitoring Well 08-MW-2F

Project: *NAS Memphis*	Location: *Millington, TN SWMU8-Cemetary Disposal Area*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0845 on 2-01-95*	TOC Elevation: *feet msl*
Completed at *0930 on 2-01-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *37.0 feet*
Geologist: *William Parks*	Well Screen: *30 to 35 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1	75	BG		ML	Silt, yellowish brown streaked w/ yellowish gray, moist at 14'.	
5									
10			2	100	BG				
15			3	100	BG			Silt, yellowish brown to moderate brown. (17'-22')	
20			4	100	BG				
25			5	87.5	BG		GM	Sand, silty with gravel; reddish brown to reddish orange, fine to coarse grained, chert and quartz gravels. (22'-35')	
30			6	100	BG				
35			7	110	BG			Sand, silty with clay and ferrigenous iron nodules; yellowish gray, olive gray, dark yellowish orange.	
40								End of boring at 37'.	

BG = Background (1.1 ppm)

WELL DIAGRAM



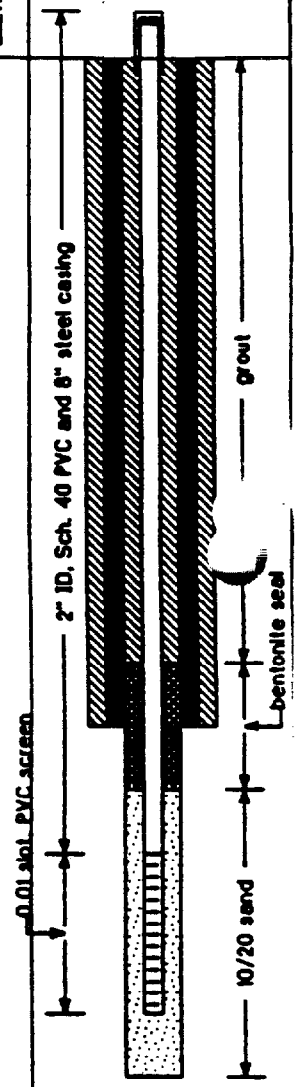
Environmental & Safety Designs, Inc.

Monitoring Well 08-MW-3F

Project: *NAS Memphis*	Location: *Millington, TN. SWMU#8 - Cemetary Disposal Area*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1015 on 2-01-95*	TOC Elevation: *feet msl*
Completed at *1120 on 2-01-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *32.0 feet*
Geologist: *William Parks*	Well Screen: *25 to 30 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1	100	BG		ML	Silt, yellowish brown streaked w/ yellowish gray. Moist at 12'.	
5			2	125	BG				
			3	62.5	BG				
10			4	100	BG				
15			5	100	BG			Silt, yellowish brown to moderate brown. (18'-22')	
20			6	100	BG				
			7	100	BG		GM	Sand, silty with gravels at 24'; yellowish brown, very silty. Sand, fine to coarse, silty with clay, fine, gravel increasing towards the bottom, dark yellowish orange, wet. (25'-30')	
25									
30			8	100	BG			Same as above except there is an increase in clay content with partial cementation. (30'-32')	
			9	100	BG			End of boring at 32'.	
35								BG = Background (1.1 ppm)	
40									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

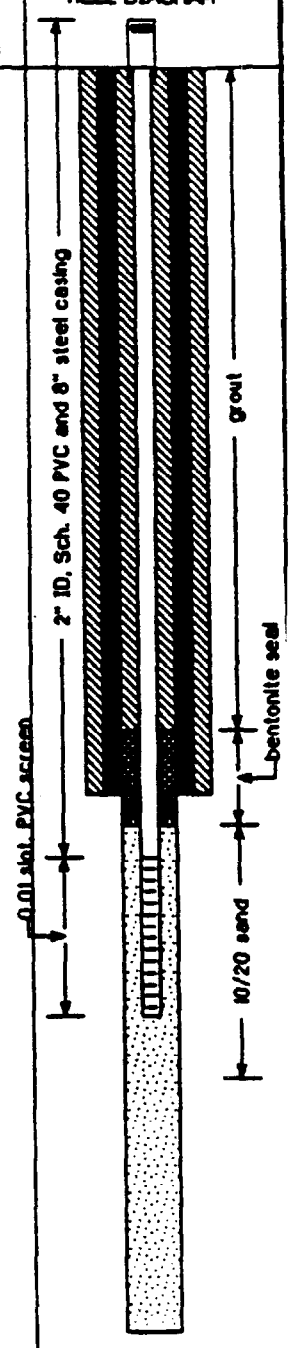
Monitoring Well 08-MW-4F

Project: *NAS Memphis*	Location: *Millington, TN SWMU#8 - Cemetary Disposal Area*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1315 on 2-01-95*	TOC Elevation: *feet msl*
Completed at *1430 on 2-01-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *40.0 feet*
Geologist: *William Parks*	Well Screen: *25 to 30 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	SOIL CLASS	GEOLOGIC DESCRIPTION
			1	100	BG	ML	Silt, yellowish brown streaked w/ yellowish gray. Moist at 12'.
			2	100	BG		
5			3	100	BG		
			4	100	BG		
10			5	125	BG		
15			6	100	BG		Silt, yellowish brown to yellowish gray, mottled.
20			7	100	4.5		Silt, moderate brown.
			8	125	BG		
25			9	100	2.5	GM	Sand, moderate brown to reddish brown, very silty, contains scattered gravel. Sand and gravel, reddish brown to yellowish brown, chert and quartz gravels up to 3" in diameter. (27'-29.5')
30			10	100	BG	ML	Silt, clayey, with iron stones (flat, not gravel), dark yellowish orange, moist. (29.5'-34')
35			11	100	BG	SW	Sand, fine with silt and clay, yellowish gray to grayish orange, moist. (34'-40')
40			12	90	BG		

ELEV. (ft-msl)

WELL DIAGRAM



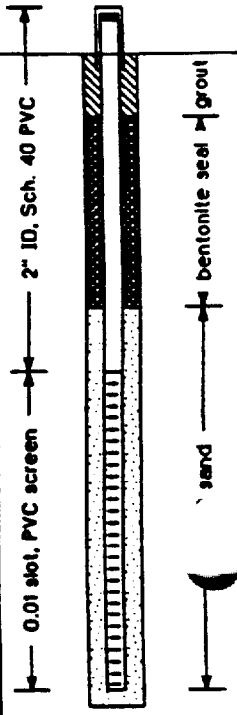
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-1S

Project: *NAS Memphis*	Location: *Millington, TN SWMU 60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *on 1-31-95*	TOC Elevation: *feet msl*
Completed at *on 1-31-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.0 feet*
Geologist: *Ryan Lister*	Well Screen: *10 to 20 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
5	X		1	80	46.8			Silt, pale olive with heavy black staining at 0'-f and 5'-7'.	
10	X		2	80	313		ML	Silt, dark yellowish orange to moderate yellowish brown, has light olive gray silt inclusions and iron streaking.	
15	X		3	100	3.4			Silt, olive gray to medium dark gray with moderate yellowish brown silt inclusions from 15'-20'. Black staining present at 15'-17'. No staining present from 20'-25'.	
20	X		4	85	30.8			Geologic description and collected analytical samples are taken from paired well MW-01-LF.	
25									
30									
35									
40									

WELL DIAGRAM



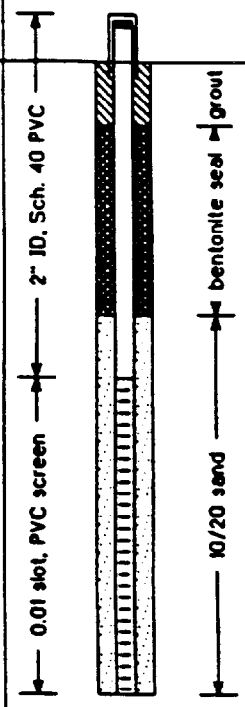
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-2S

Project: NAS Memphis	Location: Millington, TN SWMU#60 - North Landfill
Project No.: N0094	Surface Elevation: feet msl
Started at 0830 on 2-01-95	TOC Elevation: feet msl
Completed at 1015 on 2-01-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 20.0 feet
Geologist: Ryan Lister	Well Screen: 10 to 20 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
5	X		1	70	BG			Silt, moserate yellowish brown with organics. Roots occuring at .5' and 4'. 1" gravel section at 1' stained black.	
10	X		2	90	BG		ML	Silt, moderate yellowish brown , with a greenish gray to light olive gray silt swirled throughout. Staining also at 9.5'.	
15	X		3	100	BG			Silt, olive gray with iron nodules to one quarter of an inch.	
20	X		4	85	BG			End of boring. Total depth of boring at 20'. Analytical and geologic description taken from paired well MW-02-LF. BG = Background	
25									
30									
35									
40									

WELL DIAGRAM



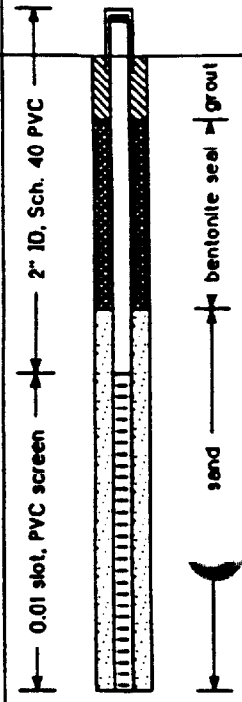
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-3S

Project: NAS Memphis	Location: Millington, TN SWMU#60 - North Landfill
Project No.: N0094	Surface Elevation: feet msl
Started at on 2-01-95	TOC Elevation: feet msl
Completed at on 2-01-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 20.0 feet
Geologist: Ryan Lister	Well Screen: 10 to 20 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silt, moderate yellowish brown with organics, very dry.	
5			1	100	BG				
10			2	80	BG		ML		
								Silt, greenish gray to light gray.	
15			3	100	BG				
20			4	80	BG				
								End of Boring. Boring terminated at 40'. Geologic description and analytical samples taken from MW-03-LF.	
25									
30									
35									
40									

WELL DIAGRAM



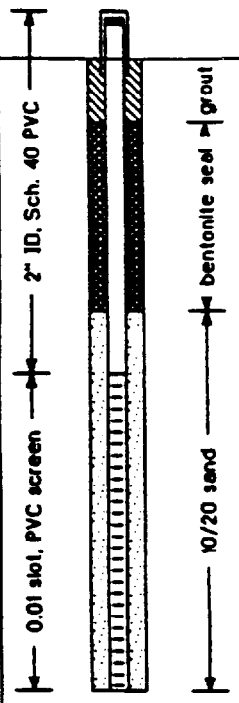
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-4S

Project: *NAS Memphis*	Location: *Millington, TN SWMU60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0915 on 1-31-95*	TOC Elevation: *feet msl*
Completed at *1215 on 1-31-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.0 feet*
Geologist: *Ryan Lister*	Well Screen: *10 to 20 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silt, moderate yellowish brown with organics, very dry.	
5			1	80	BG			Silt, moderate yellowish brown with fewer organics. Wet from 5'-9', but becomes wet at 9'-10'.	
10			2	80	BG		ML		
15			3	100	80.1			Silt, medium light gray, moist down to 20.5 then becoming dry. Some iron staining at 27'.	
20			4		3.4			End of boring at 40'. Geologic description and analytical samples are taken from paired well MW-04-LF.	
25									
30									
35									
40									

WELL DIAGRAM



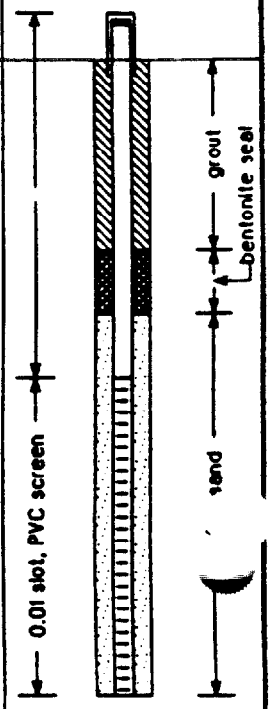
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-5S

Project: *NAS Memphis*	Location: *Millington, TN. SWMU60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0830 on 2-13-95*	TOC Elevation: *feet msl*
Completed at *0900 on 2-13-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.0 feet*
Geologist: *Jack C.*	Well Screen: *10 to 20 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
	X							Fill, dark brown silt with scattered gravel.	
	X							Silt, clayey, soft light olive gray to grayish orange, mottled, dark brown inclusions, moist, finely laminated.	
5	X		1	100	1.4			Silt, clay, greenish gray, mottled dark yellowish orange, laminated, soft, moist.	
	X							Silt, clay, grayish orange mottled yellowish orange, laminated with dark inclusions, soft, moist.	
10	X		2	80	BG		ML		
15	X		3	90	BG			Silt, clayey, pale yellowish brown, becoming stained yellowish orange from 18'-19'.	
20	X		4	80	BG			Silt, clayey, medium gray, massive, moist.	
25								BG = Background (L1 ppm)	
30									
35									
40									

WELL DIAGRAM



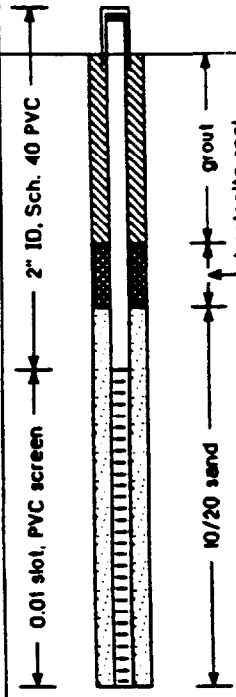
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-6S

Project: *NAS Memphis*	Location: *Millington, TN SWMU60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1020 on 2-13-95*	TOC Elevation: *feet msl*
Completed at *1060 on 2-13-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *10 to 20 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Fill, dark brown silt with scattered gravel.	
								No sample description; poor recovery.	
5			1	40	BG			Silt, clay, moderate yellowish brown to grayish orange, mottled brown, soft, moist.	
10			2	133	BG		ML	Silt, clay, moderate yellowish brown, laminated with dark inclusions, becoming stained dark yellowish orange from 12.5'-13'.	
15			3	130	BG			Silt, clayey, moderate yellowish brown mottled with dark inclusions, finely laminated, soft.	
								Silt, clayey, medium gray, moist, soft.	
20			4	100	BG				
25								BG = Background (1.1 ppm)	
30									
35									
40									

WELL DIAGRAM



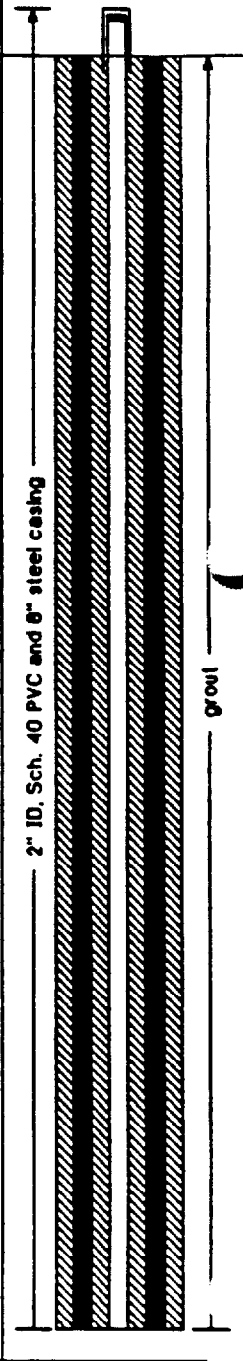
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-1LF

Project: *NAS Memphis*	Location: *Millington TN. SWMU#60 North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0700 on 1-31-95*	TOC Elevation: *feet msl*
Completed at *0845 on 2-02-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *75.0 feet*
Geologist: *David Ladd*	Well Screen: *65 to 75 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silt, pale olive with heavy black staining at 0'-1' and 5'-7'.	
5			1	80	468				
10			2	80	313			Silt, dark yellowish orange to moderate yellowish brown, has light olive gray silt inclusions and iron streaking.	
15			3	100	3.4			Silt, olive gray to medium dark gray with moderate yellowish brown silt inclusions from 15'-20'. Black staining present at 15'-17'. No staining present from 20'-25'.	
20					30.8		ML		
25								Silt, light olive gray to greenish gray, iron staining present (25'-30.5').	
30								Silt, moderate yellowish brown and dry (30.5'-40'). Some light gray silt from 38'-40', but mostly moderate yellowish brown.	
35			4	85	BG				
40			5	100	BG				

WELL DIAGRAM



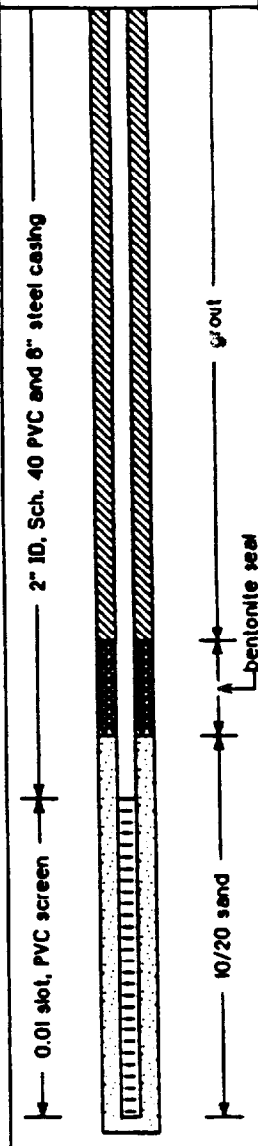
EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-1LF

Project: *NAS Memphis*	Location: *Millington TN. SWMU60 North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0700 on 1-31-95*	TOC Elevation: *feet msl*
Completed at *0845 on 2-02-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *75.0 feet*
Geologist: *David Ladd*	Well Screen: *65 to 75 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							ML	Silt, dark yellowish brown.	
								Gravel and sand, poorly sorted and silty, yellowish gray to dark yellowish orange. Gravel is chert and quartz with chert gavels up to 2.5".	
45									
50								Sand, fine to coarse grained, yellowish gray to dark yellowish orange, contains some scattered gravel.	
55			6	90	BG				
							GP	Sand and gravel, poorly sorted and silty, yellowish gray to dark yellowish orange. Gravel is chert and quartz.	
60									
65			7	90	BG			Gravel and sand, dark yellowish orange to moderate brown, chert and quartz gravel up to 2.5".	
70								Sand and gravel, dark yellowish orange to yellowish orange. Gravel content increasing from 72'-74.5'.	
75			8	110	BG		CL	Clay, moderate gray to brownish gray, waxy, contains some fine sand.	
								End of Boring. Boring terminated at 75.	
								BG = Background	
80									

WELL DIAGRAM



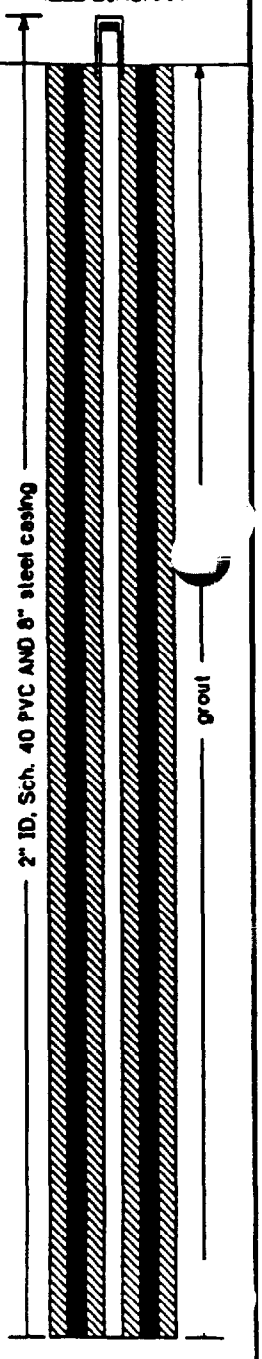
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-2LF

Project: NAS Memphis	Location: Millington TN. SWMU60 - North Landfill
Project No.: N0094	Surface Elevation: feet msl
Started at 1120 on 2-01-95	TOC Elevation: feet msl
Completed at on 2-02-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 95.0 feet
Geologist: Jack C.	Well Screen: 83 to 93 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silt, moderate yellowish brown with organics. Roots occuring at .5' and 4'. 1" gravel section at 1' stained black.	
5			1	70	B6				
10			2	90	B6			Silt, moderate yellowish brown , with a greenish gray to light olive gray silt swirled throughout. Fe staining at 9.5'.	
15			3	100	B6			Silt, olive gray with iron nodules to one quarter of an inch.	
20							ML		
25			4	65	B6			Silt, olive gray to medium light gray, iron nodules present 25'-30'.	
30								Silt, dark yellowish orange with a light olive gray to light gray silt swirled througout.	
35									
40							GP	Silt, light gray, but making a transition to olive gray at 39.5'-40'.	

WELL DIAGRAM



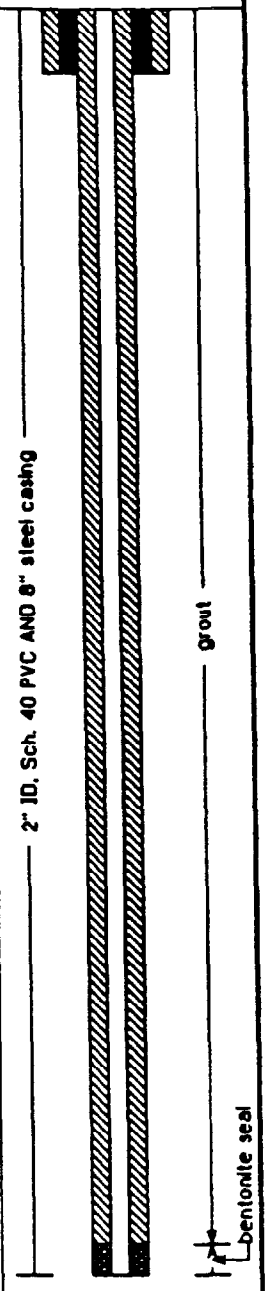
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-2LF

Project: *NAS Memphis*	Location: *Millington TN, SWMU60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1120 on 2-01-95*	TOC Elevation: *feet msl*
Completed at *on 2-02-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *95.0 feet*
Geologist: *Jack C.*	Well Screen: *83 to 93 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Lost core from 40'-43'.	
45	X		5	93	BG			Gravel, sandy but relatively clean, yellowish brown. Chert and quartz gravels up to 2.5" in diameter.	
								Sand and gravel, yellowish gray to yellowish brown, stained yellowish orange near 49'. Sand is fine to very coarse grained, silty.	
50								Sand with some gravel, yellowish gray, fine to very coarse grained, relatively clean.	
55			6	100	BG			Sand and gravel, yellowish gray to yellowish brown, locally stained yellowish orange. Gravel is chert and quartz, sand is fine to very coarse grained.	
60							GP		
65			7	90	BG			Sand with some gravel, dark yellowish orange, fine to coarse grained.	
70									
75			8	90	BG			Gravel and sand, dark yellowish orange to yellowish brown, gravel up to 2.5" in diameter.	
								Sand with some gravel, dark yellowish orange, fine to coarse grained.	
80									

WELL DIAGRAM



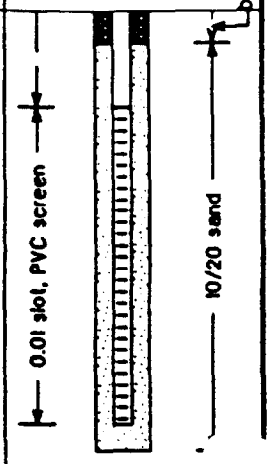
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-2LF

Project: NAS Memphis	Location: Millington TN. SWMU#60 - North Landfill
Project No.: N0094	Surface Elevation: feet msl
Started at 1120 on 2-01-95	TOC Elevation: feet msl
Completed at on 2-02-95	Depth to Groundwater: feet Measured:
Drilling Method: Rotasonic	Groundwater Elevation: feet msl
Drilling Company: North Star Drilling	Total Depth: 95.0 feet
Geologist: Jack C.	Well Screen: 83 to 93 feet

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
85			9	90	BG		GP	Sand coarse with gravel, grayish brown to dark yellowish orange.	
90									
95			10	100	BG		ML	Silt, clayey, grayish brown, laminated, stiff, finely micaceous, dry.	
								End of boring. Boring terminated at 95', but bottom of well will be set at 93'.	
								BG = Background	
100									
105									
110									
115									
120									

WELL DIAGRAM



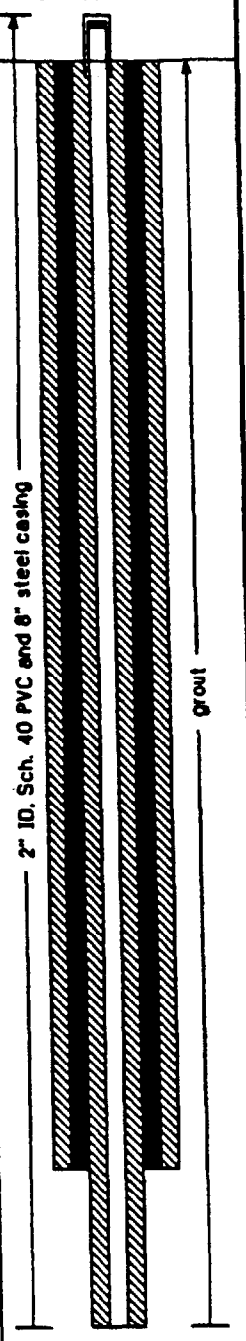
EnSafe Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-3LF

Project: *NAS Memphis*	Location: *Millington TN SWMU60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1330 on 2-01-95*	TOC Elevation: *feet msl*
Completed at *1630 on 2-07-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *95.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *77 to 87 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silt, moderate yellowish brown with organics, very dry.	
5			1	100	BG				
10			2	80	BG				
								Silt, greenish gray to light gray.	
15			3	100	BG				
20			4		BG		GM		
25			5	80	BG			Silt, clayey, greenish gray.	
30			6		BG			Silt, calyey, greenish gray, iron staining and light gray silt swirling.	
								Silt, dark yellowish orange with a light olive gray to light gray silt swirled througout.	
35			7		BG				
								Silt, light olive gray.	
40			8	93	BG				

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-3LF

Project: *NAS Memphis*	Location: *Millington TN. SWMU60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1330 on 2-01-95*	TOC Elevation: *feet msl*
Completed at *1630 on 2-07-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *95.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *77 to 87 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
45	X		9	70	BG		GM	Alternating sand with gravel, silty, trace clay, some intervals of real clean gravel up to one half of an inch, dark yellowish orange to grayish orange, wet.		2" ID, Sch. 40 PVC and 8" steel casing; grout; bentonite seal; 20 sand
50	X		10		BG			Silt, clayey, pale yellowish brown, moist, from 49'-55' there are alternating layers of sandy gravel which are pinkish gray to dark yellowish orange. There is a super saturated interval from 49'-50.5'.		
55	X		11	100	BG			Sand, fine to coarse with gravel, very pale to dark yellowish orange, wet.		
60	X		12		BG					
65	X		13	100	BG			Sand, fine to coarse, trace silt, gravelly, gravel increasing in size and number between 70'-75'. Color is dark yellowish orange, wet.		
70	X		14		BG					
75	X		15	95	BG		SP	Same as above except a much cleaner sand, less gravel.		
80	X		16		BG					

Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-3LF

Project: *NAS Memphis*	Location: *Millington TN. SWMU#60 - North Landfill*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1330 on 2-01-95*	TOC Elevation: *feet msl*
Completed at *1630 on 2-07-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *95.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *77 to 87 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
85			17	95	BG		SP			0.01 slot, PVC screen; 10/20 sand; backfill
90			18		BG		CL	Silt, clayey, grayish brown, stiff, mottled with laminations towards the end of the run.		
95			11	110	BG			End of Boring. Boring terminated at 95'.		
100										
105										
110										
115										
120										

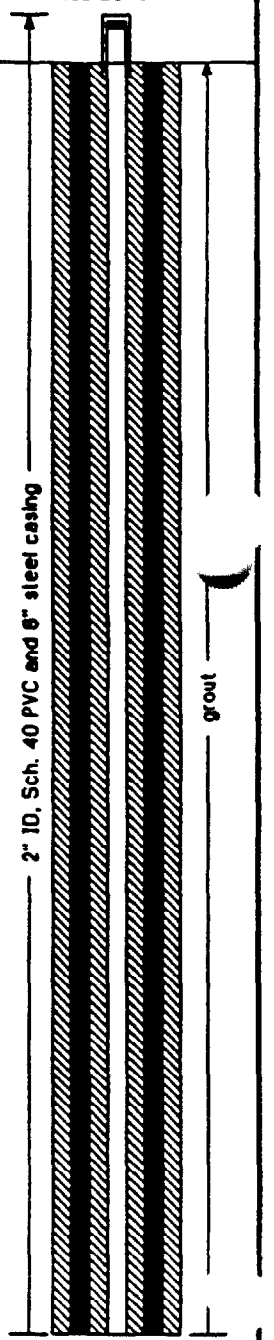
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-4LF

Project: *NAS Memphis*	Location: *Memphis, TN*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0915 on 1-31-95*	TOC Elevation: *feet msl*
Completed at *1215 on 2-08-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *98.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *86 to 96 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silt, moderate yellowish brown with organics, very dry.	
5			1	80	BG			Silt, moderate yellowish brown with fewer organics. Wet from 5'-9', but becomes wet at 9'-10', moist.	
10			2	80	BG				
15			3	100	80.1			Silt, medium light gray, moist down to 20.5 then becoming dry. Some iron staining at 27'.	
20			4		3.4		ML		
25			4	90	BG				
30			5		2.9				
								Silt, moderate yellowish brown dry to slightly moist.	
35			6		60.2				
40			7	87	BG				

WELL DIAGRAM



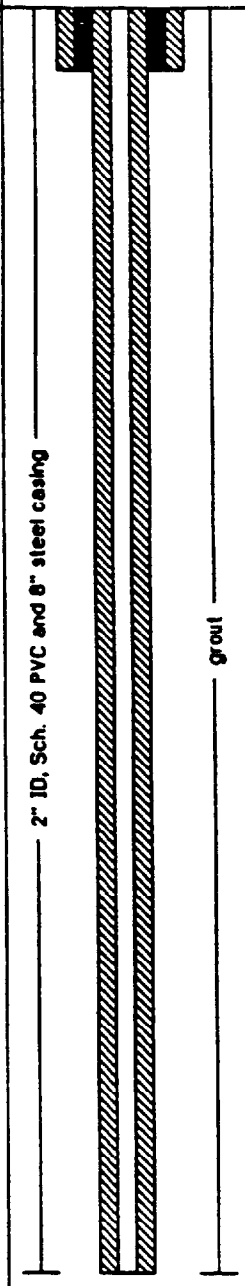
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-4LF

Project: *NAS Memphis*	Location: *Memphis, TN*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0915 on 1-31-95*	TOC Elevation: *feet msl*
Completed at *1215 on 2-08-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *96.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *86 to 96 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							ML		
45			8		BG			Sand, gravelly, silty with clayey gravel seam at 51.5'-52'. Grayish brown to dark yellowish orange, wet.	
50			9		BG				
55			10	90	BG			Sand, gravelly, and silty. Color change from 55'-58' turning pinkish green, then becoming dark yellowish orange at 58'-65', wet.	
60			11		BG		GM		
65			12	95	BG				
70			13		BG			Gravel starting to increase and color starting to change to yellowish orange.	
75			8	90	BG				
80			9	100	BG			Gavel increasing still and color changing to grayish orange.	

WELL DIAGRAM



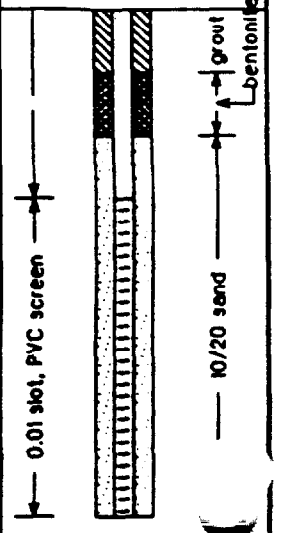
Environmental & Safety Designs, Inc.

Monitoring Well 60-MW-4LF

Project: *NAS Memphis*	Location: *Memphis, TN*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *0915 on 1-31-95*	TOC Elevation: *feet msl*
Completed at *1215 on 2-08-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *96.0 feet*
Geologist: *Jack Carmichael*	Well Screen: *86 to 96 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Sand, gravelly with silt, gravel up to 2" in diameter towards the bottom. Color is dark yellowish orange and section is wet.	
85									
			10	87.5	BG		GM	Gravel, sandy, silty with small amounts of clay. Cobbles up to 3" in diameter, very dark yellowish orange, wet.	
90									
95			11	112.5	BG			Silty, upper 2" is reddish brown stained, lower 3"-4" laminated pale brown, moist.	
								End of boring at 96'.	
								BG = Background (L1 ppm)	
100									
105									
110									
115									
120									

WELL DIAGRAM



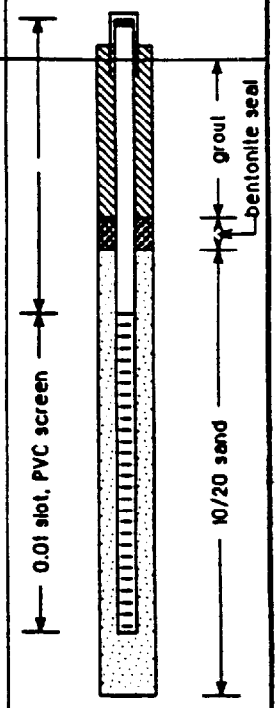
Environmental & Safety Designs, Inc.

Monitoring Well BG-05-S

Project: *NAS Memphis*	Location: *Millington, TN Background Site #5*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1440 on 1-12-95*	TOC Elevation: *feet msl*
Completed at *1540 on 1-12-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *20.0 feet*
Geologist: *Jack Carmichael and William Parks*	Well Screen: *8 to 18 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			1	75	BG		ML	Silty loam with roots.	
5								Silt, clayey, yellowish brown to yellowish gray, with orange brown mottling, moist, plastic.	
10			2	75	BG				
15								Silt, clayey, medium gray, massive, moist.	
20			3	125	BG			Log information taken from the boring for the lower fluvial at BG-5.	
25									
30									
35									
40									

WELL DIAGRAM



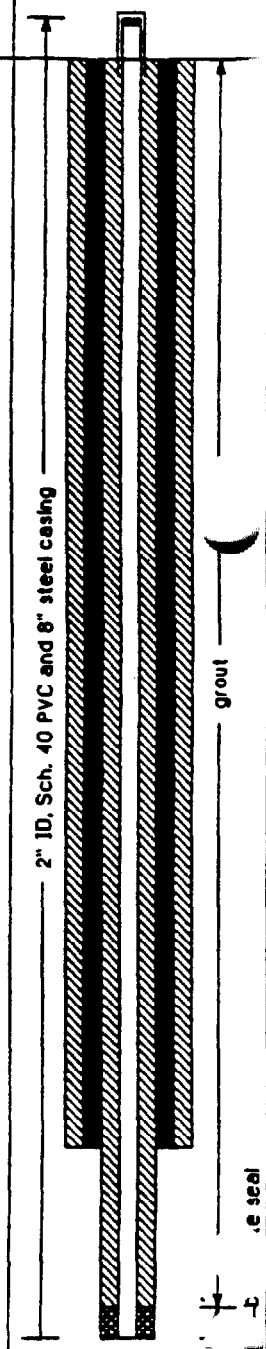
Environmental & Safety Designs, Inc.

Monitoring Well BG-05-UF

Project: *NAS Memphis*	Location: *Millington, TN. Background Site #5*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1440 on 1-12-95*	TOC Elevation: *feet msl*
Completed at *1540 on 1-12-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *53.0 feet*
Geologist: *Jack Carmichael and William Parks*	Well Screen: *43.0 to 53.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silty loam with roots.	
			1	75	BG			Silt, clayey, yellowish brown to yellowish gray, with orange brown mottling, moist, plastic.	
5									
10			2	75	BG				
15									
							ML	Silt, clayey, medium gray, massive, moist.	
20			3	125	BG				
								Silt, clayey, medium gray to blue gray with orange brown mottling.	
25									
30									
			4	105	BG			Silt, clayey, light brown gray to orangish brown, mottled, gravel.	
35									
							GP	Sand, silty and clayey, moderate brown to brownish orange, trace gravel.	
40									

WELL DIAGRAM



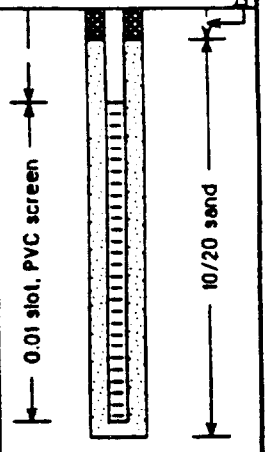
Environmental & Safety Designs, Inc.

Monitoring Well BG-05-UF

Project: *NAS Memphis*	Location: *Millington, TN Background Site #5*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1440 on 1-12-95*	TOC Elevation: *feet msl*
Completed at *1540 on 1-12-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *53.0 feet*
Geologist: *Jack Carmichael and William Parks*	Well Screen: *43.0 to 53.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			5	108	BG		GP	Sand, silty and gravelly, brownish gray to orangish brown, moist. Sand, fine to coarse grained with gravel, yellowish gray to grayish orange.	
45									
50									
55			6	100	BG			Log information taken from the boring for the lower fluvial at BG-5.	
60									
65									
70									
75									
80									

WELL DIAGRAM



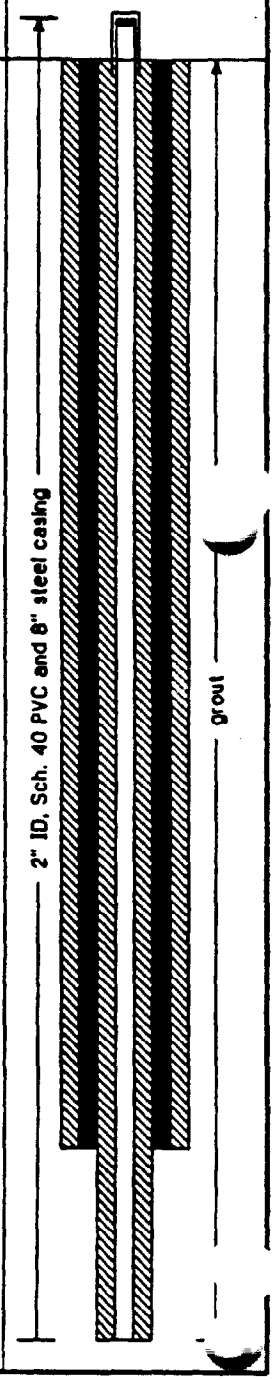
Environmental & Safety Designs, Inc.

Monitoring Well BG-05-LF

Project: *NAS Memphis*	Location: *Millington, TN. Background Site #5*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1440 on 1-12-95*	TOC Elevation: *feet msl*
Completed at *1540 on 1-12-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *86.0 feet*
Geologist: *Jack Carmichael and William Parks*	Well Screen: *66.0 to 76.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Silty loam with roots.	
			1	75	BG			Silt, clayey, yellowish brown to yellowish gray, with orange brown mottling, moist, plastic.	
5									
10			2	75	BG				
15							ML	Silt, clayey, medium gray, massive, moist.	
20			3	125	BG				
								Silt, clayey, medium gray to blue gray with orange brown mottling.	
25									
30			4	105	BG			Silt, clayey, light brown gray to orangish brown, mottled, gravel.	
35									
40							GP	Sand, silty and clayey, moderate brown to brownish orange, trace gravel.	

WELL DIAGRAM



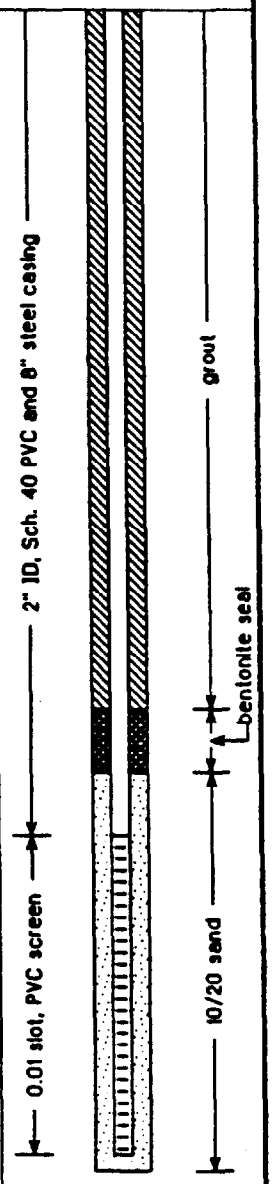
Environmental & Safety Designs, Inc.

Monitoring Well BG-05-LF

Project: *NAS Memphis*	Location: *Millington, TN. Background Site #5*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1440 on 1-12-95*	TOC Elevation: *feet msl*
Completed at *1540 on 1-12-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *86.0 feet*
Geologist: *Jack Carmichael and William Parks*	Well Screen: *66.0 to 76.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
			5	108	BG		GP	Sand, silty and gravelly, brownish gray to orangish brown, moist.	
45								Sand, fine to coarse grained with gravel, yellowish gray to grayish orange.	
50									
55			6	100	BG				
60									
65			7	90	BG				
70									
75			8	110	BG		SC	Sand, very fine, silty, yellowish gray to yellowish orange, occassional clay casts, very wet.	
80									

WELL DIAGRAM



Environmental & Safety Designs, Inc.

Monitoring Well BG-05-LF

Project: *NAS Memphis*	Location: *Millington, TN. Background Site #5*
Project No.: *N0094*	Surface Elevation: *feet msl*
Started at *1440 on 1-12-95*	TOC Elevation: *feet msl*
Completed at *1540 on 1-12-95*	Depth to Groundwater: *feet* Measured:
Drilling Method: *Rotasonic*	Groundwater Elevation: *feet msl*
Drilling Company: *North Star Drilling*	Total Depth: *86.0 feet*
Geologist: *Jack Carmichael and William Parks*	Well Screen: *86.0 to 76.0 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	% RECOVERY	PID (ppm)	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)	WELL DIAGRAM
85			9	90	86		SC			
								End of boring at 86'.		
90										
95										
100										
105										
110										
115										
120										

TRI STATE
TESTING SERVICES, INC.

Measurement of Hydraulic Conductivity

Client: EnSafe/Allen & Hoshall

Date of Report: 03/17/95 Project No.: E-2-837

Project Name: NAS Memphis, Tennessee

Sample I.D.: 007S000177

Soil Description: Yellow & light Gray Silt with fine sand

	Pre-Test	Post Test
Wet Density (Lbs/ft^3)	118.6	120.8
Dry Density (Lbs/ft^3)	101.0	101.9
Moisture (% Dry Wt)	17.4	18.6
Porosity (n)	.397	.383
Degree of Saturation (%)	.97	1.0

Permeability

Temperature Correction, R_t = 1.048

$K_1 = 6.7 \times 10^{-5}$ cm/sec
$K_2 = 6.4 \times 10^{-5}$ cm/sec
$K_3 = 6.8 \times 10^{-5}$ cm/sec
$K_4 = 6.2 \times 10^{-5}$ cm/sec

Coefficient of Permeability, $K_{20} = 6.8 \times 10^{-5}$ cm/sec

Tested in accordance with Method 9100 of Test Methods for evaluation Solid Waste, Third Addition (SW-846) and in general accordance with ASTM D-5084-90.

Lab No. P-95-0019 Reviewed By: David D. McCray

6756 B[illegible] C[illegible] E MEMPHIS, TN 38133 901-385-1199 FAX 901-386-6614

TESTING SERVICES, INC.

Measurement of Hydraulic Conductivity

Client: EnSafe/Allen & Hoshall

Date of Report: 03/17/95 Project No.: E-2-837

Project Name: NAS Memphis, Tennessee

Sample I.D.: 07S0001112

Soil Description: Dark Brown Clay with Silt & fine sand lenses running horizontal

	Pre-Test	Post Test
Wet Density (Lbs/ft^3)	105.6	108.0
Dry Density (Lbs/ft^3)	80.2	78.6
Moisture (% Dry Wt)	31.7	37.4
Porosity (n)	.506	.516
Degree of Saturation (%)	.96	1.0

Permeability

Temperature Correction, R_t = 1.043

$K_1 = 3.7 \times 10^{-8}$ cm/sec
$K_2 = 4.2 \times 10^{-8}$ cm/sec
$K_3 = 3.9 \times 10^{-8}$ cm/sec
$K_4 = 3.9 \times 10^{-8}$ cm/sec

Coefficient of Permeability, $K_{20} = 4.1 \times 10^{-8}$ cm/sec

Tested in accordance with Method 9100 of Test Methods for evaluation Solid Waste, Third Addition (SW-846) and in general accordance with ASTM D-5084-90.

Lab No. P-95-0018 Reviewed By: David D. McCray

6755 B[illegible] C[illegible] Memphis, TN 38133 901-385-1199 FAX 901-386-6614

TRI STATE
TESTING SERVICES, INC.

Measurement of Hydraulic Conductivity

Client: EnSafe/Allen & Hoshall

Date of Report: 03/13/95 Project No.: E-2-837

Project Name: NAS Memphis, Tennessee

Sample I.D.: 007S0003117

Soil Description: Dark Brown Clay with Silt & fine sand lenses running horizontal

	Pre-Test	Post Test
Wet Density (Lbs/ft^3)	98.0	103.2
Dry Density (Lbs/ft^3)	75.3	73.8
Moisture (% Dry Wt)	30.1	39.9
Porosity (n)	.544	.554
Degree of Saturation (%)	.67	.95

Permeability

Temperature Correction, R_t = 1.086

$K_1 = 1.4 \times 10^{-8}$ cm/sec
$K_2 = 1.4 \times 10^{-8}$ cm/sec
$K_3 = 1.7 \times 10^{-8}$ cm/sec
$K_4 = 1.3 \times 10^{-8}$ cm/sec

Coefficient of Permeability, $K_{20} = 1.6 \times 10^{-8}$ cm/sec

Tested in accordance with Method 9100 of Test Methods for evaluation Solid Waste, Third Addition (SW-846) and in general accordance with ASTM D-5084-90.

Lab No. P-95-0014 Reviewed By: David D. McCray

6756 B[illegible] Cove Memphis, TN 38133 901-385-1199 FAX 901-386-6614

TRI STATE
TESTING SERVICES, INC.

Measurement of Hydraulic Conductivity

Client: EnSafe/Allen & Hoshall

Date of Report: 03/17/95 Project No.: E-2-837

Project Name: NAS Memphis, Tennessee

Sample I.D.: 07S0008127

Soil Description: Dark Brown Clay with Silt & fine sand lenses

	Pre-Test	Post Test
Wet Density (Lbs/ft^3)	104.9	109.7
Dry Density (Lbs/ft^3)	81.1	82.0
Moisture (% Dry Wt)	29.3	33.7
Porosity (n)	.497	.504
Degree of Saturation (%)	.91	1.0

Permeability

Temperature Correction, R_t = 1.053

$K_1 = 8.7 \times 10^{-7}$ cm/sec
$K_2 = 7.6 \times 10^{-7}$ cm/sec
$K_3 = 8.4 \times 10^{-7}$ cm/sec
$K_4 = 8.5 \times 10^{-7}$ cm/sec

Coefficient of Permeability, $K_{20} = 8.7 \times 10^{-7}$ cm/sec

Tested in accordance with Method 9100 of Test Methods for evaluation Solid Waste, Third Addition (SW-846) and in general accordance with ASTM D-5084-90.

Lab No. P-95-0017 Reviewed By: David D. McCray

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TRI STATE
TESTING SERVICES, INC.

Measurement of Hydraulic Conductivity

Client: EnSafe/Allen & Hoshall

Date of Report: 03/13/95 Project No.: E-2-837

Project Name: NAS Memphis, Tennessee

Sample I.D.: 007S000922

Soil Description: Brown Silty Clay

	Pre-Test	Post Test
Wet Density (Lbs/ft^3)	119.9	121.1
Dry Density (Lbs/ft^3)	94.0	95.4
Moisture (% Dry Wt)	27.5	26.9
Porosity (n)	.430	.420
Degree of Saturation (%)	.963	.980

Permeability

Temperature Correction, $R_t = 1.056$

$K_1 = 6.9 \times 10^{-7}$ cm/sec
$K_2 = 1.0 \times 10^{-6}$ cm/sec
$K_3 = 9.7 \times 10^{-7}$ cm/sec
$K_4 = 9.2 \times 10^{-7}$ cm/sec

Coefficient of Permeability, $K_{20} = 9.5 \times 10^{-7}$ cm/sec

Tested in accordance with Method 9100 of Test Methods for evaluation Solid Waste, Third Addition (SW-846) and in general accordance with ASTM D-5084-90.

Lab No. P-95-0016 Reviewed By: David D. McCray

6756 B[illegible] Cole Memphis, TN 38133 901-385-1199 Fax 901-386-6614

TRI STATE
TESTING SERVICES, INC.

Measurement of Hydraulic Conductivity

Client: EnSafe/Allen & Hoshall

Date of Report: 03/13/95 Project No.: E-2-837

Project Name: NAS Memphis, Tennessee

Sample I.D.: 008MW025

Soil Description: Dark Brown Silty Clay

	Pre-Test	Post Test
Wet Density (Lbs/ft^3)	126.0	128.4
Dry Density (Lbs/ft^3)	100.1	101.8
Moisture (% Dry Wt)	25.9	26.1
Porosity (n)	.396	.384
Degree of Saturation (%)	1.0	1.0

Permeability

Temperature Correction, R_t = 1.086

$K_1 = 5.9 \times 10^{-7}$ cm/sec
$K_2 = 1.6 \times 10^{-7}$ cm/sec
$K_3 = 1.6 \times 10^{-7}$ cm/sec
$K_4 = 2.0 \times 10^{-7}$ cm/sec

Coefficient of Permeability, $K_{20} = 3.0 \times 10^{-8}$ cm/sec

Tested in accordance with Method 9100 of Test Methods for evaluation Solid Waste, Third Addition (SW-846) and in general accordance with ASTM D-5084-90.

Lab No. P-95-0015 Reviewed By: David D. McCray

Memphis, TN 38133 901-385-1199 FAX 901-386-6614

STATE
TESTING SERVICES, INC.

Measurement of Hydraulic Conductivity

Client: EnSafe/Allen & Hoshall

Date of Report: 02/27/95 Project No.: E-2-837

Project Name: NAS Memphis, Tennessee

Sample I.D.: 0600S0003022

Soil Description: Gray Silty Clay

	Pre-Test	Post Test
Wet Density (Lbs/ft^3)	127.1	124.6
Dry Density (Lbs/ft^3)	104.9	100.6
Moisture (% Dry Wt)	21.2	23.8
Porosity (n)	.366	.361
Degree of Saturation (%)	.97	.99

Permeability

Temperature Correction, R_t = 1.043

$K_1 = 2.2 \times 10^{-7}$ cm/sec
$K_2 = 1.0 \times 10^{-7}$ cm/sec
$K_3 = 1.7 \times 10^{-7}$ cm/sec
$K_4 = 1.6 \times 10^{-7}$ cm/sec

Coefficient of Permeability, $K_{20} = 1.7 \times 10^{-7}$ cm/sec

Tested in accordance with Method 9100 of Test Methods for evaluation Solid Waste, Third Addition (SW-846) and in general accordance with ASTM D-5084-90.

Lab No. P-95-0011 Reviewed By: David D. McCray

6756 B[illegible] Cove Memphis, TN 38133 901-385-1199 FAX 901-386-6614

TRI STATE
TESTING SERVICES, INC.

Report of Laboratory Analysis

EnSafe/Allen & Hoshall
5720 Summer Trees Drive, Suite 8
Memphis, Tennessee 38134

Project No.: E-2-837
Date: 13 March '95
Sheet 1 of 1

Project: NAVY CLEAN Memphis, Tennessee

Sample Identification	007S0003117	008MW025	007S000922
Percent Moisture (as received)	30.1%	25.9%	27.5%
Bulk Density Wet (as received) LBS/ft^3	98.0	126.0	119.9
Bulk Density Dry (as received) LBS/ft^3	75.3	100.1	94.0
Specific Gravity	2.65	2.64	2.64

Reviewed by: David D. McCray

6756 B[illegible] Cove Memphis, TN 38133 901-385-1199 FAX 901-386-6614

TRI STATE
TESTING SERVICES, INC.

Report of Laboratory Analysis

EnSafe/Allen & Hoshall
5720 Summer Trees Drive, Suite 8
Memphis, Tennessee 38134

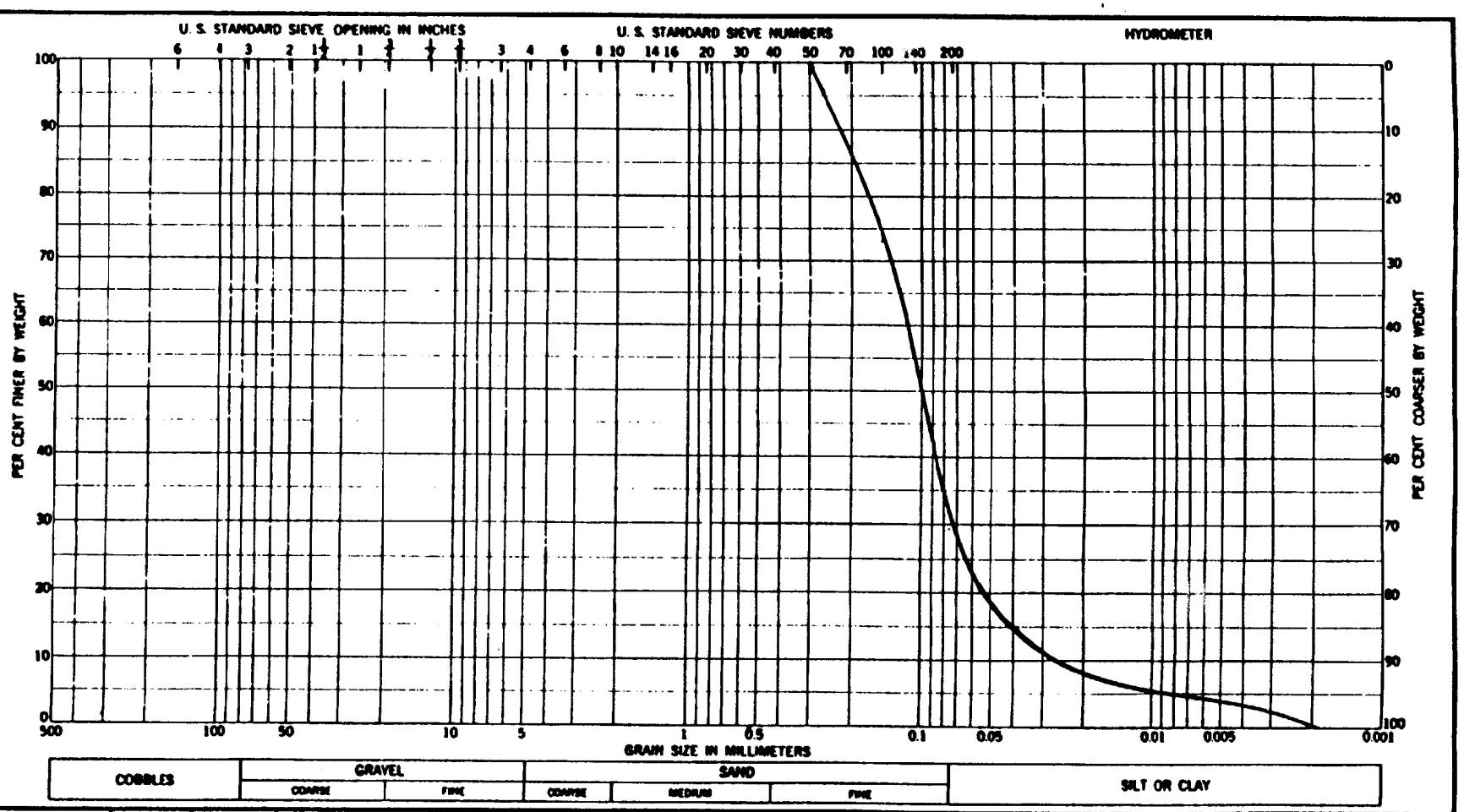
Project No.: E-2-837
Date: 17 March '95
Sheet 1 of 1

Project: NAVY CLEAN Memphis, Tennessee

Sample Identification	07S0008127	07S0001112	007S000177
Percent Moisture (as received)	29.3%	31.7%	17.4%
Bulk Density Wet (as received) LBS/ft^3	104.9	105.6	118.6
Bulk Density Dry (as received) LBS/ft^3	81.1	80.2	101.0
Specific Gravity	2.65	2.65	2.63

Reviewed by: David D. McCray

6756 B [illegible] Cove Memphis, TN 38133 901-385-1199 FAX 901-386-6614



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project Naval Air Station
Memphis, Tennessee

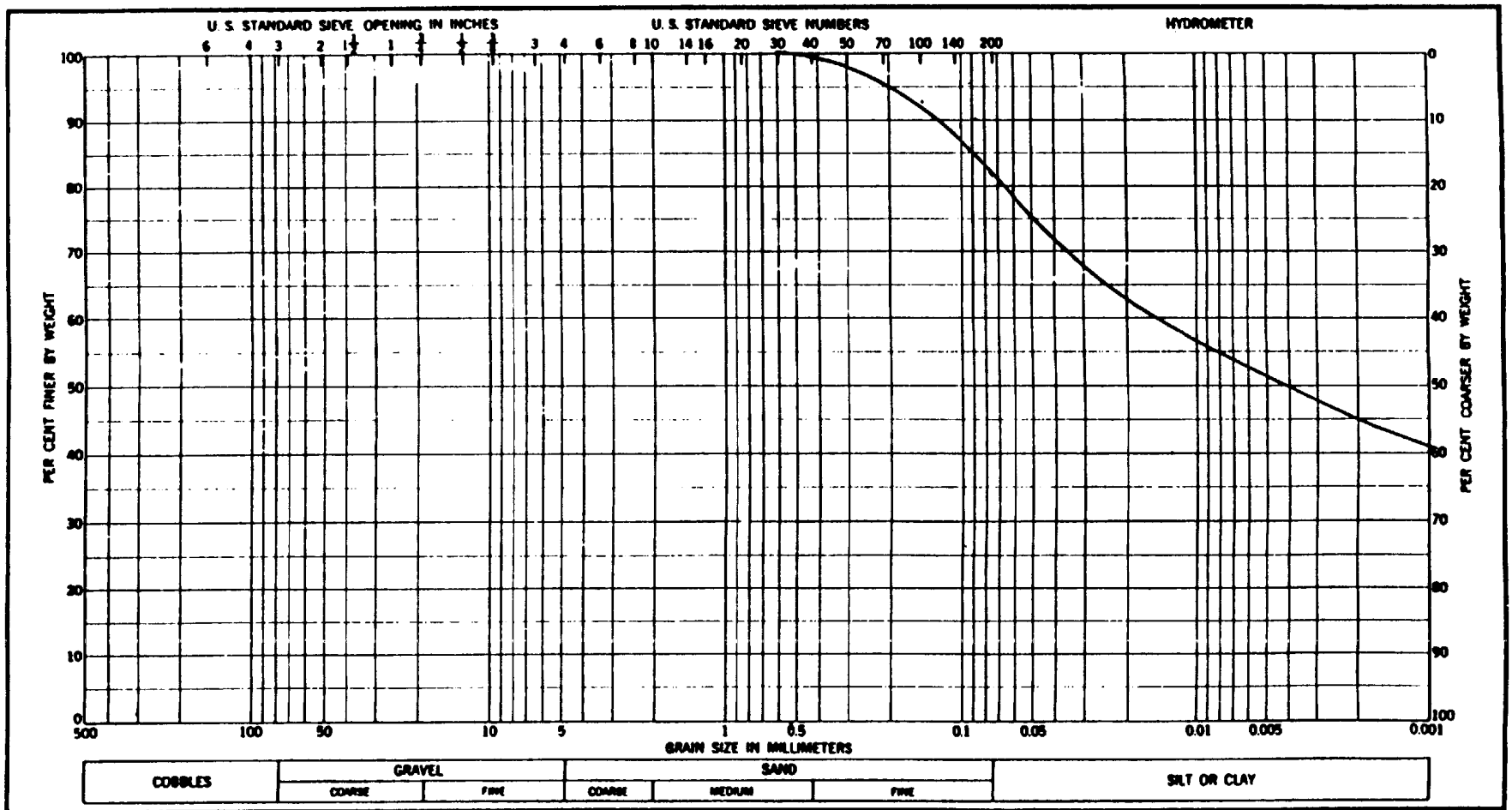
Area

Boring No. Sample ID 007S000177

Date 03/14/95

GRADATION CURVES

TRI-STATE TESTING SERVI , INC.



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project Naval Air Station
Memphis, Tennessee

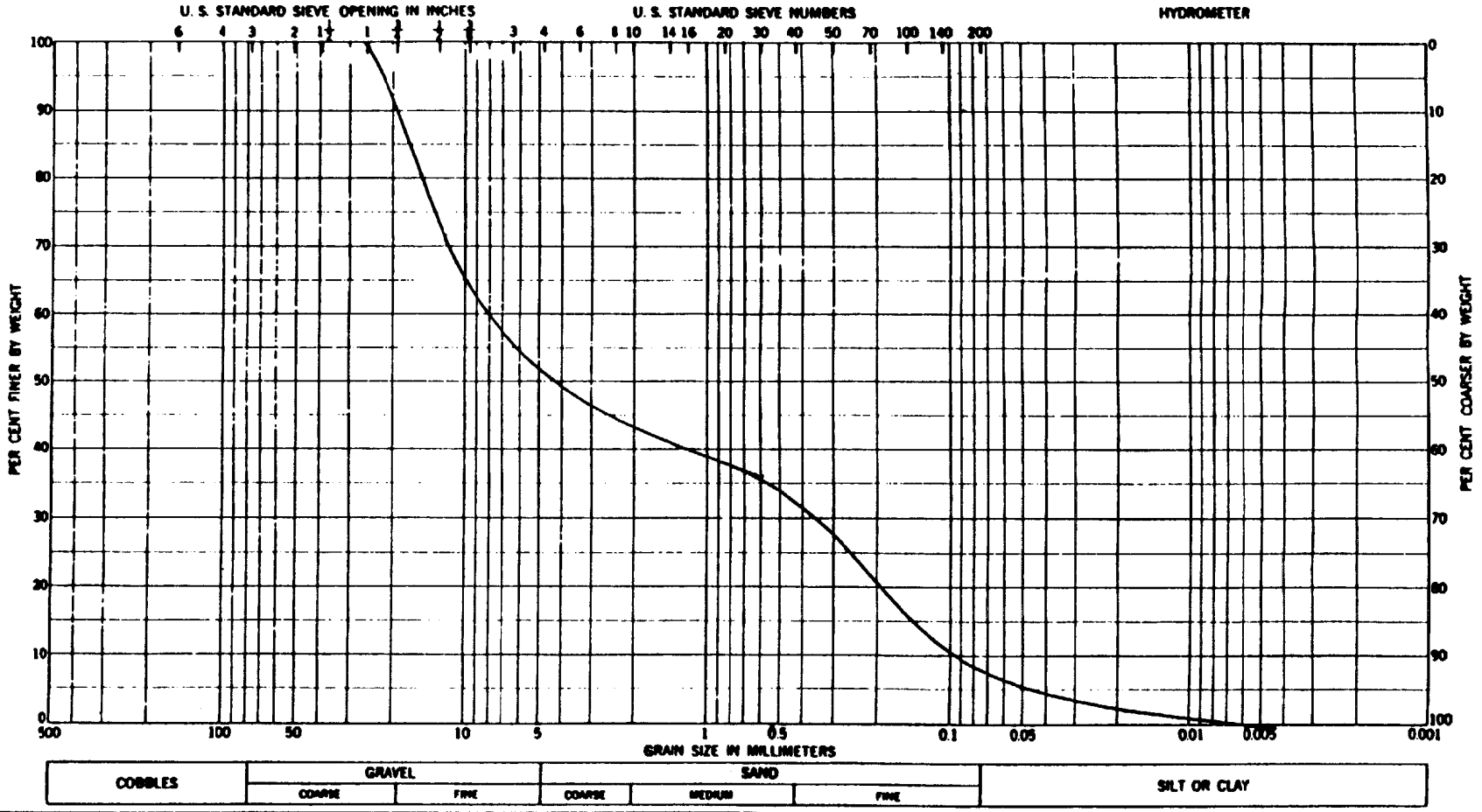
Area

Boring No. Sample ID 0750001112

Date 03/14/95

GRADATION CURVES

TRI-STATE TESTING SERVICES, INC.



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project Naval Air Station
Memphis, Tennessee

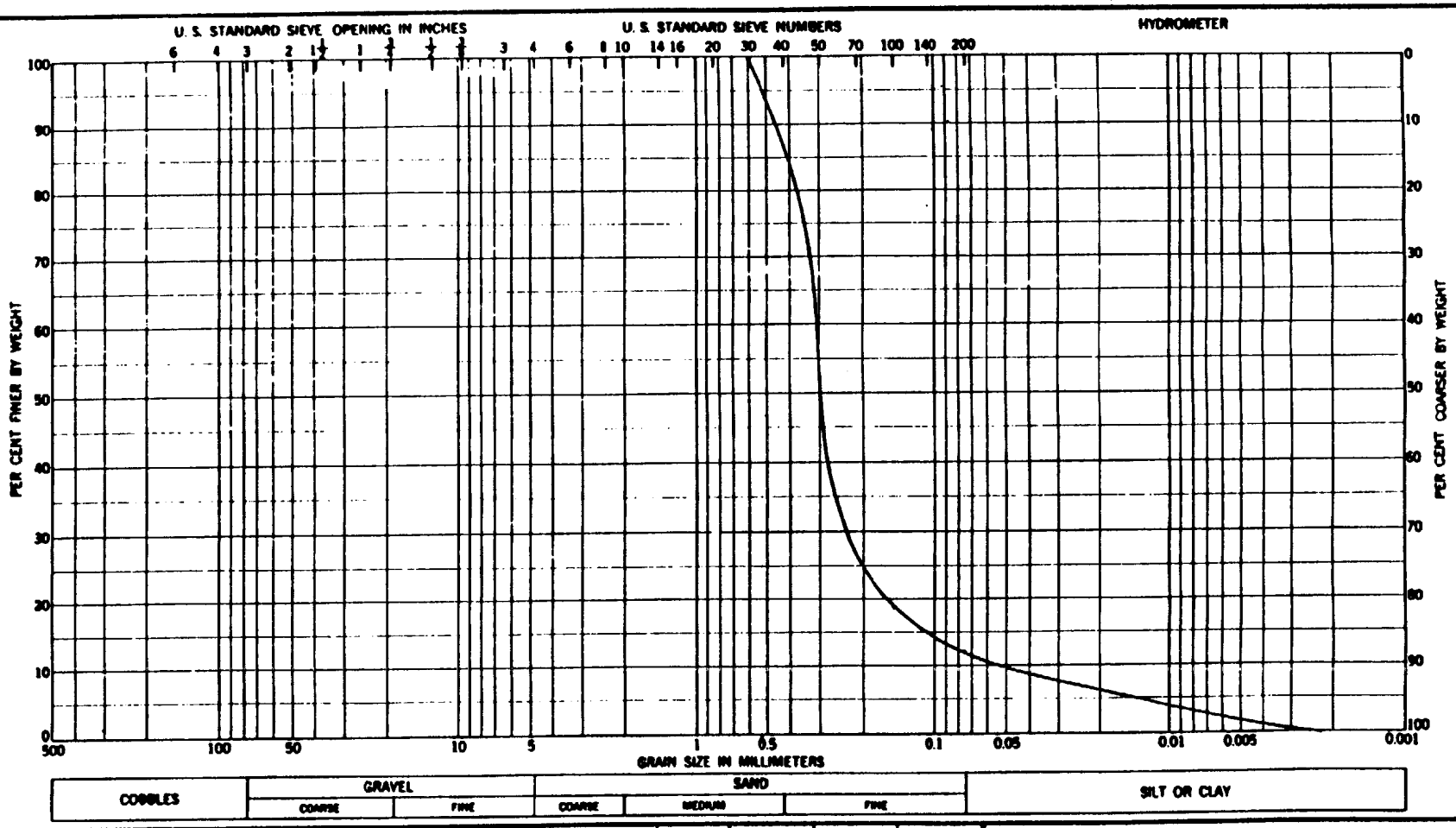
Area

Boring No. Sample ID 07S00275

Date 03/06/95

GRADATION CURVES

TRI-STATE TESTING SERV[illegible]S, INC.



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project: Naval Air Station Memphis, Tennessee

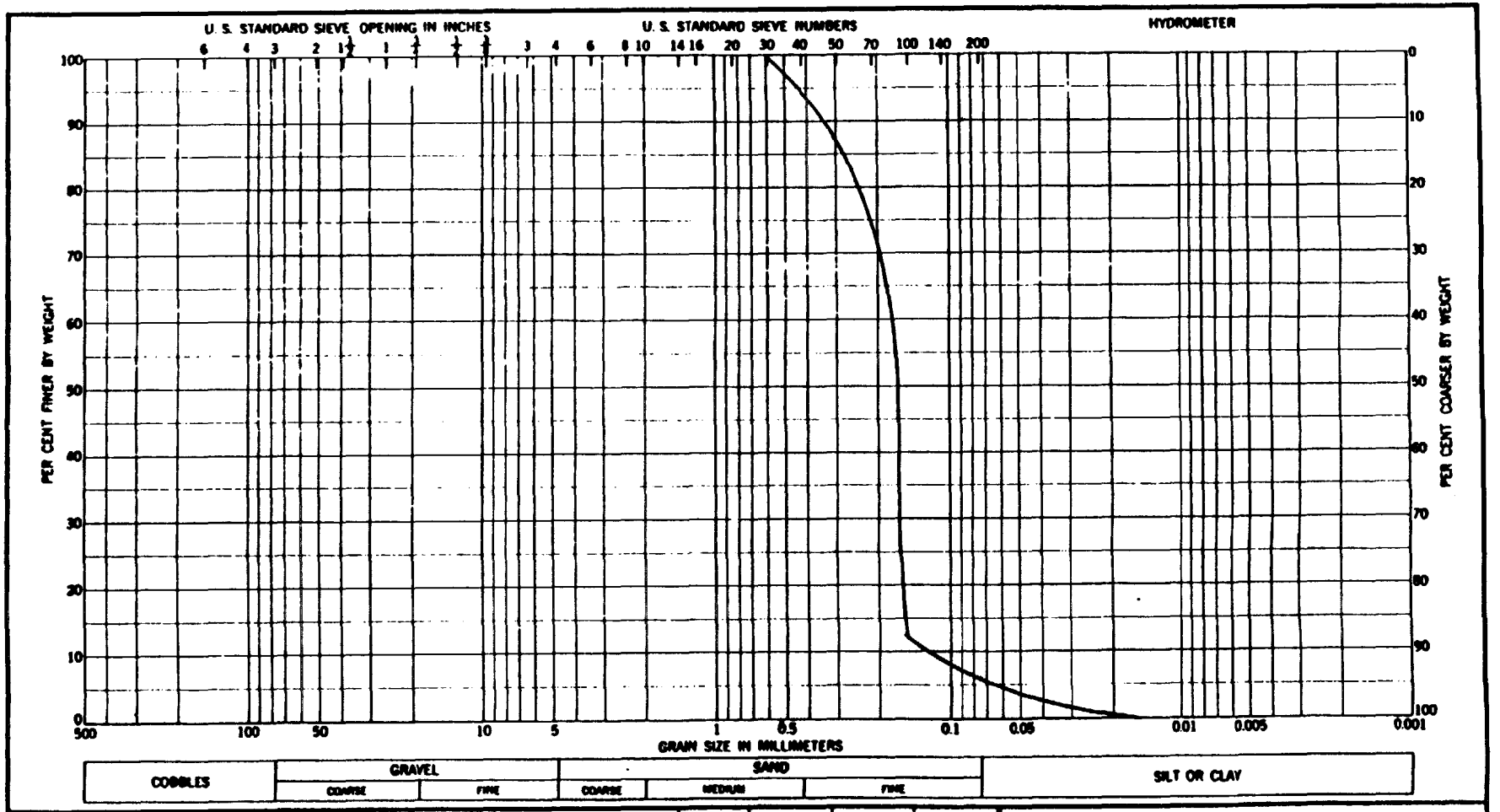
Area:

Boring No.: Sample ID 07S000341

Date: 03/06/95

GRADATION CURVES

TRI-STATE TESTING SERVICES, INC.



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project Naval Air Station
Memphis, Tennessee

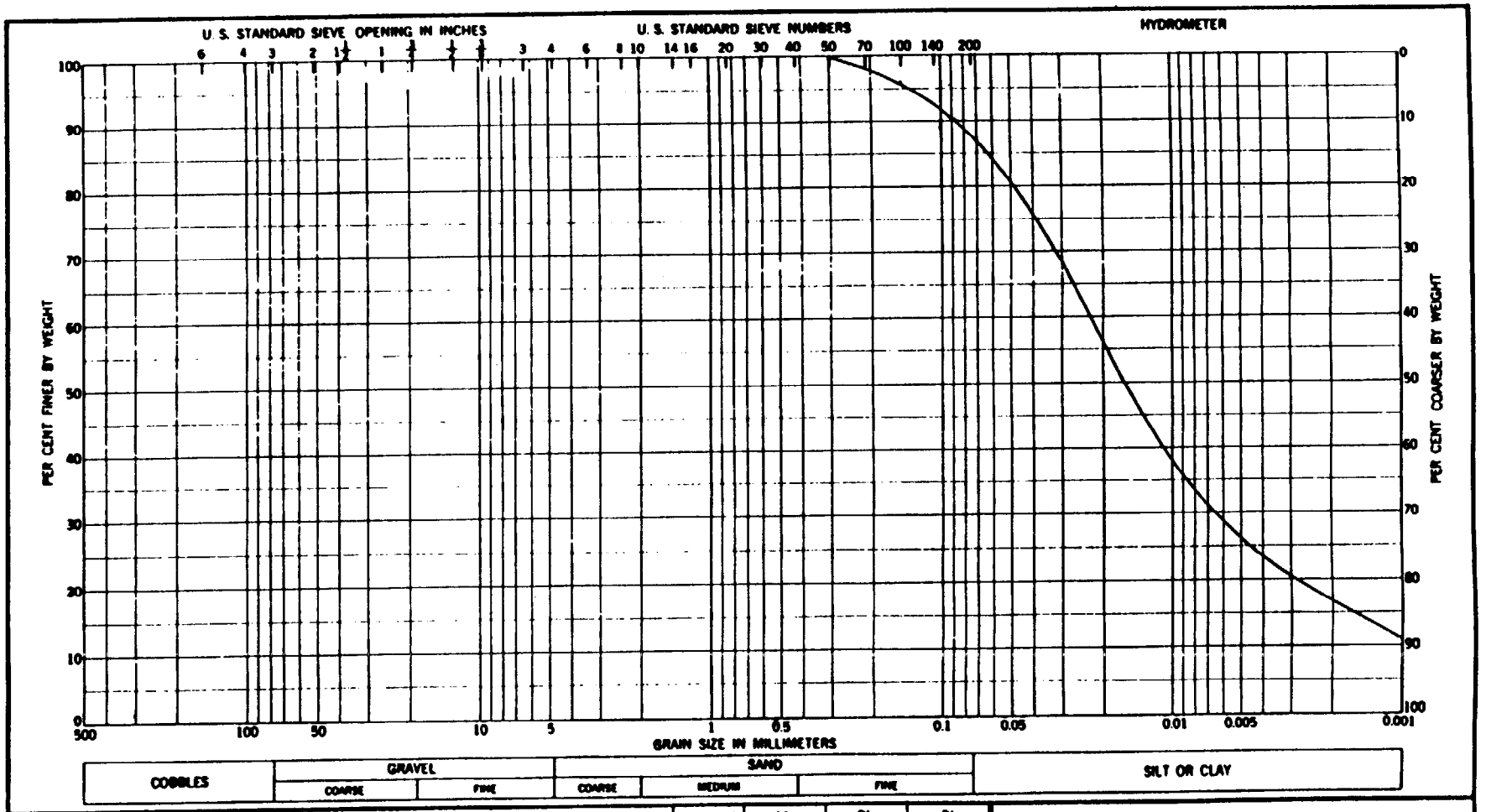
Area

Boring No. Sample ID 07S000346

Date 03/06/95

GRADATION CURVES

TRI-STATE TESTING SERVICES, INC.



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project: Naval Air Station
Memphis, Tennessee

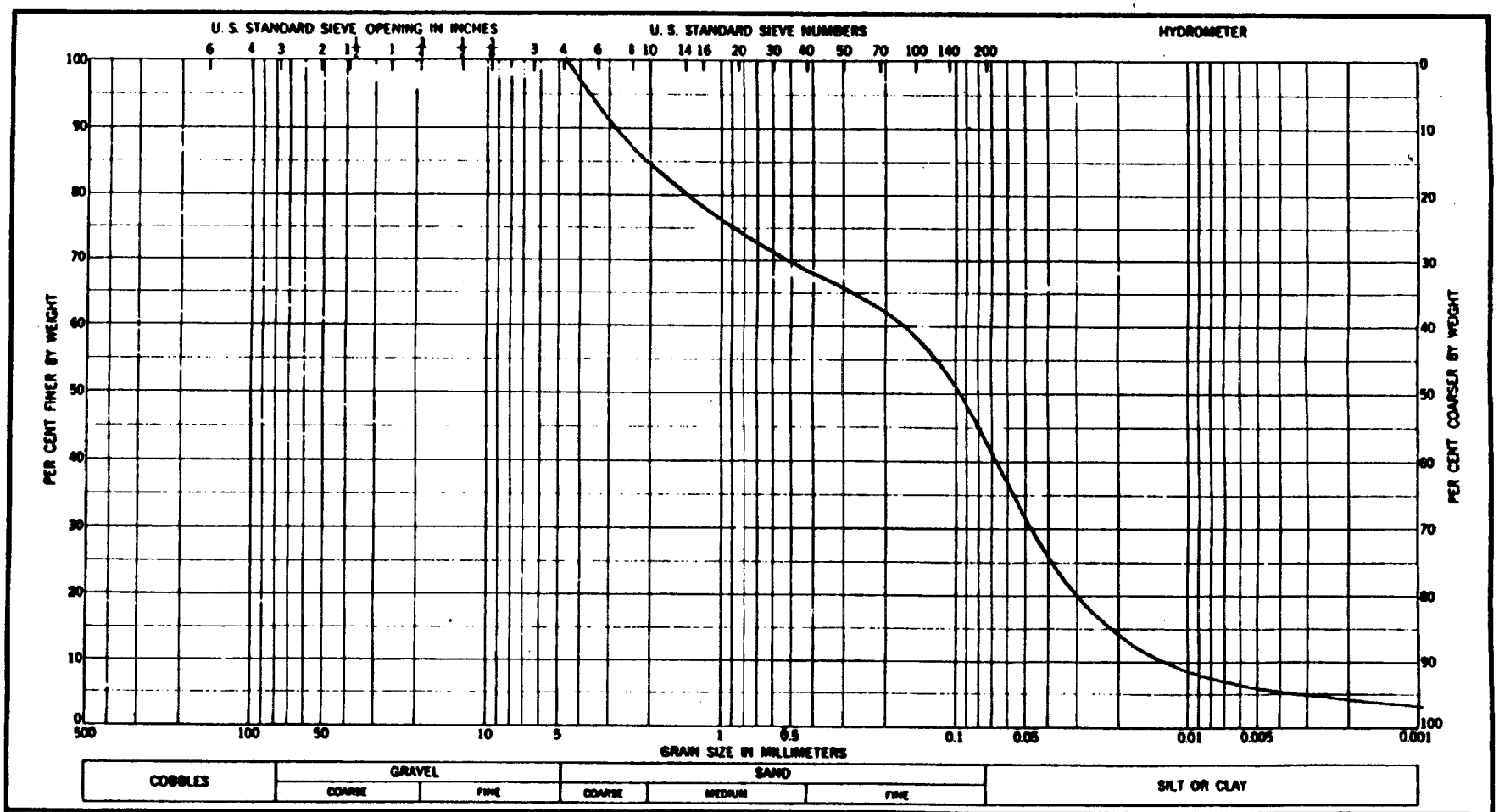
Area:

Boring No.: Sample ID 00750003117

Date: 03/06/95

GRADATION CURVES

TRI-STATE TESTING SERVICES, INC.



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project Naval Air Station
Memphis, Tennessee

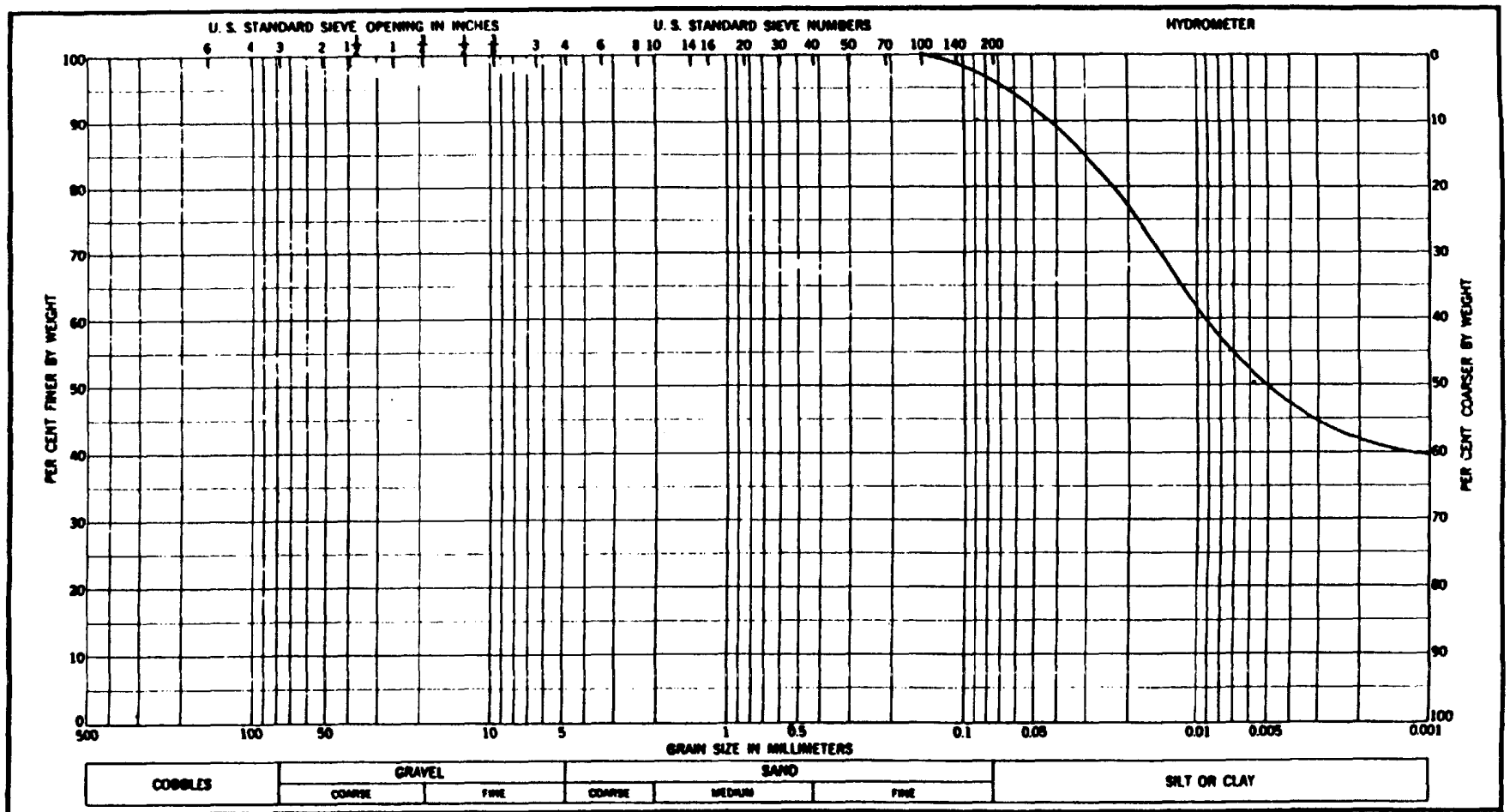
Area

Boring No. Sample ID 07S0008127

Date 03/14/95

GRADATION CURVES

TRI-STATE TESTING SERV[illegible], INC.



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
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Project: Naval Air Station Memphis, Tennessee

Area:

Boring No.: Sample ID 007S000922

Date: 03/06/95

GRADATION CURVES

TRI-STATE TESTING SERVICES, INC.