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CONFIRMATION SAMPLING INVESTIGATION REPORT ASSEMBLY F SOLID WASTE
MANAGEMENT UNITS 20, 22, 30 AND 39 VOLUME 2 OF 2 APPENDICES A AND B
MILLINGTON SUPPACT TN
7/31/1998
ENSAFE INC

**CONFIRMATORY SAMPLING
INVESTIGATION REPORT
ASSEMBLY F
SWMUs 20, 22/63, 30, AND 39
NAVAL SUPPORT ACTIVITY MEMPHIS
MILLINGTON, TENNESSEE**



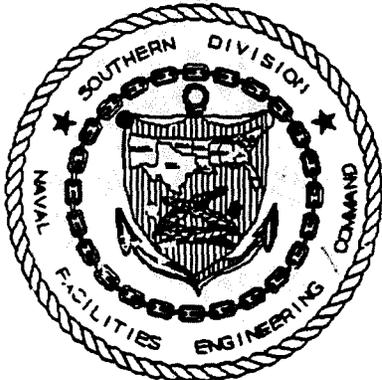
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Appendices A and B**

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Appendix A

Validation Report

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Attachment A Data Validation Summary Narratives

1.0 INTRODUCTION 1

This report presents the analytical data collected during the Confirmatory Sampling Investigation 2
 (CSI) of Naval Support Activity (NSA) Memphis Assembly F Solid Waste Management Units 3
 (SWMUs) 17, 19, 20, 22, 30, 39, and 63; and the quality assurance/quality control (QA/QC) 4
 evaluation of those data. The purpose of the data evaluation is to verify that the QC requirements 5
 of the data set have been met and to characterize the weakness of any questionable data. 6

The Assembly F soil and groundwater samples were collected at NSA Memphis during the months 7
 of October and November 1996. This sampling event consisted of collecting soil and groundwater 8
 samples during a geo-probe investigation of each SWMU. Fifty percent of the samples collected 9
 during this phase of the investigation were analyzed in an onsite laboratory provided by Fibertec 10
 Environmental Services of Holt, Michigan and 15% of the samples collected were submitted to 11
 Environmental Testing and Consulting, Inc. (ETC) of Memphis, Tennessee. The remaining 12
 samples were submitted to National Environmental Testing, Inc. (NET) laboratory in 13
 Bedford, Massachusetts, and were reported using U.S. Environmental Protection Agency 14
 (USEPA) Data Quality Objective (DQO) Level III and IV equivalents. The analytical methods 15
 and DQO laboratory deliverables for this phase of the CSI are summarized in Table 1-1. 16

**Table 1-1
 NSA Memphis Analytical Program**

Analytical Method	Data Quality Level Equivalents	USEPA Method Reference
Volatile Organic Compounds	IV	SW-846 8240
Semivolatile Organic Compounds	IV	SW-846 8270
Pesticides/Polychlorinated Biphenyls	IV	SW-846 5080
Chlorinated Herbicides	IV	SW-846 8150
Organophosphorous Pesticides	IV	SW-846 8140
Total Petroleum Hydrocarbons	III	USEPA 418.1
Metals	IV	40 CFR Part 264 Appendix IX (SW-846 6010/7060/7421/7470/7740)

Table 1-1
 NSA Memphis Analytical Program

Analytical Method	Data Quality Level Equivalents	USEPA Method Reference
Cyanide	IV	SW-846 9010
Gasoline Range Organics	IV	Modified 8015/TN GRO, 8020
Diesel Range Organics	IV	Modified 8015/TN DRO

Note:

- CFR — Code of Federal Regulations
 TN GRO/DRO — Tennessee Method for Gasoline Range Organics and Diesel Range Organics

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

- 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. 2 3 4
- USEPA Title 40 Code of Federal Regulations (CFR) Part 264, Appendix IX, 52 Federal Register 25947, July 1987. 5 6
- USEPA Environmental Monitoring and Support Laboratory, *Methods for Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, revised March 1983. 7 8
- Data Quality Objectives for data deliverables as cited in: *USEPA Data Quality Objectives for Remedial Response Activities*, EPA-540/G-87/003, March 1987. 9 10

Data were validated using the following documents (as appropriate): 11

- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER, February 1994 (EPA-540/R-94/012). (Organic Functional Guidelines). 1
2
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER, February 1994 (EPA-540/R-94/013). (Inorganic Functional Guidelines). 3
4
5

The NSA Memphis data were validated by either EnSafe personnel or EnSafe's subcontractor, Heartland Environmental Services, Inc. (Heartland) of St. Charles, Missouri. Of the samples submitted to NET, 95% of the data was validated at DQO Level III equivalent while 5% was validated at Level IV equivalent. The samples analyzed by Fibertec were validated at DQO Level III equivalent while the samples submitted to ETC were validated at a modified Level II equivalent. The data validation findings were summarized separately for each individual sample delivery group (SDG). Each SDG usually contained 20 investigative 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, which were not counted as investigative samples. All validation summary reports are included in Attachment A to this Appendix. All data summary tables are included in Appendix B of this document.

Data evaluation for samples collected at NSA Memphis included the following parameters. 17

Data Validation Summary of Investigative Samples: 18

Section 2	Organic and Metals Data	SWMU 17	19
Section 3	Organic and Metals Data	SWMU 19	20
Section 4	Organic, Metals, and Total Petroleum hydrocarbons (TPH) Data	SWMU 20	21 22
Section 5	Volatile Organic Data	SWMU 20 Screening Data	23

Data Validation Summary of Investigative Samples (continued):			1
Section 6	Organic, Metals, and TPH Data	SWMU 22	2
Section 7	Volatile Organic Data	SWMU 22 Screening Data	3
Section 8	Organic, Metals, and TPH Data	SWMU 30	4
Section 9	Volatile Organic Data	SWMU 30 Screening Data	5
Section 10	Organic, Metals, and TPH Data	SWMU 39	6
Section 11	Volatile Organic Data	SWMU 39 Screening Data	7
Section 12	Volatile Organic Data	SWMU 63	8
Section 13	Volatile Organic Data	SWMU 63 Screening Data	9

1.1 Organic Evaluation Criteria

The USEPA methods listed in Table 1-1 define QC criteria that the laboratory must meet, although they do not address data evaluation from a user's perspective. Evaluation criteria available in the Organic Functional Guidelines (February 1994) were 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)
- Laboratory control and duplicate samples
- Blank analysis
- Internal standard performance
- Field duplicate precision
- Compound quantitation

According to the Organic 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 Assembly F were evaluated using this approach. The following flags were used to annotate data with laboratory and/or field deficiencies or problems:

Validation Qualifiers

U Undetected — The analyte was found in a sample, but at a concentration less than 10 times the blank concentration for common organic constituents (methylene chloride, acetone, and 2-butanone), or five times the blank concentration for other constituents; the associated value shown is the quantitation limit after evaluation of the blank.

J Estimated Value — One or more QC parameters were outside control limits.

UJ Undetected and Estimated — The target analyte was analyzed for, but was not detected above the listed estimated quantitation limit; the quantitation limit is estimated because one or more QC parameters were outside control limits.

D Diluted Result — The result was obtained from a diluted sample.

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

These flags were applied to data where deficiencies were noted during validation. Because the laboratory uses some of the same qualifiers during analyses, laboratory qualifiers “U” and “J” remained on the data unless superseded by a validation qualifier (e.g., “UJ,” “UR”). Laboratory qualifiers that remained on the data after validation are described below:

Laboratory Qualifiers

- U Undetected — The target analyte was not detected above the Practical Quantitation Limit (PQL).
- J Estimated Value Below PQL — The analyte was detected below the PQL and is estimated.

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 compound (VOC) and gasoline range organic (GRO) analysis is 14 days from the collection date. Semivolatile organic compound (SVOC), pesticide/polychlorinated biphenyl (PCB), organophosphorus pesticide (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 of extraction. TPH (by USEPA Method 418.1) water samples have a holding time of 28 days from the collection date. 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 can be correctly interpreted according to method requirements. These criteria are not sample-specific; conformance is determined using standard materials, and therefore must be met in all circumstances. Performance standards for VOC (bromofluorobenzene [BFB]) and SVOC (decafluorotriphenylphosphine [DFTPP]) analyses are analyzed to determine if the data produced by the instrument can be correctly interpreted according to the method requirements. Performance

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 instrument's daily performance 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 %RSD 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 that these steps were taken.

A five-point initial calibration is analyzed for GRO, DRO, herbicides, OP pesticides, and TPH. Two calibration methods may be used: response factor or linear regression methods. For the response factor 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, an instrument blank, performance evaluation mixtures, 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.

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 adding a known quantity of stock solution 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 and Duplicate Samples

TPH and other 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 to professional judgment.

1.1.7 Blank Analysis

Laboratory Method Blanks

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 during sample collection as well as ambient field conditions. When chemicals are found in both 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, dilution, or volume of sample, these variables should also 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 greater than the AL, then the concentration may be used unqualified.
- If the sample concentration is less than the quantitation limit and less than the AL, then the sample is reported as nondetect at the quantitation limit.

Example (using 10X rule):

Water Sample		Diluted Water Sample		1
Blank result	1	Blank result	1	2
Blank AL	10	Dilution Factor	5	3
PQL	5	Blank AL	50	4
Sample result	4J	Diluted PQL	25	5
Final result	5U	Sample result	4J	6
		Final result	25U	7
				8

In this example, note that data are not reported as 4U because they are less than the PQL. Also note that the dilution factor is used to calculate an AL of 50 (1 x 5 x 10). 9
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- If the sample concentration is greater than the quantitation limit, but less than the AL, then the concentration is reported as nondetect "U." 11
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Example (using 10X rule):

Water Sample		Soil Sample		Diluted Soil Sample		13
Blank result	6	Blank result	6	Blank Result	6	14
Blank AL	60	% Solids	80	% Solids	80	15
PQL	5	Blank AL	75	Dilution Factor	5	16
Sample result	50	PQL	5	Blank AL	375	17
Final result	50U	Sample result	50	PQL	25	18
		Final result	50U	Sample result	250	19
				Final result	250U	20
						21

In this example, water sample results less than 60 (or 10 x 6) would be qualified as not detected. Soil results of less than 75 would be qualified as not detected because percent solids are used to calculate the AL: $[(6 \div 0.8) \times 10]$. In the diluted soil sample, results less than 375 would be qualified as not detected because dilution factors and percent solids are used to calculate the AL: $[(6 \div 0.8) \times 10 \times 5]$. 22
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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 volatile organic analysis vial filled at the laboratory with 26
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certifiable water, to assess cross-contamination during VOC sample container shipment and handling, both before and after the sample collection.

The frequencies for collecting these QC samples were defined in Section 4 of the NSA Memphis *Comprehensive RFI Work Plan* (EnSafe/Allen & Hoshall, October 1994) as follows:

- *Field blanks* — one per source of water per sampling event.
- *Rinsate blank* — one per week.
- *Trip blank* — one per shipment containing VOC samples.

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

1.1.8 Internal Standard Performance

GC/MS internal standards are added to samples to ensure 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 by 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 (IS) compounds recommended by the methods.

VOC IS Compounds	SVOC IS Compounds	1
Bromochloromethane	1,4-Dichlorobenzene-d4	2
1,4-Difluorobenzene	Naphthalene-d8	3
Chlorobenzene-d5	Acenaphthene-d10	4
	Phenanthrene-d10	
VOC IS Compounds Used by Fibertec	Chrysene-d12	5
Pentafluorobenzene	Perylene-d12	6
1,4-Dichlorobenzene-d4		7
1,4-Difluorobenzene		8
Chlorobenzene-d5		9

1.1.9 Field Duplicate Precision 10

One field duplicate was collected at NSA Memphis for each 10 water and/or soil or sediment samples collected. Field duplicate samples are analyzed to evaluate data precision, which measures the reproducibility of the analysis. 11
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For the NSA Memphis CSI, 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 30% for water and less than 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." 14
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1.1.10 Compound Quantitation 20

For organic analytes, the data evaluator must assess the usability of values when multiple sample results are reported by the laboratory. The following paragraphs describe actions taken by the validator in these cases. 21
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Reanalyzed Samples

Occasionally, organic samples may require reanalysis because of method requirements or poor QC results. Examples of poor QC results are samples analyzed outside 12-hour tuning periods, extremely low surrogate %Rs, and IS retention times and/or area counts outside QC limits. In these instances, the laboratory must report results for the original and reanalyzed sample. During validation, the reviewer evaluates QC associated with the original and reanalyzed sample and assesses which sample represents the preferable quality. The sample with the preferable QC should be used for interpretation. The preferred analysis is reported as the investigative sample in EnSafe's database and analytical tables.

Diluted Samples

When an analyte response exceeds the linear calibration range of the instrument or is off-scale, the laboratory will dilute the sample. If one or more compounds are outside the calibration range during an initial analysis, the laboratory will flag the analyte "E." When diluted, the sample results will be flagged "D." Generally, values from the initial analysis will be used except where they 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.

1.2 Inorganic Evaluation Criteria

The SW-846 methods and 40 CFR Part 264 define QC criteria that the laboratory must meet, although they do not address data evaluation from a user's perspective. Evaluation criteria available in the Inorganic Functional Guidelines, (February 1994), were 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	1
•	Instrument calibration	2
•	Blank analysis	3
•	Inductively Coupled Plasma (ICP) interference check samples	4
•	LCS results	5
•	Matrix spike results	6
•	Laboratory duplicates	7
•	ICP serial dilutions	8
•	Atomic Absorption (AA) duplicate injections and post digestion spike recoveries	9
•	Field duplicate precision	10

According to 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 Assembly F were evaluated using this approach. The following flags were used to annotate data exhibiting laboratory and/or field deficiencies or problems:

Validation Qualifiers 15

U **Undetected** — The analyte was found in a sample, but at a concentration less than five times the blank concentration; the associated value shown is the quantitation limit after validation blank evaluation. 16
17

J **Estimated Value** — At least one QC parameter was outside control limits or the analyte’s concentration was less than the PQL. 18
19

UJ **Undetected and Estimated** — The analyte was analyzed for, but not detected above the listed estimated instrument detection limit (IDL); the IDL is estimated because one or more QC parameters were outside control limits. 20
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R/UR **Unusable Data** — One or more QC parameters grossly exceeded control limits. 23

These flags were applied to data where deficiencies were noted during validation. The laboratory flags values between the IDL and the PQL with a "B" qualifier. The "B" qualifier means that the analyte was detected below the PQL and is estimated. During validation, all results between the IDL and PQL flagged "B" by the laboratory were changed to "J" during validation. This was done to remain consistent between the organic and inorganic flags.

Because the laboratory uses some of the same qualifiers during analyses, the laboratory "U" qualifier remained on the data unless superseded by a validation qualifier (e.g., "UJ," "UR"). The laboratory "U" qualifier which remained on the data after validation is defined as:

Laboratory Qualifiers

U Undetected — The analyte was analyzed for but not detected above the IDL.

1.2.1 Holding Times

Acceptable technical holding times are specified in the analytical methods. For aqueous samples, the holding time for metals analysis is six months, except for mercury, which is 28 days from the date of collection. Cyanide analysis has a sample holding time of 14 days from the date of collection. The methods do not specify holding times for soil matrices. 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 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 performed 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 instrument's performance 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, except mercury and cyanide, should fall between 90% and 110%. The %R for mercury and cyanide should fall between 80% and 120% and 85% and 115%, respectively.

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 any contamination introduced during sample collection as well as ambient field conditions. 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 concentration of the compound in the sample exceeds five times the amount in any blank, referred to as ALs. Because blank samples may not be prepared using the same weight, dilution, or volume of sample, these variables should also 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 greater than 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 (ICS) is used to confirm the laboratory instrument's interference and background correction factors. Interference samples should be run at the beginning and end of each sample analysis, or run at least twice per 8-hour working shift, whichever is more frequent. The ICS consists of two solutions: Solution A and Solution AB. Solution A contains the interferants (aluminum, calcium, iron, and magnesium), and Solution AB contains the target analytes mixed with the interferants. An ICS analysis consists of analyzing both solutions consecutively, starting with Solution A, for all wavelengths used for each analyte reported by ICP.

No analytes should be detected in ICS Solution A other than aluminum, calcium, iron, and magnesium. The presence of other analytes could lead to the possibility of false positives or false negatives for that analyte in the investigative samples. The %Rs for ICS Solution AB should fall between 80% and 120%.

1.2.5 Laboratory Control Samples

The LCS monitors the overall performance of steps in the analysis, including sample preparation. All aqueous LCS %R results must fall within the control limits of 80% to 120%, except for antimony and silver, which have no control limits. 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 Matrix Spike 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 analysis reproducibility. The RPD between the sample and the duplicate is calculated. A control limit of 20 RPD for aqueous samples should not be exceeded for analyte values greater than five times the quantitation limit. For analytes less than five times the quantitation limit, a control of +/- the quantitation limit should not be exceeded.

1.2.8 ICP Serial Dilutions

ICP serial dilutions assess the absence or presence of matrix interference. One sample from each set of similar matrix type is chosen for the serial (fivefold) dilution. For an analyte concentration at least 10 times greater than the IDL, the measured concentrations of the undiluted and diluted samples should agree within 10%.

1.2.9 AA Duplicate Injections and Postdigestion 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 be within 20%. The %Rs 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 water and/or soil samples collected. Field duplicate samples are analyzed to evaluate data precision, which measures the reproducibility of the analysis.

For the NSA Memphis CSI, 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 30% for water and less than 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 17

All samples were received by the laboratory intact and with the proper documentation. Table 2-1 summarizes the samples that were included in SWMU 17.

**Table 2-1
SWMU 17 Sample IDs**

Sample ID	APX IX Metals	PCBs	SVOC	VOCs
017S000101	X	X	X	X

One investigative sample was analyzed in one SDG for SWMU 17. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

2.1 Data Quality

The overall data quality of the analytical work performed for SWMU 17 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

2.2 Blanks

Bis(2-ethylhexyl)phthalate, chromium, copper, silver, and zinc were detected in several method and field blanks. The blanks were examined during the validation process and sample results for bis(2-ethylhexyl)phthalate, chromium, copper, silver, and zinc believed to be from blank contamination were qualified as nondetect "U."

3.0 DATA VALIDATION RESULTS — SWMU 19 1

All samples were received by the laboratory intact and with the proper documentation. Table 3-1 summarizes the samples that were included in SWMU 19. 2
3

**Table 3-1
SWMU 19 Sample IDs**

Sample ID	APX IX Metals	PCBs	SVOCs	VOCs
019S000101	X	X	X	X
019S000201	X	X	X	X

Two investigative samples were analyzed in one SDG for SWMU 19. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document. 4
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3.1 Data Quality 7

The overall data quality of the analytical work performed for SWMU 19 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation. 8
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3.2 Blanks 13

Acetone, methylene chloride, and vanadium were detected in several method and field blanks. The blanks were examined during the validation process and sample results for acetone, methylene chloride, and vanadium believed to be from blank contamination were qualified as nondetect "U." 14
15
16

4.0 DATA VALIDATION RESULTS – SWMU 20

All samples were received by the laboratory intact and with the proper documentation. Table 4-1 summarizes the samples that were included in SWMU 20.

Table 4-1
 SWMU 20 Sample IDs

Sample ID	APX IX Metals	CN	Herb	OP Pest	Pest/ PCB	SVOC	VOC	TPH	DRO	GRO
020SGB0101	X	X	X	X	X	X	X	X	X	X
020GGB0147							X			
020HGB0147							X			
020SGB0201	X	X	X	X	X	X	X	X	X	X
020SGB0307							X			
020SGB0413							X			

Note:

CN – Cyanide
 HERB – Herbicides

Five investigative samples, one field duplicate, and field QC samples were analyzed in one SDG for SWMU 20. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

4.1 Data Quality

The overall data quality of the analytical work performed for SWMU 20 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

4.2 Unusable Data 1

A few samples were rendered unusable because they grossly exceeded QC parameters. Table 4-2 summarizes the unusable data and explains the qualification. 2
3

**Table 4-2
 SWMU 20 Unusable Data**

Sample ID	Fraction	Analyte(s)	Reason
020GGB0147 020HGB0147	Volatiles	2-Butanone	Cont. Calib. %D > 90%
020SGB0101 020SGB0201	Appendix IX Metals	Antimony	MS %R < 30%

4.3 Blanks 4

Tin and thallium were detected in several method and field blanks. The blanks were examined during the validation process and sample results for tin and thallium believed to be from blank contamination were qualified as nondetect "U." 5
6
7

4.4 Compound Quantitation 8

The following results were reported from secondary dilutions. 9

Sample ID	Compound	10
020GGB0147	1,1-Dichloroethane	11
020HGB0147	1,1-Dichloroethane	12
020SGB0413	1,1-Dichloroethane	13

5.0 DATA VALIDATION RESULTS — SWMU 20 Screening Samples

All samples were received by the laboratory intact and with the proper documentation. Table 5-1 summarizes the samples that were included in SWMU 20.

**Table 5-1
 SWMU 20 Screening Sample IDs**

Sample ID	8240-VOC	Sample ID	8240-VOC
020SGB0101	X	020SGB0313	X
020SGB0107	X	020SGB0401	X
020SGB0113	X	020SGB0407	X
020GGB0147	X	020SGB0413	X
020SGB0207	X	020GGB0446	X
020SGB0213	X	020SGB0507	X
020GGB0244	X	020SGB0513	X
020SGB0301	X	020SGB0607	X
020SGB0307	X	020SGB0613	X

Eighteen investigative samples were analyzed in two SDGs for SWMU 20. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

5.1 Data Quality

The overall data quality of the analytical work performed for SWMU 20 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

5.2 Blanks

There were no detections in any blanks associated with SWMU 20. No data were qualified.

5.3 Compound Quantitation

The following results were reported from secondary dilutions.

Sample ID	Compound
020SGB0113	1,1-Dichloroethene, 1,1-Dichloroethane
020GGB0147	1,1-Dichloroethene, 1,1-Dichloroethane

6.0 DATA VALIDATION RESULTS — SWMU 22

All samples were received by the laboratory intact and with the proper documentation. Table 6-1 summarizes the samples that were included in SWMU 22.

Table 6-1
 SWMU 22 Sample IDs

Sample ID	APX IX Metals	CN	Herb	OP Pest	Pest/ PCB	SVOC	VOC	DRO	GRO	TPH
022SGB0113							X			
022SGB0301	X	X	X	X	X	X	X	X	X	X
022SGB0401	X	X	X	X	X	X	X	X	X	X
022GGB1047							X			

Four investigative samples and field QC samples were analyzed in three SDGs for SWMU 22. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

6.1 Data Quality

The overall data quality of the analytical work performed for SWMU 22 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

6.2 Unusable Data

One sample was rendered unusable because it grossly exceeded QC parameters. Table 6-2 summarizes the unusable data and an explanation of the qualification.

Table 6-2
SWMU 22 Unusable Data

Sample ID	Fraction	Analyte	Reason
022SGB0301	Appendix IX Metals	Antimony	MS %R < 30%

6.3 Blanks

Acetone, GRO, and selenium were detected in several method and field blanks. The blanks were examined during the validation process and sample results for acetone, GRO, and selenium believed to be from blank contamination were qualified as nondetect "U."

6.4 Compound Quantitation

The following compound was reported from a secondary dilution.

Sample ID	Compound
022SGB0301	DRO

7.0 DATA VALIDATION RESULTS – SWMU 22 Screening Samples

All samples were received by the laboratory intact and with the proper documentation. Table 7-1 summarizes the samples that were included in SWMU 22.

**Table 7-1
 SWMU 22 Screening Sample IDs**

Sample ID	8240-VOC	Sample ID	8240-VOC
022SGB0101	X	022CGB0416	X
022SGB0115	X	022SGB0416	X
022GGB0145	X	022GGB0447	X
022SGB0201	X	022HGB0447	X
022SGB0216	X	022SGB0516	X
022GGB0247	X	022SGB0616	X
022SGB0301	X	022SGB0701	X
022SGB0311	X	022SGB0716	X
022SGB0315	X	022SGB0847	X
022GGB0347	X	022GGB0947	X
022HGB0347	X	022GGB1047	X
022SGB0401	X		

Twenty investigative samples, three field duplicate pairs, and field QC samples were analyzed in three SDGs for SWMU 22. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

7.1 Data Quality

The overall data quality of the analytical work performed for SWMU 22 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC

requirements were flagged as estimated "J." This qualification indicates that the data could be 1
biased either high or low. Although the data are qualified as estimated, they remain acceptable 2
for use in risk assessment and site remediation. 3

7.2 Blanks

 4

Methylene chloride was detected in several method blanks and one trip blank. The blanks were 5
examined during the validation process and sample results for methylene chloride believed to be 6
from blank contamination were qualified as nondetect "U." 7

8.0 DATA VALIDATION RESULTS – SWMU 30

All samples were received by the laboratory intact and with the proper documentation. Table 8-1 summarizes the samples that were included in SWMU 30.

Table 8-1
 SWMU 30 Sample IDs

Sample ID	APX IX Metals	CN	Herb	OP Pest	Pest/P CB	SVOC	VOC	DRO	GRO	TPH
030SGB0101	X	X	X	X	X	X	X	X	X	X
030SGB0301							X			
030CGB0301							X			
030SGB0401	X	X	X	X	X	X	X	X	X	X
030SGB0513							X			

Four investigative samples, one field duplicate pair, and field QC samples were analyzed in three SDGs for SWMU 30. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

8.1 Data Quality

The overall data quality of the analytical work performed for SWMU 30 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated “J.” This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

8.2 Unusable Data

One sample was rendered unusable because it grossly exceeded QC parameters. Table 8-2 summarizes the unusable data and explains the qualification.

Table 8-2
SWMU 30 Unusable Data

Sample ID	Fraction	Analyte	Reason
030SGB0513	Volatiles	Acetone	Cont. Calib. %D > 90%

8.3 Blanks

GRO, beryllium, cadmium, and tin were detected in several method and field blanks. The blanks were examined during the validation process and sample results for GRO, beryllium, cadmium, and tin believed to be from blank contamination were qualified as nondetect "U."

8.4 Compound Quantitation

The following results were reported from secondary dilutions.

Sample ID	Compound
030SGB0301	Acetone

9.0 DATA VALIDATION RESULTS — SWMU 30 Screening Samples

All samples were received by the laboratory intact and with the proper documentation. Table 9-1 summarizes the samples that were included in SWMU 30.

Table 9-1
SWMU 30 Screening Sample IDs

Sample ID	8240-VOC	Sample ID	8240-VOC
030SGB0113	X	030SGB0313	X
030GGB0138	X	030SGB0413	X
030SGB0201	X	030GGB0437	X
030SGB0213	X	030SGB0501	X
030GGB0238	X	030SGB0513	X
030SGB0301	X	030GGB0545	X

Twelve investigative samples and field QC samples were analyzed in one SDG for SWMU 30. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

9.1 Data Quality

The overall data quality of the analytical work performed for SWMU 30 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

9.2 Blanks

There were no detections in any blanks associated with SWMU 30. No data were qualified.

10.0 DATA VALIDATION RESULTS — SWMU 39

All samples were received by the laboratory intact and with the proper documentation. Table 10-1 summarizes the samples that were included in SWMU 39.

Table 10-1
SWMU 39 Sample IDs

Sample ID	APX IX Metals	CN	Herb	OP Pest	Pest/P CB	PCB	SVOC	VOC	DRO	GRO	TPH
039SGB0101	X	X	X	X	X		X	X	X	X	X
039SGB0102						X					
039SGB0113						X					
039SGB0201	X	X	X	X	X		X	X	X	X	X
039SGB0202						X					
039SGB0211						X					
039SGB0301						X					
039SGB0302						X					
039CGB0302						X					
039SGB0313						X					
099CGB0313						X					
039SGB0401						X			X		
039SGB0402						X					
039SGB0413						X			X		
039GGB0443									X		
039SGB0501						X					
039SGB0502						X			X		
039SGB0513						X					
039SGB0610									X		
039SGB0713									X		
039SGB0817									X		
039SGB0913									X		
039SGB0917									X		
039H010044								X			

Twenty-one investigative samples, three field duplicate pairs, and field QC samples were analyzed in six SDGs for SWMU 39. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

10.1 Data Quality

The overall data quality of the analytical work performed for SWMU 39 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

10.2 Blanks

Acetone, vinyl chloride, carbon disulfide, GRO, beryllium, cadmium, and selenium were detected in several method and field blanks. The blanks were examined during the validation process and sample results for acetone, vinyl chloride, carbon disulfide, GRO, beryllium, cadmium, and selenium believed to be from blank contamination were qualified as nondetect "U."

10.3 Compound Quantitation

The following results were reported from secondary dilutions.

Sample ID	Compound
039SGB0201	Endosulfan I, Dieldrin, 4,4'-DDE, 4,4'-DDT, alpha-Chlordane, gamma-Chlordane, Technical Chlordane

11.0 DATA VALIDATION RESULTS - SWMU 39 Screening Samples

All samples were received by the laboratory intact and with the proper documentation. Table 11-1 summarizes the samples that were from SWMU 39.

Table 11-1
SWMU 39 Screening Sample IDs

Sample ID	8240-VOC	Sample ID	8240-VOC	Sample ID	8240-VOC
039SGB0102	X	039SGB0401	X	039SGB0713	X
039SGB0113	X	039SGB0402	X	039SGB0717	X
039GGB0147	X	039SGB0413	X	039SGB0810	X
039SGB0202	X	039GGB0413	X	039SGB0813	X
039SGB0211	X	039GGB0443	X	039SGB0817	X
039GGB0214	X	039SGB0501	X	039CGB0910	X
039GGB0247	X	039SGB0502	X	039SGB0910	X
039SGB0301	X	039SGB0513	X	039SGB0913	X
039CGB0302	X	039GGB0543	X	039SGB0917	X
039SGB0302	X	039SGB0610	X	039CGB1010	X
039CGB0313	X	039SGB0613	X	039SGB1010	X
039SGB0313	X	039SGB0617	X	039SGB1013	X
039GGB0314	X	039SGB0710	X	039SGB1017	X
039GGB0343	x	039GGB1148	X	039GGB1248	X
		039HGB1148	X		

Thirty-eight investigative samples, five field duplicate pairs, and QC samples were analyzed in two SDGs for SWMU 39. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

11.1 Data Quality

The overall data quality of the analytical work performed for SWMU 39 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

11.2 Blanks

Methylene chloride was detected in several method blanks. The blanks were examined during the validation process and sample results for methylene chloride believed to be from blank contamination were qualified as nondetect "U."

11.3 Compound Quantitation

The initial analysis of samples 039SGB0610, 039SGB0813, 039SGB0817, 039SGB0917, and 039SGB1017 caused the GC/MS system to shut down due to high levels of non-target analytes. These samples were diluted and reported with elevated detection limits.

Samples 039SGB0710 and 039SGB0810 were diluted due to surrogate %Rs outside the recommended QC limits. The laboratory did not report the initial results because the surrogate %Rs improved upon reanalysis. These reanalyzed samples were reported with elevated detection limits.

The following results were reported from secondary dilutions.

Sample ID	Compound
039SGB0102	Methylene Chloride
039SGB0211	Methylene Chloride, 1,1,2,2-Tetrachloroethane, Ethylbenzene, m-Xylene, o-Xylene

12.0 DATA VALIDATION RESULTS - SWMU 63

All samples were received by the laboratory intact and with the proper documentation. Table 12-1 summarizes the samples that were included in SWMU 63.

Table 12-1
SWMU 63 Sample IDs

Sample ID	VOCs
063SGB0108	X

One investigative sample and field QC samples were analyzed in one SDG for the SWMU 63 data. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

12.1 Data Quality

The overall data quality of the analytical work performed for SWMU 63 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

12.2 Blanks

No detections were identified in any blanks associated with SWMU 63. No data was qualified.

13.0 DATA VALIDATION RESULTS - SWMU 63 Screening Samples

All samples were received by the laboratory intact and with the proper documentation. Table 13-1 summarizes the samples that were included in SWMU 63.

Table 13-1
SWMU 63 Screening Sample IDs

Sample ID	8240-VOC
063SGB0101	X
063SGB0108	X
063SGB0116	X
063GGB0147	X

Four investigative samples were analyzed in one SDG for SWMU 63. Full validation reports of this SDG can be found in Attachment A, while data tables can be found in Appendix B of this document.

13.1 Data Quality

The overall data quality of the analytical work performed for SWMU 63 was considered satisfactory and usable for site remediation and risk assessment. Results outside QA/QC requirements were flagged as estimated "J." This qualification indicates that the data could be biased either high or low. Although the data are qualified as estimated, they remain acceptable for use in risk assessment and site remediation.

13.2 Blanks

Methylene chloride was detected in several method blanks. The blanks were examined during the validation process and sample results for methylene chloride believed to be from blank contamination were qualified as nondetect "U."

Attachment A
Data Validation Summary Narratives

SWMU 17

E/A&H VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
 CTO and Subtask No.: 0106-04730
 Laboratory: NET, Bedford
 Sample Delivery Group: 1918
 Matrix: Soil

Table 1
SDG 1918 Sample ID and Analyses

Sample ID	Appendix 9 Metals	VOCs	SVOCs	Pest/PCBs
017S000101	X	X	X	X

VALIDATION RESULTS

All samples were received by the laboratory intact and with the proper documentation on July 1, 1996, for metals, VOCs, SVOCs, and pest/PCBs. The following sections summarize the data validation results.

Appendix IX Metals Fraction

- All associated holding times, initial calibration verifications, continuing calibration verifications, ICP interference check sample recoveries, ICP serial dilution differences, and graphite furnace atomic absorption (GFAA) analytical spike results were acceptable. No problems were encountered during review of sample result verification.
- Table 2 displays the elements which were detected in the various blanks analyzed with this SDG and associated with sample 017S000101.

Table 2
Blank Detections

Blank ID	Element	Conc.	Action Level	Qualification
CCB1	Chromium	8.5 µg/L	17 mg/kg	J
	Copper	5.9 µg/L	5.9 mg/kg	---
	Silver	4.3 µg/L	8.6 mg/kg	UJ
	Zinc	15.3 µg/L	15.3 mg/kg	---
Prep Blank	Chromium	-1.852 µg/L	18.52 mg/kg	J

Note: µg/L = micrograms per liter mg/kg = milligrams per kilogram

When the blank concentration was greater than the PQL, the AL was five times the blank concentration. Positive results less than the AL were qualified as nondetect "U"; nondetect results were accepted without qualification.

When the blank concentration was less than the PQL (negative result), the AL was 10 times the absolute value of the concentration. Positive results less than the AL were qualified as estimated "J" and nondetect results were qualified as estimated "UJ."

3. Table 3 illustrates the elements which exceeded the 75% to 125% control limits for the MS.

**Table 3
Matrix Spike Deficiencies**

Element	%R	Qualification
Antimony	63.7	J(+) UJ(ND)
Arsenic	67.9	J(+) UJ(ND)
Lead	61.2	J(+) UJ(ND)
Silver	49.0	J(+) UJ(ND)

NOTE: J(+) = Positive results were qualified as estimated "J."
UJ(ND) = Undetected results were qualified as estimated "UJ."

All antimony, arsenic, lead, and silver results were qualified as estimated "J" for positive results and "UJ" for undetected results.

5. The RPD for lead (105.7) exceeded the 20% maximum control limits for laboratory duplicates. All positive results were qualified as estimated "J" while any undetected results were accepted without qualification.
6. The concentration for antimony (69.7 mg/kg) exceeded the solid LCS control limits of 11.4 mg/kg to 68.6 mg/kg. All positive results were qualified as estimated "J" while any undetected results were accepted without qualification.

VOC Fraction

1. All holding times, GC/MS instrument performance checks, initial calibrations, surrogates recoveries, internal standard performance, and blank results were acceptable. No problems were encountered during review of sample result verification.
2. Table 4 explains the compounds which exceeded the 25%D control limits in the continuing calibrations associated with sample 017S000101.

Table 4
Continuing Calibration Deficiencies

Compound	%D	Qualification
Vinyl Chloride	26.2	---
Acetone	57.2	J(+) UJ(ND)

NOTE: J(+) = Positive results were qualified as estimated "J."
UJ(ND) = Undetected results were qualified as estimated "UJ."

Vinyl chloride was accepted without qualification because the result was nondetect and the %D was less than 50%. Acetone was qualified as estimated "UJ" for a nondetect result because the %D was greater than 50%.

SVOC Fraction

1. All holding times, GC/MS instrument performance checks, surrogates recoveries, and internal standard performances were acceptable. No problems were encountered during review of sample result verification.
2. Table 5 explains the compounds which exceeded the 30%RSD and 25%D control limits in the initial and continuing calibrations, respectively, associated with sample 017S000101.

Table 5
Initial and Continuing Calibration Deficiencies

Calibration	Compound	%RSD/%D	Qualification
Initial	Hexachlorocyclopentadiene	52.7%RSD	J(+) UJ(ND)
	2,4-Dinitrophenol	32.4%RSD	---
Continuing	Hexachlorocyclopentadiene	30.4%D	---
	4-Nitrophenol	25.9%D	---

NOTE: J(+) = Positive results were qualified as estimated "J."
UJ(ND) = Undetected results were qualified as estimated "UJ."

Hexachlorocyclopentadiene was qualified as estimated "UJ" for a nondetect result in sample 017S000101 because the %RSD was greater than 50%. The remaining results in sample 017S000101 were accepted without qualification because the results were nondetect and the %RSDs and %Ds were less than 50%.

3. Bis(2-ethylhexyl)phthalate was detected in the method blank at a concentration of 67 µg/kg (action level of 670 µg/kg). Because the concentration in sample 017S000101 (2400 µg/kg) was less than the action level with a 20 fold dilution taken into consideration, the result was qualified as nondetect.

Pesticide/PCB Fraction

1. All holding times, surrogate recoveries, blank spike/blank spike duplicate recoveries, method blank results, instrument blank results, initial calibrations, and continuing calibrations were acceptable. No problems were encountered during review of sample result verification.

SWMU 19

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 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 # 1736

A validation was performed on the Volatile Data from SDG 1736. 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.

Field QC Blanks

Qualifications were required based on contamination noted in one (1) of the associated field QC blanks. 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 associated samples. These factors must be taken into consideration when applying the 5X or 10X criteria to field samples.

**DATA ASSESSMENT NARRATIVE
VOLATILE ANALYSIS**

PAGE - 2

Field QC Blanks, continued

	000T032096
acetone	3 µg/L
methylene chloride	3 µg/L

Specific Findings

<u>Samples</u>	<u>Compound</u>	<u>Action Level</u>	<u>Qualifications</u>
019S000201	acetone	30 µg/Kg	NA

System Performance and Overall Assessment

Overall performance was acceptable. The data reviewer estimates that 5% of data required qualifications. The laboratory reported results for total xylenes in two (2) samples (019S000101 and 019S000201) with Y flags to indicate that the total results were outside the calibration range but that the individual isomers did not exceed the calibration. The flags were removed by the reviewer because the samples were analyzed and quantitated appropriately.

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
019S000201	acetone	+	NA

- * 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 SW846 8270; 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 # 1736

A validation was performed on the Volatile Data from SDG 1736. 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

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. Qualifications are required.

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ANALYSIS

PAGE - 2

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, J820, 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).

019S000101	hexachlorocyclopentadiene (51.6%)
019S000201	2,4-dinitrophenol (55.9%)

System Performance and Overall Assessment

The overall system performance was fair. 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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
019S000101	hexachlorocyclopentadiene	+/-	J/UJ
019S000201	2,4-dinitrophenol		

- * 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 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 # 1736

A validation was performed on the Pesticide/Aroclor Data from SDG 1736. 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 toxaphene. No positive results were reported for the compounds analyzed with a single point calibration, therefore the data did not require qualification.

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

PAGE - 2

Continuing Calibrations

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

Specific Findings

The continuing calibration of 4/11/96 (20:56) contained a compound with a %D greater than 50% but less than 90%. For the samples and the non-compliant compound listed below, the positive results are qualified as estimated, J, and the non-detect results are qualified as estimated, UJ.

019S000101 4,4'-DDE (54.0%)

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
019S000101	4,4'-DDE	+/-	J/UJ
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 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 # 1736

A validation was performed on the Metals Data from SDG 1736. 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
- GFAA Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited negative bias for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Vanadium	-1.78 mg/kg	all soil samples below 17.8 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 (32%) and Zinc (33%) were below the lower control limits (<75% but >30%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Duplicate Analysis

Specific Findings

The laboratory duplicate analysis for Zinc (47%) was greater than 35%. All positive results are qualified as estimated, "J". The RPDs for Chromium (28%) and Lead (28%) were not greater than 35% and will not be qualified.

GFAA Post Digestion Spiking

Specific Finding

The post digestion spike recovery for GFAA was below the lower control limits (<75% but >10%). All positive and non-detect results for the listed samples below are qualified as estimated, "J" or "UJ".

<u>Element</u>	<u>Sample IDs</u>	<u>% recoveries</u>
Selenium	019S000101	80

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 below 17.8 mg/kg	V.	+/U	J/UJ
All soil samples	Sb and Zn.	+/U	J/UJ
All soil samples	Zn.	+	J
019S000101.	Se.	+/U	J/UJ
All "B" results	all analytes	B	J

SWMU 20

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, Method 8240 with CLP deliverables; 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 # 2066

A validation was performed on the Volatile Data from SDG 2066. 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

Continuing calibrations

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

DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 2

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, L2006, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

020GGB0147 acetone (59.1)
020HGB0147 2-hexanone (88.0)
020GGB0147DL

The continuing calibration, L2006, contained compounds with %Ds greater than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and reject all non detects (UR).

020GGB0147 2-butanone (97.9)
020HGB0147
020GGB0147DL

The continuing calibration, E2536, contained compounds with %Ds greater than 25% D but less than 50% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J).

030SGB0301DL acetone (29.3)
030SGB0301
020SBG0101
020SBG0201

The continuing calibration, E2580, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

030CGB0301 acetone (57.4)

DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 3

Field Duplicates

Specific Finding:

For the duplicate pair 020GGB0147 and 020HGB0147, exhibited RPDs that exceeded 30 %. Qualify the positive results for the compounds listed below, as estimated (J) and the non detects as estimated (UJ).

1,1-dichloroethene	(69%)
1,1,1-trichloroethane	(100%)
1,1,2-trichloroethane	(200%)
1,1-dichloroethane	(55%)

For the duplicate pair 030SBG0301 and 030CGB0301, exhibited RPDs that exceeded 30 %. Qualify the positive results for acetone (183%), as estimated (J) and the non detects as estimated (UJ).

Compound Identification/Quantitation

Specific Finding:

For the samples listed below, replace the "E" flagged results with the corresponding "D" flagged results in the diluted samples. For the diluted samples listed below, reject all results except for the "D" flagged results with corresponding "E" flagged results.

020GGB0147	020GGB0147DL
020HGB0147	020HGB0147DL
020SBG0413	020SBG0413DL
030SGB0301	030SGB0301DL

Reject all results for sample 030CGB0301DL, the dilution was not required.

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as reported requires 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.

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
020GGB0147 020HGB0147 020GGB0147DL	acetone (59.1) 2-hexanone (88.0)	+/-	J/UJ
020GGB0147 020HGB0147 020GGB0147DL	2-butanone (97.9)	+/-	J/UR
030SGB0301DL 030SGB0301 020SBG0101 020SBG0201	acetone (29.3)	+	J
030CGB0301	acetone (57.4)	+	J
020GGB0147 020HGB0147	1,1-dichloroethene 1,1,1-trichloroethene 1,1,2-trichloroethane 1,1-dichloroethane	+/-	J/UJ
030SBG0301 030CGB0301	acetone	+/-	J/UJ
020GGB0147 020HGB0147 020SBG0413 030SGB0301	All "E" flagged results	+	D
020GGB0147DL 020HGB0147DL 020SBG0413DL 030SGB0301DL	All results except for "D" flagged	+/-	UR
030CGB0301DL	All results	+/-	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 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 Method 8270 with CLP deliverables; 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 # 2066

A validation was performed on the Semivolatile Data from SDG 2066 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

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented 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

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 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 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 # 2066

A validation was performed on the Pesticide/PCB Data from SDG 2066. 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/Quantitation

* - All criteria were met for this parameter.

Surrogate Recoveries

Qualifications were required in two (2) samples which exhibited low DCB recoveries.

Specific Findings

Positive and non-detect results reported in the following samples are qualified as estimated, J/UJ, due to surrogate recoveries below the QC limits.

<u>Samples</u>	<u>Surrogate</u>	<u>% Recovery</u>
020SGB0101	DCB	69%
020SGB0201		65%/70%

**DATA ASSESSMENT NARRATIVE
CHLORINATED PESTICIDES/PCBs**

PAGE - 2

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 did not analyze a five (5) point curve for AR1221, AR1232, AR1242, AR1248, AR1254, toxaphene or technical chlordane prior to the sample analysis. No positive results were reported for the multi-component compounds, therefore the data did not require qualification. No qualifications were required.

System Performance and Overall Assessment

The data reviewer estimates that 50% 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

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
020SGB0101 020SGB0201	All Compounds	+/-	J/UJ

- * 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 HERBICIDES

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 8150; 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 # 2066

A validation was performed on the Chlorinated Herbicides from SDG 2066. 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.

Surrogate Recoveries

One (1) sample required qualifications due to a surrogate recovery below the QC limits.

Specific Findings

The following sample exhibited a surrogate recovery less than the QC limits. All positive and non-detect results reported in the sample are qualified as estimated, J/UJ.

<u>Sample</u>	<u>Surrogate</u>	<u>%R</u>
020SGB0101	DCAA	24%

**DATA ASSESSMENT NARRATIVE
CHLORINATED HERBICIDE ANALYSIS**

PAGE - 2

System Performance and Overall Assessment

The reviewer estimates that less than 30% 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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
020SGB0101	All Compounds	+/-	J/UJ

- * 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

ORGANOPHOSPHOROUS PESTICIDES

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 8140; 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 # 2066

A validation was performed on the Organophosphorous Pesticide Data from SDG 2066. 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.

System Performance and Overall Assessment

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

TPH - PURGEABLE (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2066

A validation was performed on the TPH (GRO) data from SDG 2066. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Overall Performance

The data did not require qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

- U** = Not detected
- J** = Estimated value
- UJ** = Reported Quantitation limit is qualified as estimated
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
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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

TPH - EXTRACTABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2066

A validation was performed on the TPH (DRO) data from SDG 2066. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Overall Performance

The data did not require qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

- U** = Not detected
- J** = Estimated value
- UJ** = Reported Quantitation limit is qualified as estimated
- UR** = 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 compound 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 compound 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 METALS, TPH 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 SW846 Methods; 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 # 2066

A validation was performed on the Metals, TPH and Cyanide Data from SDG 2066. 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
- GFAA Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Calibration Blanks

Specific Finding

The preparation and calibration blanks exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Barium	6.4 ug/l	no impact
Beryllium	0.014 mg/kg	no impact
Lead	0.77 mg/kg	no impact
Zinc	1.06 mg/kg	no impact

Tin 6.11 mg/kg all soil samples below 30.55 mg/kg

The USEPA requires that all sample values below five times the preparation, field, or 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.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Thallium	-0.30 mg/kg	all soil samples below 3.0 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 recovery for soils for Antimony (26.6%) was below 30%. All positive results are qualified as estimated, "J" and all non-detect results are rejected.

The Matrix Spike recoveries for soils for Arsenic (56%) and Selenium (58%) were below the lower control limits (<75% but >30%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Duplicate Analysis

Specific Findings

The difference for Nickel was not greater than 2 times the CRDL and will not be qualified.

Laboratory Control Standard

Specific Finding

The laboratory control standard for soils for TPH (130%) was above the upper control limits (>120%). All positive results are qualified as estimated, "J".

GFAA Post Digestion Spiking

Specific Finding

The post digestion spike recovery for GFAA was below the lower control limits (> 10% but < 85%). All positive and non-detect results for the listed samples below are qualified as estimated, "J" or "UJ".

<u>Element</u>	<u>Sample IDs</u>	<u>% recoveries</u>
Thallium	020SGB0101	76
Thallium	020SGB0201	77

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 below 30.55 mg/kg	Sn.	+	U
All soil samples below 3.0 mg/kg	Tl.	+/U	J/UJ
All soil samples	Sb.	+	J
		U	R
All soil samples	As and Se.	+/U	J/UJ
All soil samples	TPH.	+	J
020SGB0101 and 201.	Tl.	+/U	J/UJ
All "B" results	all analytes	B	J

SWMU 20
SCREENING SAMPLES

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
 CTO and Subtask No.: 0106-001-04-730-00
 Laboratory: Fibertec Environmental Services, Holt, Michigan
 Sample Delivery Group: 101924
 Matrix: Soil and Water
 DQO Level: III

Table 1
SDG 101924, SW846 8240 VOA Sample IDs

Sample ID	Sample ID	Sample ID
020SGB0101	022HGB0347	039SGB0202
020SGB0107	022SGB0401	039SGB0211
020SGB0113	022CGB0416	039GGB0214
020SGB0147	022SGB0416	039GGB0247
020SGB0207	022GGB0447	039SGB0301
020SGB0213	022HGB0447	039CGB0302
020GGB0244	022SGB0516	039SGB0302
020SGB0301	022SGB0616	039CGB0313
020SGB0307	022SGB0701	039SGB0313
020SGB0313	022SGB0716	039GGB0314
020SGB0401	030SGB0113	039GGB0343
020SGB0407	030GGB0138	039SGB0401
020SGB0413	030SGB0201	039SGB0402
020GGB0446	030SGB0213	039SGB0413
022SGB0101	030GGB0238	039GGB0413
022SGB0115	030SGB0301	039GGB0443
022GGB0145	030SGB0313	039SGB0501
022SGB0201	030SGB0413	039SGB0502
022SGB0216	030GGB0437	039SGB0513
022GGB0247	030SGB0501	039GGB0543
022SGB0301	030SGB0513	063SGB0101
022SGB0311	030GGB0545	063SGB0108
022SGB0313	039SGB0102	063SGB0116
022GGB0347	039SGB0113	063GGB0147
	039GGB0147	

VALIDATION RESULTS

All samples were received by the on-site laboratory intact and with the proper documentation between October 8 and October 31, 1996. The following section summarizes the data validation results. Tentatively identified compounds (TICs) have not been discussed in great detail because most compounds are quantitatively uncertain (many TICs are unidentifiable and are reported as unknowns).

Volatile Organic Compound Fraction

- All holding times were acceptable.
- Samples 039SGB0401, 039SGB0402, 039SGB0501, and 039SGB0102 were analyzed outside the 12-hour QC requirements for the bromofluorobenzene (BFB) GC/MS instrument performance check for October 16, 1996. None of these samples were reanalyzed. All compounds in these four samples were qualified as estimated "J" for positive results and "UJ" for nondetect results.
- The following compounds were outside the acceptable initial calibration criteria.

Table 2
Initial Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 10, 1996	Chloromethane	35.7	None	039GGB0343,
	Bromomethane	35.0	None	039CGB0302,
	Methylene Chloride	32.5	None	039SGB0202,
	Acetone	72.5	J (+)/UJ (ND)	039SGB0301
	2-Butanone	54.0	J (+)/UJ (ND)	
	1,1,2-Trichloroethane	36.9	None	
	Bromoform	60.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	109.0	J (+)/UJ (ND)	
	2-Hexanone	77.0	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	86.2	J (+)/UJ (ND)	
October 16, 1996	Chloromethane	36.3	None	All samples in
	Trichloroethene	35.6	None	this SDG except
	1,1,2-Trichloroethane	36.8	J (in 022SGB0301 and 022SGB0311 only)	039GGB0343, 039CGB0302, 039SGB0202,
	Bromoform	68.8	J (+)/UJ (ND)	and
	1,1,2,2-Tetrachloroethane	65.5	J (+)/UJ (ND)	039SGB0301

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results
UJ (ND) = Qualified estimated "UJ" for nondetect results

When the %RSD was > 30% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %RSD was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for

undetected results.

4. The following compounds were outside the acceptable continuing calibration criteria.

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 15, 1996	Chloromethane	64.8	No qualifiers were applied to samples because all samples were reanalyzed or earlier analyses were used for data interpretation. Results associated with this calibration were not supplied to EnSafe by Fibertec.	039SGB0301,
	Bromomethane	144.8		039SGB0401,
	Vinyl Chloride	110.7		039SGB0402,
	Methylene Chloride	132.8		039SGB0501,
	Acetone	106.6		039SGB0502,
	Carbon Disulfide	123.6		039SGB0102
	1,1-Dichloroethene	137.7		
	1,1-Dichloroethane	87.7		
	1,2-Dichloroethene (total)	123.3		
	Chloroform	108.0		
	2-Butanone	40.7		
	1,1,1-Trichloroethane	98.2		
	Carbon Tetrachloride	43.8		
	Bromodichloromethane	27.3		
	1,2-Dichloropropane	32.6		
	4-Methyl-2-Pentanone	57.4		
	2-Hexanone	42.9		
	Tetrachloroethene	65.9		
	1,1,2,2-Tetrachloroethane	99.0		
	Stryene	51.7		
Xylenes	35.9			
October 17, 1996	Chloromethane	44.6	None	039SGB0313,
	Vinyl Chloride	104.9	J (+)/UJ (ND)	039SGB0211,
	Methylene Chloride	28.3	J	039CGB0313,
	1,2-Dichloroethane	48.6	None	039SGB0102Dil,
	Carbon Tetrachloride	47.1	None	039SGB0502,
	cis-1,3-Dichloropropene	29.8	None	039GGB0214,
	Benzene	50.3	J (+)/UJ (ND)	039GGB0247,
	trans-1,3-Dichloropropene	37.8	None	039SGB0211Dil
	4-Methyl-2-Pentanone	45.	None	
	Xylenes	56.4	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 18, 1996	Chloromethane	-71.5	J (+)/UJ (ND)	022HGB0347,
	Vinyl Chloride	-40.0	None	022GGB0347,
	Carbon Disulfide	83.3	J (+)/UJ (ND)	022SGB0201,
	1,1-Dichloroethane	263.6	J (+)/UJ (ND)	022SGB0401,
	2-Butanone	57.8	J (+)/UJ (ND)	063SGB0101
	1,1,1-Trichloroethane	50.0	None	
	cis-1,3-Dichloropropene	33.3	None	
	1,1,2-Trichloroethane	33.3	None	
	trans-1,3-Dichloropropene	50.0	None	
	Bromoform	-40.0	None	
	4-Methyl-2-Pentanone	28.6	None	
	Tetrachloroethene	-33.3	None	
	Xylenes	71.4	J (+)/UJ (ND)	
	October 19, 1996	Chloromethane	69.4	J (+)/UJ (ND)
Methylene Chloride		36.1	J (+)	039SGB0413
Carbon Disulfide		58.8	J (+)/UJ (ND)	
1,2-Dichloroethane		60.0	J (+)/UJ (ND)	
2-Butanone		47.5	J (+)	
1,1,1-Trichloroethane		33.3	None	
Carbon Tetrachloride		58.8	J (+)/UJ (ND)	
Bromodichloromethane		33.6	None	
1,2-Dichloropropane		39.4	None	
cis-1,3-Dichloropropene		48.1	None	
1,1,2-Trichloroethane		28.6	J (+)	
Benzene		90.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		36.7	None	
Bromoform		63.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		80.9	J (+)/UJ (ND)	
2-Hexanone		128.4	J (+)/UJ (ND)	
Tetrachloroethene		30.8	None	
Toluene	36.4	None		
Ethylbenzene	42.3	J (+)		
Xylenes	94.3	J (+)/UJ (ND)		
October 21, 1996	Chloromethane	116.2	J (+)/UJ (ND)	022SGB0315,
	Vinyl Chloride	40.4	None	022SGB0311,
	Carbon Disulfide	56.0	J (+)/UJ (ND)	022SGB0416,
	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	022GGB0447,
	2-Butanone	37.8	J (+)	022HGB0447,
	1,1,1-Trichloroethane	33.3	None	022CGB0416,
	Carbon Tetrachloride	66.7	J (+)/UJ (ND)	063SGB0108,
	Bromodichloromethane	33.6	None	063SGB0116,
	cis-1,3-Dichloropropene	36.7	None	063GGB0147
	Benzene	83.1	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.4	None	
	Bromoform	53.2	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	33.6	None	
	Tetrachloroethene	32.6	None	
	Xylenes	66.7	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 22, 1996	Chloromethane	79.7	J (+)/UJ (ND)	030SGB0113,
	Bromomethane	30.9	None	030GGB0138
	Acetone	33.5	None	
	Carbon Disulfide	27.6	None	
	1,2-Dichloroethane	45.0	None	
	Carbon Tetrachloride	41.0	None	
	Bromodichloromethane	39.5	None	
	cis-1,3-Dichloropropene	28.4	None	
	Trichloroethene	38.1	None	
	Benzene	62.6	J (+)/UJ (ND)	
	Bromoform	67.9	J (+)/UJ (ND)	
	Tetrachloroethene	50.8	J (+)/UJ (ND)	
	Xylenes	56.4	J (+)/UJ (ND)	
October 24, 1996	Chloromethane	72.8	J (+)/UJ (ND)	022SGB0216,
	Bromomethane	79.2	J (+)/UJ (ND)	022GGB0247,
	Vinyl Chloride	32.6	None	022SGB0701,
	Methylene Chloride	49.4	None	022SGB0716,
	Acetone	63.4	J (+)/UJ (ND)	022SGB0616,
	1,1-Dichloroethane	59.8	J (+)/UJ (ND)	022SGB0516,
	1,2-Dichloroethane	36.1	None	030SGB0201,
	Carbon Tetrachloride	50.3	J (+)/UJ (ND)	030SGB0213
	Bromodichloromethane	47.5	None	
	1,2-Dichloropropane	28.0	None	
	cis-1,3-Dichloropropene	38.6	None	
	1,1,2-Trichloroethane	26.8	None	
	Benzene	68.2	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	40.4	None	
	Bromoform	56.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	40.0	None	
	Tetrachloroethene	41.9	J (+)	
	Ethylbenzene	32.3	J (+)	
	Xylenes	38.2	J (+)	
	October 25, 1996	Chloromethane	40.2	None
Vinyl Chloride		45.2	None	030GGB0238,
Carbon Disulfide		52.4	J (+)/UJ (ND)	030SGB0501,
1,2-Dichloroethane		56.8	J (+)/UJ (ND)	030GGB0545,
1,1,1-Trichloroethane		40.0	None	022SGB0115,
Carbon Tetrachloride		74.0	J (+)/UJ (ND)	022SGB0101
Bromodichloromethane		28.6	None	
Dibromochloromethane		49.7	None	
1,1,2-Trichloroethane		46.4	None	
Benzene		81.6	J (+)/UJ (ND)	
Bromoform		112.5	J (+)/UJ (ND)	
Tetrachloroethene		57.0	J (+)/UJ (ND)	
1,1,2,2-Tetrachloroethane		78.2	J (+)/UJ (ND)	
Xylenes		57.9	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 28, 1996	Chloromethane	110.6	J (+)/UJ (ND)	030SGB0413,
	Bromomethane	91.3	J (+)/UJ (ND)	030GGB0437,
	Vinyl Chloride	35.8	None	030SGB0313,
	Methylene Chloride	27.8	None	030SGB0301,
	Carbon Disulfide	36.0	J (+)	022GGB0145
	1,1-Dichloroethene	32.9	None	
	1,1-Dichloroethane	46.8	None	
	1,2-Dichloroethane	64.7	J (+)/UJ (ND)	
	2-Butanone	41.7	None	
	1,1,1-Trichloroethane	30.5	None	
	Carbon Tetrachloride	66.1	J (+)/UJ (ND)	
	Bromodichloromethane	56.7	J (+)/UJ (ND)	
	cis-1,3-Dichloropropene	28.3	None	
	Benzene	74.4	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.1	None	
	Bromoform	35.3	None	
	4-Methyl-2-Pentanone	62.9	J (+)/UJ (ND)	
	Tetrachloroethene	33.2	None	
	Xylenes	53.2	J (+)/UJ (ND)	
	October 29, 1996	Chloromethane	155.6	J (+)/UJ (ND)
Vinyl Chloride		29.1	None	020SGB0113,
Acetone		44.5	None	020SGB0101,
Carbon Disulfide		79.4	J (+)/UJ (ND)	020SGB0113Dil,
1,1-Dichloroethane		27.3	J (+)	020GGB0147Dil
1,2-Dichloroethane		54.1	J (+)/UJ (ND)	
2-Butanone		43.2	None	
1,1,1-Trichloroethane		31.8	J (+)	
Carbon Tetrachloride		67.4	J (+)/UJ (ND)	
Bromodichloromethane		41.1	None	
1,2-Dichloropropane		31.4	None	
cis-1,3-Dichloropropene		40.6	None	
Benzene		88.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		38.7	None	
Bromoform		53.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		65.0	J (+)/UJ (ND)	
Tetrachloroethene		28.1	None	
Xylenes		56.2	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 30, 1996	Chloromethane	29.3	None	020SGB0213,
	Vinyl Chloride	29.8	None	020SGB0207,
	Carbon Disulfide	51.8	J (+)/UJ (ND)	020GGB0244,
	1,2-Dichloroethane	79.8	J (+)/UJ (ND)	020SGB0413,
	2-Butanone	36.4	None	020SGB0407,
	Carbon Tetrachloride	50.0	None	020SGB0401,
	Benzene	75.6	J (+)/UJ (ND)	020GGB0446
	trans-1,3-Dichloropropene	28.6	None	
	Bromoform	73.6	J (+)/UJ (ND)	
	Tetrachloroethene	46.6	None	
	Ethylbenzene	30.6	None	
	Xylenes	44.4	None	
October 31, 1996	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	020SGB0301
	2-Butanone	36.4	None	020SGB0307
	1,1,1-Trichloroethane	26.1	J (+)	020SGB0313
	Carbon Tetrachloride	58.8	J (+)/UJ (ND)	
	Benzene	73.9	J (+)/UJ (ND)	
	Bromoform	74.3	J (+)/UJ (ND)	
	Tetrachloroethene	49.0	None	
	Xylenes	60.0	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

When the %D was > 25% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %D was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for undetected results.

- The surrogates exceeded the recommended control limits in several samples. Table 4 details the samples, the %Rs and the qualifications.

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
039GGB0343	Toluene-d8	115	88-110	None
039GGB0147	Dibromofluoromethane	130	86-118	None
	4-Bromofluorobenzene	126	86-115	
039GGB0247	Toluene-d8	112	88-110	J (+)
039GGB0413	4-Bromofluorobenzene	116	86-115	J (+)
030GGB0138	4-Bromofluorobenzene	136	86-115	None

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
022GGB0247	4-Bromofluorobenzene	116	86-115	None
030GGB0238	4-Bromofluorobenzene	116	86-115	None
022GGB0145	Dibromofluoromethane	129	86-118	None
	4-Bromofluorobenzene	157	86-115	
030GGB0545	Dibromofluoromethane	52	86-118	J (+)/ UJ (ND)
	4-Bromofluorobenzene	134	86-115	
030GGB0437	Dibromofluoromethane	76	86-115	J (+)/UJ (ND)
	4-Bromofluorobenzene	121		
020GGB0244	Dibromofluoromethane	123	86-118	None
020GGB0446	Dibromofluoromethane	119	86-118	None
039CGB0302	Toluene-d8	121	81-117	None
039SGB0202	Toluene-d8	127	81-117	None
039SGB0301	Toluene-d8	125	81-117	None
039SGB0302	Dibromofluoromethane	121	80-120	J (+)
	Toluene-d8	121	81-117	
022SGB0315	Dibromofluoromethane	122	80-120	J (+)
039SGB0313	Dibromofluoromethane	124	80-120	J (+)
022SGB0701	Dibromofluoromethane	121	80-120	None
030SGB0201	Dibromofluoromethane	128	80-120	None
030SGB0213	Dibromofluoromethane	125	80-120	None
022SGB0115	Dibromofluoromethane	129	80-120	None
030SGB0501	Dibromofluoromethane	123	80-120	None
	4-Bromofluorobenzene	122	74-121	
020SGB0401	Dibromofluoromethane	159	80-120	J (+)
020SGB0407	Dibromofluoromethane	124	80-120	J (+)
020SGB0413	Dibromofluoromethane	122	80-120	J (+)
020SGB0301	Dibromofluoromethane	154	80-120	J (+)
020SGB0307	Dibromofluoromethane	129	80-120	J (+)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

6. Several internal standards exceeded the recommended method control limits. Table 5 lists

the samples, their deficient internal standards, and their qualifications.

Table 5
Internal Standard Outliers

Sample ID	Internal Standard	Area	QC Limits	Qualification
039GGB0147	Pentafluorobenzene	326447	513060-2052240	All compounds were qualified UJ (ND)
	1,4-Difluorobenzene	510112	756770-3027082	
	Chlorobenzene-d5	477669	705741-2822964	
	1,4-Dichlorobenzene-d4	306748	527982-2111926	
039GGB0214	Pentafluorobenzene	245492	571299-2285196	All compounds were qualified as J (+)/UJ (ND)
	1,4-Difluorobenzene	377273	839921-3359682	
	Chlorobenzene-d5	346813	905890-3623558	
	1,4-Dichlorobenzene-d4	362068	785566-3142262	
022HGB0447	Pentafluorobenzene	6298333	363429-1453716	None
030SGB0113	Pentafluorobenzene	361113	442864-1771454	All compounds were qualified as UJ (ND)
	1,4-Difluorobenzene	697510	810218-3240870	
	Chlorobenzene-d5	788238	820372-3281498	
	1,4-Dichlorobenzene-d4	522646	594985-2379940	
022SGB0616	Chlorobenzene-d5	1021486	1064223-4256892	UJ (ND)
022SGB0716	Chlorobenzene-d5	1031855	1064223-4256892	UJ (ND)
030SGB0201	Chlorobenzene-d5	1034261	1064223-4256892	UJ (ND)
020SGB0401	Chlorobenzene-d5	706608	767443-3069772	UJ (ND)
	1,4-Dichlorobenzene-d4	415226	548389-2193554	
020SGB0301	1,4-Dichlorobenzene-d4	455318	463009-1852036	UJ (ND)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results.
UJ (ND) = Qualified estimated "UJ" for nondetect results.

Each internal standard is associated with particular analytes. They are as follows.

Pentafluorobenzene	1,4-Difluorobenzene	Chlorobenzene-d5	1,4-Dichlorobenzene-d4
Chloromethane	1,2-Dichloroethane	Dibromochloromethane	1,1,2,2-Tetrachloroethane
Bromomethane	Carbon Tetrachloride	Bromoform	
Vinyl Chloride	Bromodichloromethane	2-Hexanone	
Methylene Chloride	1,2-Dichloropropane	Tetrachloroethene	
Acetone	cis-1,3-Dichloropropene	Chlorobenzene	
Carbon disulfide	Trichloroethene	Ethylbenzene	
1,1-Dichloroethane	1,1,2-Trichloroethane	Styrene	
1,1-Dichloroethane	Benzene	1,3-Dichloropropane	
1,2-Dichloroethane (total)	trans-1,3-Dichloropropene	m-Xylene	
Chloroform	4-Methyl-2-Pentanone	o-Xylene	
2-Butanone	Toluene		
1,1,1-Trichloroethane			
Dichlorodifluoromethane			
Trichlorofluoromethane			

When an internal standard area was greater than the upper control limit, then only positive results in the associated analytes were qualified as estimated "J;" undetected results were accepted "as is," without qualification. When the internal standard area was less than the lower control limits, then all results in the associated analytes were qualified as estimated "J" for positive results and "UJ" for undetected results.

7. Samples 022GGB0347, 039SGB0302, 039SGB0211, 022SGB0416, and 030SGB0113 were used for MS/MSD samples. Table 6 lists the samples whose %Rs or RPDs exceeded the recommended control limits.

Table 6
Matrix Spike/ Matrix Spike Outliers

Sample ID	Analyte	%R	QC Limits	RPD	QC Limits
039SGB0302	Benzene	—	—	25	21
	Chlorobenzene	140 (MSD)	60-133	45	21
039SGB0211	Trichloroethene	—	—	28	24

Chlorobenzene and benzene in sample 039SGB0302 were not qualified because only one %R and the RPD alone, respectively, were outside the QC limits. Trichloroethene was not qualified in sample 039SGB0211 because only the RPD exceeded the QC limits.

8. Fourteen method blanks and eight trip blanks were analyzed with this SDG. Table 7 lists the blanks that demonstrated positive detections and the samples that were negated due to the detections.

Table 7
Blank Detections

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
022T101896	Trip Blank	Methylene Chloride	11	110	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101896	Method Blank	Methylene Chloride	21	210	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101996	Method Blank	Methylene Chloride	10	100	022SGB0301	None
					039SGB0413	U

**Table 7
Blank Detections**

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
VBLK102196	Method Blank	Methylene Chloride	12	120	022SGB0311	U
					022SGB0315	U
					022CGB0416	U
					022SGB0416	U
					022GGB0447	U
					022HGB0447	U
					063SGB0108	U
					063SGB0116	U
					063GGB0147	None

9. Samples 022GGB0347 and 022HGB0347, 022CGB0416 and 022SGB0416, 022GGB0447 and 022HGB0447, 039CGB0302 and 039SGB0302, and 039CGB0313 and 039SGB0313 were analyzed as field duplicates. The RPDs of ethylbenzene in samples 022GGB0347 and 022HGB0347 (33.3%) and carbon disulfide in samples 039CGB0302 and 039SGB0302 (118.4) exceeded the 30% QC limit for water samples an 50% QC limit for soil samples, respectively. Ethyl benzene was qualified as estimated "J" in samples 022GGB0347 and 022HGB0347 while carbon disulfide as qualified as "UJ" in sample 039CGB0302 and "J" in sample 039SGB0302.

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
CTO and Subtask No.: 0106-001-04-730-00
Laboratory: Environmental Testing and Consulting, Memphis, Tennessee
Sample Delivery Group: 9611760
Matrix: Soil and Water
DQO Level: Modified II

Table 1

SDG 9611760, SW846 8240 VOA Sample IDs

020SGB0507	020SGB0513
020SGB0607	020SGB0613
022SGB0847	

VALIDATION RESULTS

All samples were received by Environmental Testing and Consulting intact and with the proper documentation on November 25, 1996.

Volatile Organic Compound Fraction

All holding times, surrogate %Rs, and field and rinsate blank results were acceptable. A method blank and MS/MSD was not reported with this SDG.

SWMU 22

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 # 2045

A validation was performed on the Volatile Data from SDG 2045. 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

Blanks

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 associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria to field samples.

DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 2

Field Blank

<u>Associated blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Action Level</u>
039F101696	acetone	5J ug/L	50 ug/L

<u>Samples</u>	<u>Compound</u>	<u>Qualification</u>
039SGB0443	acetone	U

System Performance and Overall Assessment

The data reviewer estimates that less than 5% of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
039SGB0443	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 SW846 8270; 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 # 2045

A validation was performed on the Semivolatile Data from SDG 2045. 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

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data reviewer estimates that none of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

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 # 2045

A validation was performed on the Pesticide/Aroclor Data from SDG 2045. 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 did not analyze a five (5) point curve for all multi-component compounds in all sequences. No positive results were reported for the compounds analyzed with a single point calibration, therefore the data did not require qualification.

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

PAGE - 2

Compound Identification/Quantitation

One (1) sample exhibited a column quantitation %D greater than 40%. Qualifications were required per the EnSafe guidelines. Results were qualified as presumptively present at an estimated concentration (NJ) if the exhibited %Ds greater than 70% and one (1) or more of the following : were outside the calibration range, the result of a dilution, or above 10X the CRQL (professional opinion).

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 70% and are less than 10X the CRQL are reported as undetected, U.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
ALL	All P > 70% And < 10X CRQL	+	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 NARRATIVE

CHLORINATED HERBICIDES

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 8150; 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 # 2045

A validation was performed on the Herbicide Data from SDG 2045. 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.

Continuing Calibrations

One (1) continuing calibration standard associated with the reported samples exhibited %Ds above the QC limits and required qualifications.

**DATA ASSESSMENT NARRATIVE
CHLORINATED HERBICIDES**

PAGE 2

Continuing Calibrations, Continued

Specific Findings

The continuing calibration of 11/01/96 (19:16) contained a compound with a %D greater than 50% but less than 90%. For the samples and the non-compliant compound listed below, the positive results are qualified as estimated, J, and the non-detect results are qualified as estimated, UJ.

022SGB0301 2,4-DB (56.3%)

System Performance and Overall Assessment

The reviewer estimates less than 15% 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
022SGB0301	2,4-DB	+/-	J/UJ

- * 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

ORGANOPHOSPHORUS PESTICIDES

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 8140; 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 # 2045

A validation was performed on the Organophosphorus Pesticide Data from SDG 2045. 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.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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 NARRATIVE

TPH - PURGEABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2045

A validation was performed on the TPH (GRO) data from SDG 2045. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Surrogate Recoveries

Specific Finding

The following sample exhibited a surrogate recovery which is above the QC limit. All reported positive results in the sample are qualified as estimated, J.

<u>Sample ID</u>	<u>Surrogate</u>	<u>% Recovery</u>
022SGB0301	SMC1	346%

**DATA ASSESSMENT NARRATIVE
TPH - PURGEABLES (GRO)**

PAGE 2

Overall Performance

The reviewer estimates that 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
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
022SGB0301	All Compounds	+	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

TPH - EXTRACTABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2045

A validation was performed on the TPH (DRO) data from SDG 2045. The data was evaluated based on the following parameters.

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

* - All criteria were met for this parameter.

Compound Quantitation

Specific Finding

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

022SGB0301

**DATA ASSESSMENT NARRATIVE
DRO ANALYSIS**

PAGE-2

System Performance and Overall Assessment

The reviewer estimates that 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
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
022SGB0301	All E flagged compounds	+E	D
022SGB0301DL	All except corresponding D flagged results	+/-	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, TPH 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 SW 846 Methods Appendix 9 Metals and 418.1 for TPH; 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 # 2045

A validation was performed on the Metals, TPH and Cyanide Data from SDG 2045. 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
- Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Arsenic	0.46 mg/kg	no impact
Selenium	0.21 mg/kg	all soil samples below 1.05 mg/kg
Zinc	1.00 mg/kg	no impact
Tin	5.39 mg/kg	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 equipment Rinsate blank exhibited low levels of contamination but were not used for qualification.

Matrix Spike Recovery

Specific Finding

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

The Matrix Spike recoveries for soils for Cadmium (71%) and Selenium (55%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Post Digestion Spiking

Specific Finding

The post digestion spike recovery for GFAA was below the lower control limits (>10% but <85%). All positive and non-detect results for the listed samples below are qualified as estimated, "J" or "UJ".

<u>Element</u>	<u>Sample IDs</u>	<u>% recoveries</u>
Selenium	022SBG0301	63

The post digestion spike recovery for GFAA was above the upper control limits (>115%). All positive results for the listed samples below are qualified as estimated, "J".

<u>Element</u>	<u>Sample IDs</u>	<u>% recoveries</u>
Thallium	022SBG0301	115.2

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 Ensaf's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all soil samples below 1.05 mg/kg	Se.	+	U
all soil samples	Sb.	+	J
		U	R
all soil samples	Cd and Se.	+/U	J/UJ
022SBG0301.	Se.	+/U	J/UJ
022SBG0301.	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, Method 8240 with CLP deliverables; 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 # 2056

A validation was performed on the Volatile Data from SDG 2056. 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

Continuing calibrations

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

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
030SGB0513	2-butanone (88.7) 2-hexanone (59.5)	+/-	J/UJ
030SGB0513	acetone (91.7)	+/-	J/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 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 Method 8270 with CLP deliverables; 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 # 2056

A validation was performed on the Semivolatile Data from SDG 2056 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

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented 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

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 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 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 # 2056

A validation was performed on the Pesticide/PCB Data from SDG 2056. 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/Quantitation

* - All criteria were met for this parameter.

Compound Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 40%. Qualifications were required per the EnSafe guidelines. Results were qualified as presumptively present at an estimated concentration (NJ) if they exhibited %Ds greater than 70% and one (1) or more of the following: outside the calibration range, the result of a dilution, or above 10X the CRQL (professional opinion).

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 70% and are less than 10X the CRQL are reported as undetected, U.

**DATA ASSESSMENT NARRATIVE
CHLORINATED PESTICIDES/PCBs**

PAGE - 2

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 did not analyze a five (5) point curve for AR1221, AR1232, AR1242, AR1248, AR1254, toxaphene or technical chlordane prior to the sample analysis. No positive results were reported for the multi-component compounds, therefore the data did not require qualification. No qualifications were required.

System Performance and Overall Assessment

The data reviewer estimates that 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

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
All Samples	All P flagged >70%, & <10X CRQL	+P	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 NARRATIVE

CHLORINATED HERBICIDES

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 8150; 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 # 2056

A validation was performed on the Chlorinated Herbicides from SDG 2056. 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.

Compound Identification/Quantitation

One (1) sample exhibited column quantitation %Ds greater than 40%. Qualifications were required per the EnSafe guidelines.

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 40% and less than 70% are qualified as presumptively present at an estimated concentration, NJ.

System Performance and Overall Assessment

The 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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
All Samples	All P >40% & ≤ 70%,	+P	NJ

- * 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

ORGANOPHOSPHOROUS PESTICIDES

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 8140; 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 # 2056

A validation was performed on the Organophosphorous Pesticide Data from SDG 2056. 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.

System Performance and Overall Assessment

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

TPH - PURGEABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2056

A validation was performed on the TPH (GRO) data from SDG 2056. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Blanks

The associated rinse blank, 022E102496, and field blank, 022F102496, exhibited contamination for TPH-GRO. 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 associated samples. These factors must be taken into consideration when applying the 5X criteria to field samples.

DATA ASSESSMENT NARRATIVE
TPH-GRO ANALYSIS
PAGE 2

Rinseate Blanks

<u>Associated blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>CRQL</u>	<u>Action Level</u>
022E102496	TPH-GRO	52 ug/L	50 ug/L	260ug/kg
022F102496	TPH-GRO	50 ug/L	50 ug/L	250ug/kg

<u>Samples</u>	<u>Compound</u>	<u>Qualification</u>
022SGB0401	TPH-GRO	U

Overall Performance

The data reviewer estimates that less than 15% 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
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
022SGB0401	TPH-GRO	+	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 NARRATIVE

TPH - EXTRACTABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2056

A validation was performed on the TPH (DRO) data from SDG 2056. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Overall Performance

The data did not require qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

- U** = Not detected
- J** = Estimated value
- UJ** = Reported Quantitation limit is qualified as estimated
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
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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, TPH 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 SW846 Methods; 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 # 2056

A validation was performed on the Metals, TPH and Cyanide Data from SDG 2056. 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
- * ● GFAA Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Calibration Blanks

Specific Finding

The preparation and calibration blanks exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Beryllium	0.038 mg/kg	no impact
Zinc	0.54 mg/kg	no impact

The USEPA requires that all sample values below five times the preparation, field, or 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.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Barium	-0.11 mg/kg	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 (32%) and Selenium (70%) were below the lower control limits (<75% but >30%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Duplicate Analysis

Specific Findings

The RPDs for soils for Arsenic (31%) and Zinc (21%) were not greater than 35% and the difference for Nickel was not greater than 2 times the CRDL and will not be qualified.

Laboratory Control Standard

Specific Finding

The laboratory control standard for soils for TPH (130%) was above the upper control limits (>120%). All positive results are qualified as estimated, "J".

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	Sb and Se.	+/U	J/UJ
All soil samples	TPH.	+	J
All "B" results	all analytes	B	J

E/A&H VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
CTO and Subtask No.: 0106-04730
Laboratory: National Environmental Testing, Inc.
Sample Delivery Group: 2105
Matrix: Water and Soil

Samples and Analysis:

Sample ID	VOA
022GGB1047	X
039SGB0610	X
039SGB0713	X
039SGB0817	X
039SGB0913	X
039SGB0917	X

VALIDATION RESULTS

All samples were received by the laboratory intact and with the proper documentation on November 27, 1996. The following sections summarize the data validation results. Tentatively identified compounds have not been discussed in great detail, because most compounds are quantitatively uncertain (many TICs are unidentifiable and are reported as unknowns).

Volatile Organic Compound Fraction

1. All holding times, GC/MS instrument performance checks, surrogate recoveries, blank results, and internal standard performance were acceptable. No problems were encountered during review of sample result verification.
2. In the initial calibration analyzed by instrument HP5970L on December 5, 1996, acetone displayed a %RSD of 31.7%, which was outside acceptable criteria. No positive results were detected the only associated sample, 022GGB1047. The undetected result for acetone was not flagged because the %RSD was less than 50%.
3. In the continuing calibrations, several compounds had %Ds outside acceptable criteria. The following table identifies the deficient continuing calibrations, the analytes which exceeded the %D control limits, the qualifications, and the associated samples.

Table 1 - Continuing Calibration Deficiencies

Date	Instrument ID	Analyte	%D	Qualification	Associated Samples
12/03/96	HP5970E	Chloromethane	47.2	None	039SGB0713 039SGB0917
		Bromomethane	27.1		
		Vinyl Chloride	39.5		
		Chloroethane	25.7		
		Carbon Disulfide	30.4		
12/04/96	HP5970E	Chloromethane	30.8	None	039SGB0913
		4-Methyl-2-pentanone	29.9		
		2-Hexanone	32.6		
		Xylene	27.0		
12/05/96	HP5970E	Chloromethane	34.4	J	039SGB0817
		Vinyl Chloride	26.5		
		Acetone	28.8		
		Carbon Disulfide	26.6		
		2-Butanone	37.1		
		4-Methyl-2-pentanone	57.8		
2-Hexanone	46.0				
12/06/96	HP5970H	Chloromethane	30.7	None	039SGB0610
		Bromomethane	34.7		
		Chloroethane	27.5		

All samples, with the exception of 039SGB0817 were accepted without qualification because all associated %Ds were less than 50%. Acetone and 4-methyl-2-pentanone were qualified as estimated "J" and "UJ," respectively, because acetone displayed a positive detection and the %D for 4-methyl-2-pentanone was greater than 50%.

SWMU 22

SCREENING SAMPLES

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
 CTO and Subtask No.: 0106-001-04-730-00
 Laboratory: Fibertec Environmental Services, Holt, Michigan
 Sample Delivery Group: 101924
 Matrix: Soil and Water
 DQO Level: III

Table 1
SDG 101924, SW846 8240 VOA Sample IDs

Sample ID	Sample ID	Sample ID
020SGB0101	022HGB0347	039SGB0202
020SGB0107	022SGB0401	039SGB0211
020SGB0113	022CGB0416	039GGB0214
020SGB0147	022SGB0416	039GGB0247
020SGB0207	022GGB0447	039SGB0301
020SGB0213	022HGB0447	039CGB0302
020GGB0244	022SGB0516	039SGB0302
020SGB0301	022SGB0616	039CGB0313
020SGB0307	022SGB0701	039SGB0313
020SGB0313	022SGB0716	039GGB0314
020SGB0401	030SGB0113	039GGB0343
020SGB0407	030GGB0138	039SGB0401
020SGB0413	030SGB0201	039SGB0402
020GGB0446	030SGB0213	039SGB0413
022SGB0101	030GGB0238	039GGB0413
022SGB0115	030SGB0301	039GGB0443
022GGB0145	030SGB0313	039SGB0501
022SGB0201	030SGB0413	039SGB0502
022SGB0216	030GGB0437	039SGB0513
022GGB0247	030SGB0501	039GGB0543
022SGB0301	030SGB0513	063SGB0101
022SGB0311	030GGB0545	063SGB0108
022SGB0315	039SGB0102	063SGB0116
022GGB0347	039SGB0113	063GGB0147
	039GGB0147	

VALIDATION RESULTS

All samples were received by the on-site laboratory intact and with the proper documentation between October 8 and October 31, 1996. The following section summarizes the data validation results. Tentatively identified compounds (TICs) have not been discussed in great detail because most compounds are quantitatively uncertain (many TICs are unidentifiable and are reported as unknowns).

Volatile Organic Compound Fraction

- All holding times were acceptable.
- Samples 039SGB0401, 039SGB0402, 039SGB0501, and 039SGB0102 were analyzed outside the 12-hour QC requirements for the bromofluorobenzene (BFB) GC/MS instrument performance check for October 16, 1996. None of these samples were reanalyzed. All compounds in these four samples were qualified as estimated "J" for positive results and "UJ" for nondetect results.
- The following compounds were outside the acceptable initial calibration criteria.

Table 2
Initial Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 10, 1996	Chloromethane	35.7	None	039GGB0343,
	Bromomethane	35.0	None	039CGB0302,
	Methylene Chloride	32.5	None	039SGB0202,
	Acetone	72.5	J (+)/UJ (ND)	039SGB0301
	2-Butanone	54.0	J (+)/UJ (ND)	
	1,1,2-Trichloroethane	36.9	None	
	Bromoform	60.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	109.0	J (+)/UJ (ND)	
	2-Hexanone	77.0	J (+)/UJ (ND)	
1,1,2,2-Tetrachloroethane	86.2	J (+)/UJ (ND)		
October 16, 1996	Chloromethane	36.3	None	All samples in this SDG except 039GGB0343, 039CGB0302, 039SGB0202, and 039SGB0301
	Trichloroethene	35.6	None	
	1,1,2-Trichloroethane	36.8	J (in 022SGB0301 and 022SGB0311 only)	
	Bromoform	68.8	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	65.5	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results
 UJ (ND) = Qualified estimated "UJ" for nondetect results

When the %RSD was > 30% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %RSD was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for

undetected results.

4. The following compounds were outside the acceptable continuing calibration criteria.

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 15, 1996	Chloromethane	64.8	No qualifiers were applied to samples because all samples were reanalyzed or earlier analyses were used for data interpretation. Results associated with this calibration were not supplied to EnSafe by Fibertec.	039SGB0301,
	Bromomethane	144.8		039SGB0401,
	Vinyl Chloride	110.7		039SGB0402,
	Methylene Chloride	132.8		039SGB0501,
	Acetone	106.6		039SGB0502,
	Carbon Disulfide	123.6		039SGB0102
	1,1-Dichloroethene	137.7		
	1,1-Dichloroethane	87.7		
	1,2-Dichloroethene (total)	123.3		
	Chloroform	108.0		
	2-Butanone	40.7		
	1,1,1-Trichloroethane	98.2		
	Carbon Tetrachloride	43.8		
	Bromodichloromethane	27.3		
	1,2-Dichloropropane	32.6		
	4-Methyl-2-Pentanone	57.4		
	2-Hexanone	42.9		
	Tetrachloroethene	65.9		
	1,1,2,2-Tetrachloroethane	99.0		
	Stryene	51.7		
Xylenes	35.9			
October 17, 1996	Chloromethane	44.6	None	039SGB0313,
	Vinyl Chloride	104.9	J (+)/UJ (ND)	039SGB0211,
	Methylene Chloride	28.3	J	039CGB0313,
	1,2-Dichloroethane	48.6	None	039SGB0102Dil,
	Carbon Tetrachloride	47.1	None	039SGB0502,
	cis-1,3-Dichloropropene	29.8	None	039GGB0214,
	Benzene	50.3	J (+)/UJ (ND)	039GGB0247,
	trans-1,3-Dichloropropene	37.8	None	039SGB0211Dil
	4-Methyl-2-Pentanone	45.	None	
	Xylenes	56.4	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 18, 1996	Chloromethane	-71.5	J (+)/UJ (ND)	022HGB0347,
	Vinyl Chloride	-40.0	None	022GGB0347,
	Carbon Disulfide	83.3	J (+)/UJ (ND)	022SGB0201,
	1,1-Dichloroethane	263.6	J (+)/UJ (ND)	022SGB0401,
	2-Butanone	57.8	J (+)/UJ (ND)	063SGB0101
	1,1,1-Trichloroethane	50.0	None	
	cis-1,3-Dichloropropene	33.3	None	
	1,1,2-Trichloroethane	33.3	None	
	trans-1,3-Dichloropropene	50.0	None	
	Bromoform	-40.0	None	
	4-Methyl-2-Pentanone	28.6	None	
	Tetrachloroethene	-33.3	None	
	Xylenes	71.4	J (+)/UJ (ND)	
	October 19, 1996	Chloromethane	69.4	J (+)/UJ (ND)
Methylene Chloride		36.1	J (+)	039SGB0413
Carbon Disulfide		58.8	J (+)/UJ (ND)	
1,2-Dichloroethane		60.0	J (+)/UJ (ND)	
2-Butanone		47.5	J (+)	
1,1,1-Trichloroethane		33.3	None	
Carbon Tetrachloride		58.8	J (+)/UJ (ND)	
Bromodichloromethane		33.6	None	
1,2-Dichloropropane		39.4	None	
cis-1,3-Dichloropropene		48.1	None	
1,1,2-Trichloroethane		28.6	J (+)	
Benzene		90.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		36.7	None	
Bromoform		63.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		80.9	J (+)/UJ (ND)	
2-Hexanone		128.4	J (+)/UJ (ND)	
Tetrachloroethene		30.8	None	
Toluene		36.4	None	
Ethylbenzene		42.3	J (+)	
Xylenes	94.3	J (+)/UJ (ND)		
October 21, 1996	Chloromethane	116.2	J (+)/UJ (ND)	022SGB0315,
	Vinyl Chloride	40.4	None	022SGB0311,
	Carbon Disulfide	56.0	J (+)/UJ (ND)	022SGB0416,
	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	022GGB0447,
	2-Butanone	37.8	J (+)	022HGB0447,
	1,1,1-Trichloroethane	33.3	None	022CGB0416,
	Carbon Tetrachloride	66.7	J (+)/UJ (ND)	063SGB0108,
	Bromodichloromethane	33.6	None	063SGB0116,
	cis-1,3-Dichloropropene	36.7	None	063GGB0147
	Benzene	83.1	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.4	None	
	Bromoform	53.2	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	33.6	None	
	Tetrachloroethene	32.6	None	
	Xylenes	66.7	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 22, 1996	Chloromethane	79.7	J (+)/UJ (ND)	030SGB0113,
	Bromomethane	30.9	None	030GGB0138
	Acetone	33.5	None	
	Carbon Disulfide	27.6	None	
	1,2-Dichloroethane	45.0	None	
	Carbon Tetrachloride	41.0	None	
	Bromodichloromethane	39.5	None	
	cis-1,3-Dichloropropene	28.4	None	
	Trichloroethene	38.1	None	
	Benzene	62.6	J (+)/UJ (ND)	
	Bromoform	67.9	J (+)/UJ (ND)	
	Tetrachloroethene	50.8	J (+)/UJ (ND)	
	Xylenes	56.4	J (+)/UJ (ND)	
October 24, 1996	Chloromethane	72.8	J (+)/UJ (ND)	022SGB0216,
	Bromomethane	79.2	J (+)/UJ (ND)	022GGB0247,
	Vinyl Chloride	32.6	None	022SGB0701,
	Methylene Chloride	49.4	None	022SGB0716,
	Acetone	63.4	J (+)/UJ (ND)	022SGB0616,
	1,1-Dichloroethane	59.8	J (+)/UJ (ND)	022SGB0516,
	1,2-Dichloroethane	36.1	None	030SGB0201,
	Carbon Tetrachloride	50.3	J (+)/UJ (ND)	030SGB0213
	Bromodichloromethane	47.5	None	
	1,2-Dichloropropane	28.0	None	
	cis-1,3-Dichloropropene	38.6	None	
	1,1,2-Trichloroethane	26.8	None	
	Benzene	68.2	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	40.4	None	
	Bromoform	56.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	40.0	None	
	Tetrachloroethene	41.9	J (+)	
	Ethylbenzene	32.3	J (+)	
	Xylenes	38.2	J (+)	
	October 25, 1996	Chloromethane	40.2	None
Vinyl Chloride		45.2	None	030GGB0238,
Carbon Disulfide		52.4	J (+)/UJ (ND)	030SGB0501,
1,2-Dichloroethane		56.8	J (+)/UJ (ND)	030GGB0545,
1,1,1-Trichloroethane		40.0	None	022SGB0115,
Carbon Tetrachloride		74.0	J (+)/UJ (ND)	022SGB0101
Bromodichloromethane		28.6	None	
Dibromochloromethane		49.7	None	
1,1,2-Trichloroethane		46.4	None	
Benzene		81.6	J (+)/UJ (ND)	
Bromoform		112.5	J (+)/UJ (ND)	
Tetrachloroethene		57.0	J (+)/UJ (ND)	
1,1,2,2-Tetrachloroethane		78.2	J (+)/UJ (ND)	
Xylenes		57.9	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 28, 1996	Chloromethane	110.6	J (+)/UJ (ND)	030SGB0413,
	Bromomethane	91.3	J (+)/UJ (ND)	030GGB0437,
	Vinyl Chloride	35.8	None	030SGB0313,
	Methylene Chloride	27.8	None	030SGB0301,
	Carbon Disulfide	36.0	J (+)	022GGB0145
	1,1-Dichloroethene	32.9	None	
	1,1-Dichloroethane	46.8	None	
	1,2-Dichloroethane	64.7	J (+)/UJ (ND)	
	2-Butanone	41.7	None	
	1,1,1-Trichloroethane	30.5	None	
	Carbon Tetrachloride	66.1	J (+)/UJ (ND)	
	Bromodichloromethane	56.7	J (+)/UJ (ND)	
	cis-1,3-Dichloropropene	28.3	None	
	Benzene	74.4	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.1	None	
	Bromoform	35.3	None	
	4-Methyl-2-Pentanone	62.9	J (+)/UJ (ND)	
	Tetrachloroethene	33.2	None	
Xylenes	53.2	J (+)/UJ (ND)		
October 29, 1996	Chloromethane	155.6	J (+)/UJ (ND)	020SGB0107,
	Vinyl Chloride	29.1	None	020SGB0113,
	Acetone	44.5	None	020SGB0101,
	Carbon Disulfide	79.4	J (+)/UJ (ND)	020SGB0113DiI,
	1,1-Dichloroethane	27.3	J (+)	020GGB0147DiI
	1,2-Dichloroethane	54.1	J (+)/UJ (ND)	
	2-Butanone	43.2	None	
	1,1,1-Trichloroethane	31.8	J (+)	
	Carbon Tetrachloride	67.4	J (+)/UJ (ND)	
	Bromodichloromethane	41.1	None	
	1,2-Dichloropropane	31.4	None	
	cis-1,3-Dichloropropene	40.6	None	
	Benzene	88.2	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.7	None	
	Bromoform	53.2	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	65.0	J (+)/UJ (ND)	
Tetrachloroethene	28.1	None		
Xylenes	56.2	J (+)/UJ (ND)		

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 30, 1996	Chloromethane	29.3	None	020SGB0213,
	Vinyl Chloride	29.8	None	020SGB0207,
	Carbon Disulfide	51.8	J (+)/UJ (ND)	020GGB0244,
	1,2-Dichloroethane	79.8	J (+)/UJ (ND)	020SGB0413,
	2-Butanone	36.4	None	020SGB0407,
	Carbon Tetrachloride	50.0	None	020SGB0401,
	Benzene	75.6	J (+)/UJ (ND)	020GGB0446
	trans-1,3-Dichloropropene	28.6	None	
	Bromoform	73.6	J (+)/UJ (ND)	
	Tetrachloroethene	46.6	None	
	Ethylbenzene	30.6	None	
	Xylenes	44.4	None	
October 31, 1996	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	020SGB0301
	2-Butanone	36.4	None	020SGB0307
	1,1,1-Trichloroethane	26.1	J (+)	020SGB0313
	Carbon Tetrachloride	58.8	J (+)/UJ (ND)	
	Benzene	73.9	J (+)/UJ (ND)	
	Bromoform	74.3	J (+)/UJ (ND)	
	Tetrachloroethene	49.0	None	
	Xylenes	60.0	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

When the %D was > 25% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %D was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for undetected results.

5. The surrogates exceeded the recommended control limits in several samples. Table 4 details the samples, the %Rs and the qualifications.

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
039GGB0343	Toluene-d8	115	88-110	None
039GGB0147	Dibromofluoromethane	130	86-118	None
	4-Bromofluorobenzene	126	86-115	
039GGB0247	Toluene-d8	112	88-110	J (+)
039GGB0413	4-Bromofluorobenzene	116	86-115	J (+)
030GGB0138	4-Bromofluorobenzene	136	86-115	None

**Table 4
Surrogate Outliers**

Sample ID	Surrogate	%R	QC Limits	Qualification
022GGB0247	4-Bromofluorobenzene	116	86-115	None
030GGB0238	4-Bromofluorobenzene	116	86-115	None
022GGB0145	Dibromofluoromethane	129	86-118	None
	4-Bromofluorobenzene	157	86-115	
030GGB0545	Dibromofluoromethane	52	86-118	J (+)/ UJ (ND)
	4-Bromofluorobenzene	134	86-115	
030GGB0437	Dibromofluoromethane	76	86-115	J (+)/UJ (ND)
	4-Bromofluorobenzene	121		
020GGB0244	Dibromofluoromethane	123	86-118	None
020GGB0446	Dibromofluoromethane	119	86-118	None
039CGB0302	Toluene-d8	121	81-117	None
039SGB0202	Toluene-d8	127	81-117	None
039SGB0301	Toluene-d8	125	81-117	None
039SGB0302	Dibromofluoromethane	121	80-120	J (+)
	Toluene-d8	121	81-117	
022SGB0315	Dibromofluoromethane	122	80-120	J (+)
039SGB0313	Dibromofluoromethane	124	80-120	J (+)
022SGB0701	Dibromofluoromethane	121	80-120	None
030SGB0201	Dibromofluoromethane	128	80-120	None
030SGB0213	Dibromofluoromethane	125	80-120	None
022SGB0115	Dibromofluoromethane	129	80-120	None
030SGB0501	Dibromofluoromethane	123	80-120	None
	4-Bromofluorobenzene	122	74-121	
020SGB0401	Dibromofluoromethane	159	80-120	J (+)
020SGB0407	Dibromofluoromethane	124	80-120	J (+)
020SGB0413	Dibromofluoromethane	122	80-120	J (+)
020SGB0301	Dibromofluoromethane	154	80-120	J (+)
020SGB0307	Dibromofluoromethane	129	80-120	J (+)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

6. Several internal standards exceeded the recommended method control limits. Table 5 lists

the samples, their deficient internal standards, and their qualifications.

Table 5
Internal Standard Outliers

Sample ID	Internal Standard	Area	QC Limits	Qualification
039GGB0147	Pentafluorobenzene	326447	513060-2052240	All compounds were qualified UJ (ND)
	1,4-Difluorobenzene	510112	756770-3027082	
	Chlorobenzene-d5	477669	705741-2822964	
	1,4-Dichlorobenzene-d4	306748	527982-2111926	
039GGB0214	Pentafluorobenzene	245492	571299-2285196	All compounds were qualified as J (+)/UJ (ND)
	1,4-Difluorobenzene	377273	839921-3359682	
	Chlorobenzene-d5	346813	905890-3623558	
	1,4-Dichlorobenzene-d4	362068	785566-3142262	
022HGB0447	Pentafluorobenzene	6298333	363429-1453716	None
030SGB0113	Pentafluorobenzene	361113	442864-1771454	All compounds were qualified as UJ (ND)
	1,4-Difluorobenzene	697510	810218-3240870	
	Chlorobenzene-d5	788238	820372-3281498	
	1,4-Dichlorobenzene-d4	522646	594985-2379940	
022SGB0616	Chlorobenzene-d5	1021486	1064223-4256892	UJ (ND)
022SGB0716	Chlorobenzene-d5	1031855	1064223-4256892	UJ (ND)
030SGB0201	Chlorobenzene-d5	1034261	1064223-4256892	UJ (ND)
020SGB0401	Chlorobenzene-d5	706608	767443-3069772	UJ (ND)
	1,4-Dichlorobenzene-d4	415226	548389-2193554	
020SGB0301	1,4-Dichlorobenzene-d4	455318	463009-1852036	UJ (ND)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results.
UJ (ND) = Qualified estimated "UJ" for nondetect results.

Each internal standard is associated with particular analytes. They are as follows.

Pentafluorobenzene	1,4-Difluorobenzene	Chlorobenzene-d5	1,4-Dichlorobenzene-d4
Chloromethane	1,2-Dichloroethane	Dibromochloromethane	1,1,2,2-Tetrachloroethane
Bromomethane	Carbon Tetrachloride	Bromoform	
Vinyl Chloride	Bromodichloromethane	2-Hexanone	
Methylene Chloride	1,2-Dichloropropane	Tetrachloroethene	
Acetone	cis-1,3-Dichloropropene	Chlorobenzene	
Carbon disulfide	Trichloroethene	Ethylbenzene	
1,1-Dichloroethene	1,1,2-Trichloroethane	Styrene	
1,1-Dichloroethane	Benzene	1,3-Dichloropropane	
1,2-Dichloroethene (total)	trans-1,3-Dichloropropene	m-Xylene	
Chloroform	4-Methyl-2-Pentanone	o-Xylene	
2-Butanone	Toluene		
1,1,1-Trichloroethane			
Dichlorodifluoromethane			
Trichlorofluoromethane			

When an internal standard area was greater than the upper control limit, then only positive results in the associated analytes were qualified as estimated "J;" undetected results were accepted "as is," without qualification. When the internal standard area was less than the lower control limits, then all results in the associated analytes were qualified as estimated "J" for positive results and "UJ" for undetected results.

7. Samples 022GGB0347, 039SGB0302, 039SGB0211, 022SGB0416, and 030SGB0113 were used for MS/MSD samples. Table 6 lists the samples whose %Rs or RPDs exceeded the recommended control limits.

Table 6
Matrix Spike/ Matrix Spike Outliers

Sample ID	Analyte	%R	QC Limits	RPD	QC Limits
039SGB0302	Benzene	—	—	25	21
	Chlorobenzene	140 (MSD)	60-133	45	21
039SGB0211	Trichloroethene	—	—	28	24

Chlorobenzene and benzene in sample 039SGB0302 were not qualified because only one %R and the RPD alone, respectively, were outside the QC limits. Trichloroethene was not qualified in sample 039SGB0211 because only the RPD exceeded the QC limits.

8. Fourteen method blanks and eight trip blanks were analyzed with this SDG. Table 7 lists the blanks that demonstrated positive detections and the samples that were negated due to the detections.

Table 7
Blank Detections

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
022T101896	Trip Blank	Methylene Chloride	11	110	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101896	Method Blank	Methylene Chloride	21	210	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101996	Method Blank	Methylene Chloride	10	100	022SGB0301	None
					039SGB0413	U

**Table 7
Blank Detections**

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
VBLK102196	Method Blank	Methylene Chloride	12	120	022SGB0311	U
					022SGB0315	U
					022CGB0416	U
					022SGB0416	U
					022GGB0447	U
					022HGB0447	U
					063SGB0108	U
					063SGB0116	U
					063GGB0147	None

9. Samples 022GGB0347 and 022HGB0347, 022CGB0416 and 022SGB0416, 022GGB0447 and 022HGB0447, 039CGB0302 and 039SGB0302, and 039CGB0313 and 039SGB0313 were analyzed as field duplicates. The RPDs of ethylbenzene in samples 022GGB0347 and 022HGB0347 (33.3%) and carbon disulfide in samples 039CGB0302 and 039SGB0302 (118.4) exceeded the 30% QC limit for water samples an 50% QC limit for soil samples, respectively. Ethyl benzene was qualified as estimated "J" in samples 022GGB0347 and 022HGB0347 while carbon disulfide as qualified as "UJ" in sample 039CGB0302 and "J" in sample 039SGB0302.

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
CTO and Subtask No.: 0106-001-04-730-00
Laboratory: Environmental Testing and Consulting, Memphis, Tennessee
Sample Delivery Group: 9611760
Matrix: Soil and Water
DQO Level: Modified II

Table 1

SDG 9611760, SW846 8240 VOA Sample IDs	
020SGB0507	020SGB0513
020SGB0607	020SGB0613
022SGB0847	

VALIDATION RESULTS

All samples were received by Environmental Testing and Consulting intact and with the proper documentation on November 25, 1996.

Volatile Organic Compound Fraction

All holding times, surrogate %Rs, and field and rinsate blank results were acceptable. A method blank and MS/MSD was not reported with this SDG.

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
CTO and Subtask No.: 0106-001-04-730-00
Laboratory: Environmental Testing and Consulting, Memphis, Tennessee
Sample Delivery Group: 9611855
Matrix: Soil and Water
DQO Level: Modified II

Table 1

SDG 9611855, SW846 8240 VOA Sample IDs

022GGB0947	039CGB0910
022GGB1047	039SGB0910
039SGB0610	039SGB0913
039SGB0613	039SGB0917
039SGB0617	039CGB1010
039SGB0710	039SGB1010
039SGB0713	039SGB1013
039SGB0717	039SGB1017
039SGB0810	039GGB1148
039SGB0813	039HGB1148
039SGB0817	039GGB1248

VALIDATION RESULTS

All samples were received by Environmental Testing and Consulting intact and with the proper documentation on November 26 and 27, 1996.

Volatile Organic Compound Fraction

All holding times, and field and rinsate blank results were acceptable. A method blank and MS/MSD was not reported with this SDG.

The %R of surrogate compound 1,2-dichloroethane-d4 exceeded the control limits in samples 039SGB0910 (129%), 039SGB0913 (130%), 039SGB1010 (142%), and 039SGB1013 (139%). Because the %Rs exceeded the upper control limits, only positive results were to be qualified as estimated "J." Since there were no positive results in any of these samples, all results were accepted "as is" without qualification.

Samples 039SGB0910 and 039CGB0910, 039SGB1010 and 039CGB1010, and 039GGB1148 and

039HGB1148 were analyzed as field duplicate pairs. All results in these samples were undetected; therefore, all RPDs were within method criteria.

SWMU 30

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 # 2035

A validation was performed on the Volatile Data from SDG 2035. 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 data reviewer estimates that none of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

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 # 2035

A validation was performed on the Semivolatile Data from SDG 2035. 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

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data reviewer estimates that none of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

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 # 2035

A validation was performed on the Pesticide/Aroclor Data from SDG 2035. 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 and toxaphene. No positive results were reported for the compounds analyzed with a single point calibration, therefore the data did not require qualification.

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

PAGE - 2

Continuing Calibrations

One (1) continuing calibration standard associated with the reported samples exhibited %Ds above the QC limits and required qualifications.

Specific Findings

The continuing calibration of 10/15/96 (19:16) 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.

039SGB0201 4,4'-DDD (17.9%)

Surrogate Recoveries

Two (2) field samples exhibited non-compliant TCX or DCB recoveries and required qualifications.

Specific Findings

The sample listed below exhibited a low TCX recovery. The positive results are qualified as estimated, J, and the non-detect results are qualified as estimated, UJ.

<u>Sample ID</u>	<u>Surrogate</u>	<u>% Recovery</u>
039SGB0101	TCX-2	60%

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

<u>Sample ID</u>	<u>Surrogate</u>	<u>% Recovery</u>
039SGB0201	DCB-1/DCB-2	245%/228%

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

PAGE - 3

Compound Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 40%. Qualifications were required per the EnSafe guidelines. Results were qualified as presumptively present at an estimated concentration (NJ) if the exhibited %Ds greater than 70% and one (1) or more of the following : were outside the calibration range, the result of a dilution, or above 10X the CRQL (professional opinion). One (1) sample required dilution to accurately quantitate target compounds.

Specific Findings

For the following sample, the results for the E flagged compounds are rejected and replaced with the results reported from the DL analysis. All other results from the dilution are rejected, UR.

039SGB0201

The positive results reported in all samples which exhibited column quantitation differences greater than 40% but less than 70% are qualified as presumptively present at an estimated concentration, NJ.

The positive results reported in all samples which exhibited column quantitation differences greater than 70% and are less than 10X the CRQL are reported as undetected, U.

The positive results reported in all samples which exhibited column quantitation differences greater than 70% and one (1) of the following: results greater than 10X the CRQL, outside the calibration range, or the result of a dilution, are qualified as presumptively present at an estimated concentration, NJ.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
039SGB0201	4,4'-DDD	+	J
039SGB0101	ALL	+/-	J/UJ
039SGB0201	ALL	+	J
039SGB0201	All E flagged	+	D
039SGB0201DL	All except corresponding D flagged results	+/-	UR
ALL	All P > 40% But ≤ 70%	+	NJ
ALL	All P > 70% And < 10X CRQL	+	U
ALL	All P > 70% And > 10X CRQL, > cal. range, or result of dilution	+	NJ

- * 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

ORGANOPHOSPHORUS PESTICIDES

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 8140; 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 # 2035

A validation was performed on the Organophosphorus Pesticide Data from SDG 2035. 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.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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 NARRATIVE

TPH - PURGEABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2035

A validation was performed on the TPH (GRO) data from SDG 2035. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Blanks

The associated rinse blank, 039E101196, exhibited contamination for TPH-GRO. 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 associated samples. These factors must be taken into consideration when applying the 5X criteria to field samples.

Rinseate Blanks

<u>Associated blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>CRQL</u>	<u>Action Level</u>
039E101196	TPH-GRO	54 ug/L	50 ug/L	270ug/kg

<u>Samples</u>	<u>Compound</u>	<u>Qualification</u>
030SGB0101, 030SGB0401, 039SGB0101	TPH-GRO	U

Overall Performance

The data reviewer estimates that less than 15% 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
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
030SGB0101	TPH-GRO	+	U
030SGB0401	TPH-GRO	+	U
039SGB0101	TPH-GRO	+	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 NARRATIVE

TPH - EXTRACTABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2035

A validation was performed on the TPH (DRO) data from SDG 2035. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Overall Performance

The data did not require qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

- U** = Not detected
- J** = Estimated value
- UJ** = Reported Quantitation limit is qualified as estimated
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
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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, TPH 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 SW 846 Methods Appendix 9 Metals and 418.1 TPH; 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 # 2035

A validation was performed on the Metals, TPH and Cyanide Data from SDG 2035. 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
- Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Beryllium	0.27 mg/kg	all soil samples below 1.35 mg/kg
Zinc	0.39 mg/kg	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 equipment Rinsate blank exhibited low levels of contamination but were not used for qualification.

The preparation blank exhibited negative bias for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Barium	-0.40 mg/kg	no impact
Cadmium	-0.45 mg/kg	all soil samples below 4.5 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 (33%) and Arsenic (47%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Field and Laboratory Duplicates

Specific Finding

The difference for soils for Arsenic was greater than two times the CRDL. All positive results are qualified as estimated, "J".

Serial Dilution

Specific Finding

The Serial dilution for Beryllium (20%) was greater than 10%. All positive results are qualified as estimated, "J".

Post Digestion Spiking

Specific Finding

The post digestion spike recovery for GFAA was above the upper control limits (>115%). All positive results for the listed samples below are qualified as estimated, "J".

Element
Thallium

Sample IDs
039SGB0201

% recoveries
116

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 below 1.35 mg/kg	Be.	+	U
all soil samples below 4.5 mg/kg	Cd.	+/U	J/UJ
all soil samples	Sb and As.	+/U	J/UJ
all soil samples	As.	+	J
all soil samples	Be.	+	J
039SGB0201.	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, Method 8240 with CLP deliverables; 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 # 2056

A validation was performed on the Volatile Data from SDG 2056. 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

Continuing calibrations

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

DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 2

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, E2551, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

030SGB0513	2-butanone (88.7)
	2-hexanone (59.5)

The continuing calibration, E2551, contained compounds with %Ds greater than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and reject all non detects (UR).

030SGB0513	acetone (91.7)
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System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as reported requires 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.

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
030SGB0513	2-butanone (88.7) 2-hexanone (59.5)	+/-	J/UJ
030SGB0513	acetone (91.7)	+/-	J/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 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, Method 8240 with CLP deliverables; 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 # 2066

A validation was performed on the Volatile Data from SDG 2066. 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

Continuing calibrations

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

DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 2

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, L2006, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

020GGB0147	acetone (59.1)
020HGB0147	2-hexanone (88.0)
020GGB0147DL	

The continuing calibration, L2006, contained compounds with %Ds greater than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and reject all non detects (UR).

020GGB0147	2-butanone (97.9)
020HGB0147	
020GGB0147DL	

The continuing calibration, E2536, contained compounds with %Ds greater than 25% D but less than 50% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J).

030SGB0301DL	acetone (29.3)
030SGB0301	
020SBG0101	
020SBG0201	

The continuing calibration, E2580, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

030CGB0301	acetone (57.4)
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DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 3

Field Duplicates

Specific Finding:

For the duplicate pair 020GGB0147 and 020HGB0147, exhibited RPDs that exceeded 30 %. Qualify the positive results for the compounds listed below, as estimated (J) and the non detects as estimated (UJ).

1,1-dichloroethene	(69%)
1,1,1-trichloroethane	(100%)
1,1,2-trichloroethane	(200%)
1,1-dichloroethane	(55%)

For the duplicate pair 030SBG0301 and 030CGB0301, exhibited RPDs that exceeded 30 %. Qualify the positive results for acetone (183%), as estimated (J) and the non detects as estimated (UJ).

Compound Identification/Quantitation

Specific Finding:

For the samples listed below, replace the "E" flagged results with the corresponding "D" flagged results in the diluted samples. For the diluted samples listed below, reject all results except for the "D" flagged results with corresponding "E" flagged results.

020GGB0147	020GGB0147DL
020HGB0147	020HGB0147DL
020SBG0413	020SBG0413DL
030SGB0301	030SGB0301DL

Reject all results for sample 030CGB0301DL, the dilution was not required.

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as reported requires qualifications.

004

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
020GGB0147 020HGB0147 020GGB0147DL	acetone (59.1) 2-hexanone (88.0)	+/-	J/UJ
020GGB0147 020HGB0147 020GGB0147DL	2-butanone (97.9)	+/-	J/UR
030SGB0301DL 030SGB0301 020SBG0101 020SBG0201	acetone (29.3)	+	J
030CGB0301	acetone (57.4)	+	J
020GGB0147 020HGB0147	1,1-dichloroethene 1,1,1-trichloroethene 1,1,2-trichloroethane 1,1-dichloroethane	+/-	J/UJ
030SBG0301 030CGB0301	acetone	+/-	J/UJ
020GGB0147 020HGB0147 020SBG0413 030SGB0301	All "E" flagged results	+	D
020GGB0147DL 020HGB0147DL 020SBG0413DL 030SGB0301DL	All results except for "D" flagged	+/-	UR
030CGB0301DL	All results	+/-	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

SWMU 30
SCREENING SAMPLES

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
 CTO and Subtask No.: 0106-001-04-730-00
 Laboratory: Fibertec Environmental Services, Holt, Michigan
 Sample Delivery Group: 101924
 Matrix: Soil and Water
 DQO Level: III

Table 1
SDG 101924, SW846 8240 VOA Sample IDs

Sample ID	Sample ID	Sample ID
020SGB0101	022HGB0347	039SGB0202
020SGB0107	022SGB0401	039SGB0211
020SGB0113	022CGB0416	039GGB0214
020SGB0147	022SGB0416	039GGB0247
020SGB0207	022GGB0447	039SGB0301
020SGB0213	022HGB0447	039CGB0302
020GGB0244	022SGB0516	039SGB0302
020SGB0301	022SGB0616	039CGB0313
020SGB0307	022SGB0701	039SGB0313
020SGB0313	022SGB0716	039GGB0314
020SGB0401	030SGB0113	039GGB0343
020SGB0407	030GGB0138	039SGB0401
020SGB0413	030SGB0201	039SGB0402
020GGB0446	030SGB0213	039SGB0413
022SGB0101	030GGB0238	039GGB0413
022SGB0115	030SGB0301	039GGB0443
022GGB0145	030SGB0313	039SGB0501
022SGB0201	030SGB0413	039SGB0502
022SGB0216	030GGB0437	039SGB0513
022GGB0247	030SGB0501	039GGB0543
022SGB0301	030SGB0513	063SGB0101
022SGB0311	030GGB0545	063SGB0108
022SGB0315	039SGB0102	063SGB0116
022GGB0347	039SGB0113	063GGB0147
	039GGB0147	

VALIDATION RESULTS

All samples were received by the on-site laboratory intact and with the proper documentation between October 8 and October 31, 1996. The following section summarizes the data validation results. Tentatively identified compounds (TICs) have not been discussed in great detail because most compounds are quantitatively uncertain (many TICs are unidentifiable and are reported as unknowns).

Volatile Organic Compound Fraction

1. All holding times were acceptable.
2. Samples 039SGB0401, 039SGB0402, 039SGB0501, and 039SGB0102 were analyzed outside the 12-hour QC requirements for the bromofluorobenzene (BFB) GC/MS instrument performance check for October 16, 1996. None of these samples were reanalyzed. All compounds in these four samples were qualified as estimated "J" for positive results and "UJ" for nondetect results.
3. The following compounds were outside the acceptable initial calibration criteria.

Table 2
Initial Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 10, 1996	Chloromethane	35.7	None	039GGB0343,
	Bromomethane	35.0	None	039CGB0302,
	Methylene Chloride	32.5	None	039SGB0202,
	Acetone	72.5	J (+)/UJ (ND)	039SGB0301
	2-Butanone	54.0	J (+)/UJ (ND)	
	1,1,2-Trichloroethane	36.9	None	
	Bromoform	60.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	109.0	J (+)/UJ (ND)	
	2-Hexanone	77.0	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	86.2	J (+)/UJ (ND)	
October 16, 1996	Chloromethane	36.3	None	All samples in this SDG except 039GGB0343, 039CGB0302, 039SGB0202, and 039SGB0301
	Trichloroethene	35.6	None	
	1,1,2-Trichloroethane	36.8	J (in 022SGB0301 and 022SGB0311 only)	
	Bromoform	68.8	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	65.5	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results
UJ (ND) = Qualified estimated "UJ" for nondetect results

When the %RSD was > 30% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %RSD was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for

undetected results.

4. The following compounds were outside the acceptable continuing calibration criteria.

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 15, 1996	Chloromethane	64.8	No qualifiers were applied to samples because all samples were reanalyzed or earlier analyses were used for data interpretation. Results associated with this calibration were not supplied to EnSafe by Fibertec.	039SGB0301,
	Bromomethane	144.8		039SGB0401,
	Vinyl Chloride	110.7		039SGB0402,
	Methylene Chloride	132.8		039SGB0501,
	Acetone	106.6		039SGB0502,
	Carbon Disulfide	123.6		039SGB0102
	1,1-Dichloroethene	137.7		
	1,1-Dichloroethane	87.7		
	1,2-Dichloroethene (total)	123.3		
	Chloroform	108.0		
	2-Butanone	40.7		
	1,1,1-Trichloroethane	98.2		
	Carbon Tetrachloride	43.8		
	Bromodichloromethane	27.3		
	1,2-Dichloropropane	32.6		
	4-Methyl-2-Pentanone	57.4		
	2-Hexanone	42.9		
	Tetrachloroethene	65.9		
	1,1,2,2-Tetrachloroethane	99.0		
	Stryene	51.7		
Xylenes	35.9			
October 17, 1996	Chloromethane	44.6	None	039SGB0313,
	Vinyl Chloride	104.9	J (+)/UJ (ND)	039SGB0211,
	Methylene Chloride	28.3	J	039CGB0313,
	1,2-Dichloroethane	48.6	None	039SGB0102Dil,
	Carbon Tetrachloride	47.1	None	039SGB0502,
	cis-1,3-Dichloropropene	29.8	None	039GGB0214,
	Benzene	50.3	J (+)/UJ (ND)	039GGB0247,
	trans-1,3-Dichloropropene	37.8	None	039SGB0211Dil
	4-Methyl-2-Pentanone	45.	None	
	Xylenes	56.4	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 18, 1996	Chloromethane	-71.5	J (+)/UJ (ND)	022HGB0347,
	Vinyl Chloride	-40.0	None	022GGB0347,
	Carbon Disulfide	83.3	J (+)/UJ (ND)	022SGB0201,
	1,1-Dichloroethane	263.6	J (+)/UJ (ND)	022SGB0401,
	2-Butanone	57.8	J (+)/UJ (ND)	063SGB0101
	1,1,1-Trichloroethane	50.0	None	
	cis-1,3-Dichloropropene	33.3	None	
	1,1,2-Trichloroethane	33.3	None	
	trans-1,3-Dichloropropene	50.0	None	
	Bromoform	-40.0	None	
	4-Methyl-2-Pentanone	28.6	None	
	Tetrachloroethene	-33.3	None	
	Xylenes	71.4	J (+)/UJ (ND)	
	October 19, 1996	Chloromethane	69.4	J (+)/UJ (ND)
Methylene Chloride		36.1	J (+)	039SGB0413
Carbon Disulfide		58.8	J (+)/UJ (ND)	
1,2-Dichloroethane		60.0	J (+)/UJ (ND)	
2-Butanone		47.5	J (+)	
1,1,1-Trichloroethane		33.3	None	
Carbon Tetrachloride		58.8	J (+)/UJ (ND)	
Bromodichloromethane		33.6	None	
1,2-Dichloropropane		39.4	None	
cis-1,3-Dichloropropene		48.1	None	
1,1,2-Trichloroethane		28.6	J (+)	
Benzene		90.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		36.7	None	
Bromoform		63.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		80.9	J (+)/UJ (ND)	
2-Hexanone		128.4	J (+)/UJ (ND)	
Tetrachloroethene		30.8	None	
Toluene		36.4	None	
Ethylbenzene	42.3	J (+)		
Xylenes	94.3	J (+)/UJ (ND)		
October 21, 1996	Chloromethane	116.2	J (+)/UJ (ND)	022SGB0315,
	Vinyl Chloride	40.4	None	022SGB0311,
	Carbon Disulfide	56.0	J (+)/UJ (ND)	022SGB0416,
	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	022GGB0447,
	2-Butanone	37.8	J (+)	022HGB0447,
	1,1,1-Trichloroethane	33.3	None	022CGB0416,
	Carbon Tetrachloride	66.7	J (+)/UJ (ND)	063SGB0108,
	Bromodichloromethane	33.6	None	063SGB0116,
	cis-1,3-Dichloropropene	36.7	None	063GGB0147
	Benzene	83.1	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.4	None	
	Bromoform	53.2	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	33.6	None	
	Tetrachloroethene	32.6	None	
	Xylenes	66.7	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 22, 1996	Chloromethane	79.7	J (+)/UJ (ND)	030SGB0113,
	Bromomethane	30.9	None	030GGB0138
	Acetone	33.5	None	
	Carbon Disulfide	27.6	None	
	1,2-Dichloroethane	45.0	None	
	Carbon Tetrachloride	41.0	None	
	Bromodichloromethane	39.5	None	
	cis-1,3-Dichloropropene	28.4	None	
	Trichloroethene	38.1	None	
	Benzene	62.6	J (+)/UJ (ND)	
	Bromoform	67.9	J (+)/UJ (ND)	
	Tetrachloroethene	50.8	J (+)/UJ (ND)	
	Xylenes	56.4	J (+)/UJ (ND)	
	October 24, 1996	Chloromethane	72.8	J (+)/UJ (ND)
Bromomethane		79.2	J (+)/UJ (ND)	022GGB0247,
Vinyl Chloride		32.6	None	022SGB0701,
Methylene Chloride		49.4	None	022SGB0716,
Acetone		63.4	J (+)/UJ (ND)	022SGB0616,
1,1-Dichloroethane		59.8	J (+)/UJ (ND)	022SGB0516,
1,2-Dichloroethane		36.1	None	030SGB0201,
Carbon Tetrachloride		50.3	J (+)/UJ (ND)	030SGB0213
Bromodichloromethane		47.5	None	
1,2-Dichloropropane		28.0	None	
cis-1,3-Dichloropropene		38.6	None	
1,1,2-Trichloroethane		26.8	None	
Benzene		68.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		40.4	None	
Bromoform		56.1	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		40.0	None	
Tetrachloroethene		41.9	J (+)	
Ethylbenzene		32.3	J (+)	
Xylenes		38.2	J (+)	
October 25, 1996		Chloromethane	40.2	None
	Vinyl Chloride	45.2	None	030GGB0238,
	Carbon Disulfide	52.4	J (+)/UJ (ND)	030SGB0501,
	1,2-Dichloroethane	56.8	J (+)/UJ (ND)	030GGB0545,
	1,1,1-Trichloroethane	40.0	None	022SGB0115,
	Carbon Tetrachloride	74.0	J (+)/UJ (ND)	022SGB0101
	Bromodichloromethane	28.6	None	
	Dibromochloromethane	49.7	None	
	1,1,2-Trichloroethane	46.4	None	
	Benzene	81.6	J (+)/UJ (ND)	
	Bromoform	112.5	J (+)/UJ (ND)	
	Tetrachloroethene	57.0	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	78.2	J (+)/UJ (ND)	
	Xylenes	57.9	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 28, 1996	Chloromethane	110.6	J (+)/UJ (ND)	030SGB0413,
	Bromomethane	91.3	J (+)/UJ (ND)	030GGB0437,
	Vinyl Chloride	35.8	None	030SGB0313,
	Methylene Chloride	27.8	None	030SGB0301,
	Carbon Disulfide	36.0	J (+)	022GGB0145
	1,1-Dichloroethene	32.9	None	
	1,1-Dichloroethane	46.8	None	
	1,2-Dichloroethane	64.7	J (+)/UJ (ND)	
	2-Butanone	41.7	None	
	1,1,1-Trichloroethane	30.5	None	
	Carbon Tetrachloride	66.1	J (+)/UJ (ND)	
	Bromodichloromethane	56.7	J (+)/UJ (ND)	
	cis-1,3-Dichloropropene	28.3	None	
	Benzene	74.4	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.1	None	
	Bromoform	35.3	None	
	4-Methyl-2-Pentanone	62.9	J (+)/UJ (ND)	
	Tetrachloroethene	33.2	None	
	Xylenes	53.2	J (+)/UJ (ND)	
	October 29, 1996	Chloromethane	155.6	J (+)/UJ (ND)
Vinyl Chloride		29.1	None	020SGB0113,
Acetone		44.5	None	020SGB0101,
Carbon Disulfide		79.4	J (+)/UJ (ND)	020SGB0113Dil,
1,1-Dichloroethane		27.3	J (+)	020GGB0147Dil
1,2-Dichloroethane		54.1	J (+)/UJ (ND)	
2-Butanone		43.2	None	
1,1,1-Trichloroethane		31.8	J (+)	
Carbon Tetrachloride		67.4	J (+)/UJ (ND)	
Bromodichloromethane		41.1	None	
1,2-Dichloropropane		31.4	None	
cis-1,3-Dichloropropene		40.6	None	
Benzene		88.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		38.7	None	
Bromoform		53.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		65.0	J (+)/UJ (ND)	
Tetrachloroethene		28.1	None	
Xylenes	56.2	J (+)/UJ (ND)		

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 30, 1996	Chloromethane	29.3	None	020SGB0213,
	Vinyl Chloride	29.8	None	020SGB0207,
	Carbon Disulfide	51.8	J (+)/UJ (ND)	020GGB0244,
	1,2-Dichloroethane	79.8	J (+)/UJ (ND)	020SGB0413,
	2-Butanone	36.4	None	020SGB0407,
	Carbon Tetrachloride	50.0	None	020SGB0401,
	Benzene	75.6	J (+)/UJ (ND)	020GGB0446
	trans-1,3-Dichloropropene	28.6	None	
	Bromoform	73.6	J (+)/UJ (ND)	
	Tetrachloroethene	46.6	None	
	Ethylbenzene	30.6	None	
	Xylenes	44.4	None	
October 31, 1996	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	020SGB0301
	2-Butanone	36.4	None	020SGB0307
	1,1,1-Trichloroethane	26.1	J (+)	020SGB0313
	Carbon Tetrachloride	58.8	J (+)/UJ (ND)	
	Benzene	73.9	J (+)/UJ (ND)	
	Bromoform	74.3	J (+)/UJ (ND)	
	Tetrachloroethene	49.0	None	
Xylenes	60.0	J (+)/UJ (ND)		

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

When the %D was > 25% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %D was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for undetected results.

- The surrogates exceeded the recommended control limits in several samples. Table 4 details the samples, the %Rs and the qualifications.

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
039GGB0343	Toluene-d8	115	88-110	None
039GGB0147	Dibromofluoromethane	130	86-118	None
	4-Bromofluorobenzene	126	86-115	
039GGB0247	Toluene-d8	112	88-110	J (+)
039GGB0413	4-Bromofluorobenzene	116	86-115	J (+)
030GGB0138	4-Bromofluorobenzene	136	86-115	None

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
022GGB0247	4-Bromofluorobenzene	116	86-115	None
030GGB0238	4-Bromofluorobenzene	116	86-115	None
022GGB0145	Dibromofluoromethane	129	86-118	None
	4-Bromofluorobenzene	157	86-115	
030GGB0545	Dibromofluoromethane	52	86-118	J (+)/ UJ (ND)
	4-Bromofluorobenzene	134	86-115	
030GGB0437	Dibromofluoromethane	76	86-115	J (+)/UJ (ND)
	4-Bromofluorobenzene	121		
020GGB0244	Dibromofluoromethane	123	86-118	None
020GGB0446	Dibromofluoromethane	119	86-118	None
039CGB0302	Toluene-d8	121	81-117	None
039SGB0202	Toluene-d8	127	81-117	None
039SGB0301	Toluene-d8	125	81-117	None
039SGB0302	Dibromofluoromethane	121	80-120	J (+)
	Toluene-d8	121	81-117	
022SGB0315	Dibromofluoromethane	122	80-120	J (+)
039SGB0313	Dibromofluoromethane	124	80-120	J (+)
022SGB0701	Dibromofluoromethane	121	80-120	None
030SGB0201	Dibromofluoromethane	128	80-120	None
030SGB0213	Dibromofluoromethane	125	80-120	None
022SGB0115	Dibromofluoromethane	129	80-120	None
030SGB0501	Dibromofluoromethane	123	80-120	None
	4-Bromofluorobenzene	122	74-121	
020SGB0401	Dibromofluoromethane	159	80-120	J (+)
020SGB0407	Dibromofluoromethane	124	80-120	J (+)
020SGB0413	Dibromofluoromethane	122	80-120	J (+)
020SGB0301	Dibromofluoromethane	154	80-120	J (+)
020SGB0307	Dibromofluoromethane	129	80-120	J (+)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

6. Several internal standards exceeded the recommended method control limits. Table 5 lists

the samples, their deficient internal standards, and their qualifications.

Table 5
Internal Standard Outliers

Sample ID	Internal Standard	Area	QC Limits	Qualification
039GGB0147	Pentafluorobenzene	326447	513060-2052240	All compounds were qualified UJ (ND)
	1,4-Difluorobenzene	510112	756770-3027082	
	Chlorobenzene-d5	477669	705741-2822964	
	1,4-Dichlorobenzene-d4	306748	527982-2111926	
039GGB0214	Pentafluorobenzene	245492	571299-2285196	All compounds were qualified as J (+)/UJ (ND)
	1,4-Difluorobenzene	377273	839921-3359682	
	Chlorobenzene-d5	346813	905890-3623558	
	1,4-Dichlorobenzene-d4	362068	785566-3142262	
022HGB0447	Pentafluorobenzene	6298333	363429-1453716	None
030SGB0113	Pentafluorobenzene	361113	442864-1771454	All compounds were qualified as UJ (ND)
	1,4-Difluorobenzene	697510	810218-3240870	
	Chlorobenzene-d5	788238	820372-3281498	
	1,4-Dichlorobenzene-d4	522646	594985-2379940	
022SGB0616	Chlorobenzene-d5	1021486	1064223-4256892	UJ (ND)
022SGB0716	Chlorobenzene-d5	1031855	1064223-4256892	UJ (ND)
030SGB0201	Chlorobenzene-d5	1034261	1064223-4256892	UJ (ND)
020SGB0401	Chlorobenzene-d5	706608	767443-3069772	UJ (ND)
	1,4-Dichlorobenzene-d4	415226	548389-2193554	
020SGB0301	1,4-Dichlorobenzene-d4	455318	463009-1852036	UJ (ND)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results.
UJ (ND) = Qualified estimated "UJ" for nondetect results.

Each internal standard is associated with particular analytes. They are as follows.

Pentafluorobenzene	1,4-Difluorobenzene	Chlorobenzene-d5	1,4-Dichlorobenzene-d4
Chloromethane	1,2-Dichloroethane	Dibromochloromethane	1,1,2,2-Tetrachloroethane
Bromomethane	Carbon Tetrachloride	Bromoform	
Vinyl Chloride	Bromodichloromethane	2-Hexanone	
Methylene Chloride	1,2-Dichloropropane	Tetrachloroethene	
Acetone	cis-1,3-Dichloropropene	Chlorobenzene	
Carbon disulfide	Trichloroethene	Ethylbenzene	
1,1-Dichloroethane	1,1,2-Trichloroethane	Styrene	
1,1-Dichloroethane	Benzene	1,3-Dichloropropane	
1,2-Dichloroethane (total)	trans-1,3-Dichloropropene	m-Xylene	
Chloroform	4-Methyl-2-Pentanone	o-Xylene	
2-Butanone	Toluene		
1,1,1-Trichloroethane			
Dichlorodifluoromethane			
Trichlorofluoromethane			

When an internal standard area was greater than the upper control limit, then only positive results in the associated analytes were qualified as estimated "J;" undetected results were accepted "as is," without qualification. When the internal standard area was less than the lower control limits, then all results in the associated analytes were qualified as estimated "J" for positive results and "UJ" for undetected results.

7. Samples 022GGB0347, 039SGB0302, 039SGB0211, 022SGB0416, and 030SGB0113 were used for MS/MSD samples. Table 6 lists the samples whose %Rs or RPDs exceeded the recommended control limits.

Table 6
Matrix Spike/ Matrix Spike Outliers

Sample ID	Analyte	%R	QC Limits	RPD	QC Limits
039SGB0302	Benzene	---	---	25	21
	Chlorobenzene	140 (MSD)	60-133	45	21
039SGB0211	Trichloroethene	---	---	28	24

Chlorobenzene and benzene in sample 039SGB0302 were not qualified because only one %R and the RPD alone, respectively, were outside the QC limits. Trichloroethene was not qualified in sample 039SGB0211 because only the RPD exceeded the QC limits.

8. Fourteen method blanks and eight trip blanks were analyzed with this SDG. Table 7 lists the blanks that demonstrated positive detections and the samples that were negated due to the detections.

Table 7
Blank Detections

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
022T101896	Trip Blank	Methylene Chloride	11	110	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101896	Method Blank	Methylene Chloride	21	210	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101996	Method Blank	Methylene Chloride	10	100	022SGB0301	None
					039SGB0413	U

**Table 7
Blank Detections**

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
VBLK102196	Method Blank	Methylene Chloride	12	120	022SGB0311 022SGB0315 022CGB0416 022SGB0416 022GGB0447 022HGB0447 063SGB0108 063SGB0116 063GGB0147	U U U U U U U U None

9. Samples 022GGB0347 and 022HGB0347, 022CGB0416 and 022SGB0416, 022GGB0447 and 022HGB0447, 039CGB0302 and 039SGB0302, and 039CGB0313 and 039SGB0313 were analyzed as field duplicates. The RPDs of ethylbenzene in samples 022GGB0347 and 022HGB0347 (33.3%) and carbon disulfide in samples 039CGB0302 and 039SGB0302 (118.4) exceeded the 30% QC limit for water samples an 50% QC limit for soil samples, respectively. Ethyl benzene was qualified as estimated "J" in samples 022GGB0347 and 022HGB0347 while carbon disulfide as qualified as "UJ" in sample 039CGB0302 and "J" in sample 039SGB0302.

SWMU 39

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 # 1631

A validation was performed on the Volatile Data from SDG 1631. 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

The method blanks that were analyzed exhibited contamination for acetone.

	VBLK113095H
acetone	4 $\mu\text{g}/\text{Kg}$

**DATA ASSESSMENT NARRATIVE
VOLATILE ANALYSIS**

PAGE - 2

Method Blanks, continued

Specific Finding

<u>Samples</u>	<u>Compound</u>	<u>Action Level</u>	<u>Qualification</u>
009C014010	acetone	40 µg/Kg	NA

Field QC Blanks

The field blank that were analyzed exhibited contamination for vinyl chloride, acetone, and carbon disulfide.

	009F102095
vinyl chloride	170 µg/L
acetone	58 µg/L
carbon disulfide	16 µg/L

Specific Finding

<u>Samples</u>	<u>Compound</u>	<u>Action Level</u>	<u>Qualification</u>
009C014010 009H014045	acetone	580 µg/Kg	U
009H015047 039H010044	acetone	580 µg/Kg	CRQL

System Performance and Overall Assessment

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

002

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
009C014010	acetone	+B	NA
009C014010 009H014045	acetone	+	U
009H015047 039H010044	acetone	+	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

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 # 2035

A validation was performed on the Volatile Data from SDG 2035. 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 data reviewer estimates that none of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
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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 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 # 2035

A validation was performed on the Semivolatile Data from SDG 2035. 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

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data reviewer estimates that none of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

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 # 2035

A validation was performed on the Pesticide/Aroclor Data from SDG 2035. 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 and toxaphene. No positive results were reported for the compounds analyzed with a single point calibration, therefore the data did not require qualification.

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

PAGE - 2

Continuing Calibrations

One (1) continuing calibration standard associated with the reported samples exhibited %Ds above the QC limits and required qualifications.

Specific Findings

The continuing calibration of 10/15/96 (19:16) 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.

039SGB0201 4,4'-DDD (17.9%)

Surrogate Recoveries

Two (2) field samples exhibited non-compliant TCX or DCB recoveries and required qualifications.

Specific Findings

The sample listed below exhibited a low TCX recovery. The positive results are qualified as estimated, J, and the non-detect results are qualified as estimated, UJ.

<u>Sample ID</u>	<u>Surrogate</u>	<u>% Recovery</u>
039SGB0101	TCX-2	60%

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

<u>Sample ID</u>	<u>Surrogate</u>	<u>% Recovery</u>
039SGB0201	DCB-1/DCB-2	245%/228%

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

PAGE - 3

Compound Identification/Quantitation

Several samples exhibited column quantitation %Ds greater than 40%. Qualifications were required per the EnSafe guidelines. Results were qualified as presumptively present at an estimated concentration (NJ) if the exhibited %Ds greater than 70% and one (1) or more of the following : were outside the calibration range, the result of a dilution, or above 10X the CRQL (professional opinion). One (1) sample required dilution to accurately quantitate target compounds.

Specific Findings

For the following sample, the results for the E flagged compounds are rejected and replaced with the results reported from the DL analysis. All other results from the dilution are rejected, UR.

039SGB0201

The positive results reported in all samples which exhibited column quantitation differences greater than 40% but less than 70% are qualified as presumptively present at an estimated concentration, NJ.

The positive results reported in all samples which exhibited column quantitation differences greater than 70% and are less than 10X the CRQL are reported as undetected, U.

The positive results reported in all samples which exhibited column quantitation differences greater than 70% and one (1) of the following: results greater than 10X the CRQL, outside the calibration range, or the result of a dilution, are qualified as presumptively present at an estimated concentration, NJ.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
039SGB0201	4,4'-DDD	+	J
039SGB0101	ALL	+/-	J/UJ
039SGB0201	ALL	+	J
039SGB0201	All E flagged	+	D
039SGB0201DL	All except corresponding D flagged results	+/-	UR
ALL	All P > 40% But ≤ 70%	+	NJ
ALL	All P > 70% And < 10X CRQL	+	U
ALL	All P > 70% And > 10X CRQL, > cal. range, or result of dilution	+	NJ

- * 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 HERBICIDES

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 8150; 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 # 2035

A validation was performed on the Herbicide Data from SDG 2035. 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.

System Performance and Overall Assessment

The data did not require 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
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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

ORGANOPHOSPHORUS PESTICIDES

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 8140; 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 # 2035

A validation was performed on the Organophosphorus Pesticide Data from SDG 2035. 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.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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 NARRATIVE

TPH - PURGEABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2035

A validation was performed on the TPH (GRO) data from SDG 2035. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Blanks

The associated rinse blank, 039E101196, exhibited contamination for TPH-GRO. 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 associated samples. These factors must be taken into consideration when applying the 5X criteria to field samples.

Rinseate Blanks

<u>Associated blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>CRQL</u>	<u>Action Level</u>
039E101196	TPH-GRO	54 ug/L	50 ug/L	270ug/kg

Samples

Compound

Qualification

030SGB0101,
030SGB0401,
039SGB0101

TPH-GRO

U

Overall Performance

The data reviewer estimates that less than 15% 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
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
030SGB0101	TPH-GRO	+	U
030SGB0401	TPH-GRO	+	U
039SGB0101	TPH-GRO	+	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 NARRATIVE

TPH - EXTRACTABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2035

A validation was performed on the TPH (DRO) data from SDG 2035. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Overall Performance

The data did not require qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

- U** = Not detected
- J** = Estimated value
- UJ** = Reported Quantitation limit is qualified as estimated
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
------------------	--------------------	-----------	-----------

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, TPH 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 SW 846 Methods Appendix 9 Metals and 418.1 TPH; 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 # 2035

A validation was performed on the Metals, TPH and Cyanide Data from SDG 2035. 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
- Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Beryllium	0.27 mg/kg	all soil samples below 1.35 mg/kg
Zinc	0.39 mg/kg	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 equipment Rinsate blank exhibited low levels of contamination but were not used for qualification.

The preparation blank exhibited negative bias for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Barium	-0.40 mg/kg	no impact
Cadmium	-0.45 mg/kg	all soil samples below 4.5 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 (33%) and Arsenic (47%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Field and Laboratory Duplicates

Specific Finding

The difference for soils for Arsenic was greater than two times the CRDL. All positive results are qualified as estimated, "J".

Serial Dilution

Specific Finding

The Serial dilution for Beryllium (20%) was greater than 10%. All positive results are qualified as estimated, "J".

Post Digestion Spiking

Specific Finding

The post digestion spike recovery for GFAA was above the upper control limits (>115%). All positive results for the listed samples below are qualified as estimated, "J".

Element
Thallium

Sample IDs
039SGB0201

% recoveries
116

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 below 1.35 mg/kg	Be.	+	U
all soil samples below 4.5 mg/kg	Cd.	+/U	J/UJ
all soil samples	Sb and As.	+/U	J/UJ
all soil samples	As.	+	J
all soil samples	Be.	+	J
039SGB0201.	Tl.	+	J
All "B" results	all analytes	B	J

DATA ASSESSMENT NARRATIVE

PCB ANALYSIS

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 # 2037

A validation was performed on the PCB Data from SDG 2037. 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 and 1232. No positive results were reported for the compounds analyzed with a single point calibration, therefore the data did not require qualification.

DATA ASSESSMENT NARRATIVE

PCB ANALYSIS

PAGE - 2

Surrogate Recoveries

One (1) field sample exhibited non-compliant TCX and DCB recoveries and required qualifications.

Specific Findings

The sample listed below exhibited a low TCX recovery and high DCB recoveries. The positive results are qualified as estimated, J, and the non-detect results are qualified as estimated, UJ.

<u>Sample ID</u>	<u>Surrogate</u>	<u>% Recovery</u>
039SGB0301	TCX-1	67%
	DCB-1/DCB-2	183%/194%

Compound Identification/Quantitation

Based on the pattern of peaks, Aroclor 1254 may be present in sample 039SGB0501. However, with the data provided, a concentration could not be determined. No qualifications were required.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
039SGB0301	ALL	+/-	J/UJ

- * 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 # 2037

A validation was performed on the Volatile Data from SDG 2037. 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 data reviewer estimates that none of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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 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 # 2045

A validation was performed on the Volatile Data from SDG 2045. 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

Blanks

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 associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria to field samples.

DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 2

Field Blank

<u>Associated blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Action Level</u>
039F101696	acetone	5J ug/L	50 ug/L

<u>Samples</u>	<u>Compound</u>	<u>Qualification</u>
039SGB0443	acetone	U

System Performance and Overall Assessment

The data reviewer estimates that less than 5% of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
039SGB0443	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 SW846 8270; 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 # 2045

A validation was performed on the Semivolatile Data from SDG 2045. 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

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data reviewer estimates that none of the data requires qualification.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = 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 compound 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 compound 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

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 # 2045

A validation was performed on the Pesticide/Aroclor Data from SDG 2045. 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 did not analyze a five (5) point curve for all multi-component compounds in all sequences. No positive results were reported for the compounds analyzed with a single point calibration, therefore the data did not require qualification.

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLOR ANALYSIS

PAGE - 2

Compound Identification/Quantitation

One (1) sample exhibited a column quantitation %D greater than 40%. Qualifications were required per the EnSafe guidelines. Results were qualified as presumptively present at an estimated concentration (NJ) if the exhibited %Ds greater than 70% and one (1) or more of the following : were outside the calibration range, the result of a dilution, or above 10X the CRQL (professional opinion).

Specific Findings

The positive results reported in all samples which exhibited column quantitation differences greater than 70% and are less than 10X the CRQL are reported as undetected, U.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
ALL	All P > 70% And < 10X CRQL	+	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 NARRATIVE

CHLORINATED HERBICIDES

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 8150; 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 # 2045

A validation was performed on the Herbicide Data from SDG 2045. 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.

Continuing Calibrations

One (1) continuing calibration standard associated with the reported samples exhibited %Ds above the QC limits and required qualifications.

**DATA ASSESSMENT NARRATIVE
CHLORINATED HERBICIDES**

PAGE 2

Continuing Calibrations, Continued

Specific Findings

The continuing calibration of 11/01/96 (19:16) contained a compound with a %D greater than 50% but less than 90%. For the samples and the non-compliant compound listed below, the positive results are qualified as estimated, J, and the non-detect results are qualified as estimated, UJ.

022SGB0301 . 2,4-DB (56.3%)

System Performance and Overall Assessment

The reviewer estimates less than 15% 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
022SGB0301	2,4-DB	+/-	J/UJ

- * 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

ORGANOPHOSPHORUS PESTICIDES

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 8140; 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 # 2045

A validation was performed on the Organophosphorus Pesticide Data from SDG 2045. 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.

System Performance and Overall Assessment

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

NJ = Result is considered presumptively present at an estimated concentration

UR = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
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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

TPH - PURGEABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2045

A validation was performed on the TPH (GRO) data from SDG 2045. 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
- * • Identification/Quantitation

* - All criteria were met for this parameter.

Surrogate Recoveries

Specific Finding

The following sample exhibited a surrogate recovery which is above the QC limit. All reported positive results in the sample are qualified as estimated, J.

<u>Sample ID</u>	<u>Surrogate</u>	<u>% Recovery</u>
022SGB0301	SMC1	346%

**DATA ASSESSMENT NARRATIVE
TPH - PURGEABLES (GRO)**

PAGE 2

Overall Performance

The reviewer estimates that 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
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
022SGB0301	All Compounds	+	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

TPH - EXTRACTABLES (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, surrogate and matrix spike recoveries, and GC performance. 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 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# 2045

A validation was performed on the TPH (DRO) data from SDG 2045. The data was evaluated based on the following parameters.

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

* - All criteria were met for this parameter.

Compound Quantitation

Specific Finding

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

022SGB0301

**DATA ASSESSMENT NARRATIVE
DRO ANALYSIS**

PAGE-2

System Performance and Overall Assessment

The reviewer estimates that 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
- UR** = 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 compound 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 compound 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

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
022SGB0301	All E flagged compounds	+E	D
022SGB0301DL	All except corresponding D flagged results	+/-	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, TPH 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 SW 846 Methods Appendix 9 Metals and 418.1 for TPH; 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 # 2045

A validation was performed on the Metals, TPH and Cyanide Data from SDG 2045. 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
- Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Arsenic	0.46 mg/kg	no impact
Selenium	0.21 mg/kg	all soil samples below 1.05 mg/kg
Zinc	1.00 mg/kg	no impact
Tin	5.39 mg/kg	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 equipment Rinsate blank exhibited low levels of contamination but were not used for qualification.

Matrix Spike Recovery

Specific Finding

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

The Matrix Spike recoveries for soils for Cadmium (71%) and Selenium (55%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Post Digestion Spiking

Specific Finding

The post digestion spike recovery for GFAA was below the lower control limits (>10% but <85%). All positive and non-detect results for the listed samples below are qualified as estimated, "J" or "UJ".

<u>Element</u>	<u>Sample IDs</u>	<u>% recoveries</u>
Selenium	022SBG0301	63

The post digestion spike recovery for GFAA was above the upper control limits (>115%). All positive results for the listed samples below are qualified as estimated, "J".

<u>Element</u>	<u>Sample IDs</u>	<u>% recoveries</u>
Thallium	022SBG0301	115.2

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 below 1.05 mg/kg	Se.	+	U
all soil samples	Sb.	+	J
		U	R
all soil samples	Cd and Se.	+/U	J/UJ
022SBG0301.	Se.	+/U	J/UJ
022SBG0301.	Tl.	+	J
All "B" results	all analytes	B	J

E/A&H VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
CTO and Subtask No.: 0106-04730
Laboratory: National Environmental Testing, Inc.
Sample Delivery Group: 2105
Matrix: Water and Soil

Samples and Analysis:

Sample ID	VOA
022GGB1047	X
039SGB0610	X
039SGB0713	X
039SGB0817	X
039SGB0913	X
039SGB0917	X

VALIDATION RESULTS

All samples were received by the laboratory intact and with the proper documentation on November 27, 1996. The following sections summarize the data validation results. Tentatively identified compounds have not been discussed in great detail, because most compounds are quantitatively uncertain (many TICs are unidentifiable and are reported as unknowns).

Volatile Organic Compound Fraction

1. All holding times, GC/MS instrument performance checks, surrogate recoveries, blank results, and internal standard performance were acceptable. No problems were encountered during review of sample result verification.
2. In the initial calibration analyzed by instrument HP5970L on December 5, 1996, acetone displayed a %RSD of 31.7%, which was outside acceptable criteria. No positive results were detected the only associated sample, 022GGB1047. The undetected result for acetone was not flagged because the %RSD was less than 50%.
3. In the continuing calibrations, several compounds had %Ds outside acceptable criteria. The following table identifies the deficient continuing calibrations, the analytes which exceeded the %D control limits, the qualifications, and the associated samples.

Table 1 - Continuing Calibration Deficiencies

Date	Instrument ID	Analyte	%D	Qualification	Associated Samples
12/03/96	HP5970E	Chloromethane	47.2	None	039SGB0713 039SGB0917
		Bromomethane	27.1		
		Vinyl Chloride	39.5		
		Chloroethane	25.7		
		Carbon Disulfide	30.4		
12/04/96	HP5970E	Chloromethane	30.8	None	039SGB0913
		4-Methyl-2-pentanone	29.9		
		2-Hexanone	32.6		
		Xylene	27.0		
12/05/96	HP5970E	Chloromethane	34.4	J UJ	039SGB0817
		Vinyl Chloride	26.5		
		Acetone	28.8		
		Carbon Disulfide	26.6		
		2-Butanone	37.1		
		4-Methyl-2-pentanone	57.8		
2-Hexanone	46.0				
12/06/96	HP5970H	Chloromethane	30.7	None	039SGB0610
		Bromomethane	34.7		
		Chloroethane	27.5		

All samples, with the exception of 039SGB0817 were accepted without qualification because all associated %Ds were less than 50%. Acetone and 4-methyl-2-pentanone were qualified as estimated "J" and "UJ," respectively, because acetone displayed a positive detection and the %D for 4-methyl-2-pentanone was greater than 50%.

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SCREENING SAMPLES

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
 CTO and Subtask No.: 0106-001-04-730-00
 Laboratory: Fibertec Environmental Services, Holt, Michigan
 Sample Delivery Group: 101924
 Matrix: Soil and Water
 DQO Level: III

Table 1
SDG 101924, SW846 8240 VOA Sample IDs

Sample ID	Sample ID	Sample ID
020SGB0101	022HGB0347	039SGB0202
020SGB0107	022SGB0401	039SGB0211
020SGB0113	022CGB0416	039GGB0214
020SGB0147	022SGB0416	039GGB0247
020SGB0207	022GGB0447	039SGB0301
020SGB0213	022HGB0447	039CGB0302
020GGB0244	022SGB0516	039SGB0302
020SGB0301	022SGB0616	039CGB0313
020SGB0307	022SGB0701	039SGB0313
020SGB0313	022SGB0716	039GGB0314
020SGB0401	030SGB0113	039GGB0343
020SGB0407	030GGB0138	039SGB0401
020SGB0413	030SGB0201	039SGB0402
020GGB0446	030SGB0213	039SGB0413
022SGB0101	030GGB0238	039GGB0413
022SGB0115	030SGB0301	039GGB0443
022GGB0145	030SGB0313	039SGB0501
022SGB0201	030SGB0413	039SGB0502
022SGB0216	030GGB0437	039SGB0513
022GGB0247	030SGB0501	039GGB0543
022SGB0301	030SGB0513	063SGB0101
022SGB0311	030GGB0545	063SGB0108
022SGB0315	039SGB0102	063SGB0116
022GGB0347	039SGB0113	063GGB0147
	039GGB0147	

VALIDATION RESULTS

All samples were received by the on-site laboratory intact and with the proper documentation between October 8 and October 31, 1996. The following section summarizes the data validation results. Tentatively identified compounds (TICs) have not been discussed in great detail because most compounds are quantitatively uncertain (many TICs are unidentifiable and are reported as unknowns).

Volatile Organic Compound Fraction

- All holding times were acceptable.
- Samples 039SGB0401, 039SGB0402, 039SGB0501, and 039SGB0102 were analyzed outside the 12-hour QC requirements for the bromofluorobenzene (BFB) GC/MS instrument performance check for October 16, 1996. None of these samples were reanalyzed. All compounds in these four samples were qualified as estimated "J" for positive results and "UJ" for nondetect results.
- The following compounds were outside the acceptable initial calibration criteria.

Table 2
Initial Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 10, 1996	Chloromethane	35.7	None	039GGB0343,
	Bromomethane	35.0	None	039CGB0302,
	Methylene Chloride	32.5	None	039SGB0202,
	Acetone	72.5	J (+)/UJ (ND)	039SGB0301
	2-Butanone	54.0	J (+)/UJ (ND)	
	1,1,2-Trichloroethane	36.9	None	
	Bromoform	60.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	109.0	J (+)/UJ (ND)	
	2-Hexanone	77.0	J (+)/UJ (ND)	
1,1,2,2-Tetrachloroethane	86.2	J (+)/UJ (ND)		
October 16, 1996	Chloromethane	36.3	None	All samples in this SDG except 039GGB0343, 039CGB0302, 039SGB0202, and 039SGB0301
	Trichloroethene	35.6	None	
	1,1,2-Trichloroethane	36.8	J (in 022SGB0301 and 022SGB0311 only)	
	Bromoform	68.8	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	65.5	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results
UJ (ND) = Qualified estimated "UJ" for nondetect results

When the %RSD was > 30% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %RSD was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for

undetected results.

4. The following compounds were outside the acceptable continuing calibration criteria.

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 15, 1996	Chloromethane	64.8	No qualifiers were applied to samples because all samples were reanalyzed or earlier analyses were used for data interpretation. Results associated with this calibration were not supplied to EnSafe by Fibertec.	039SGB0301, 039SGB0401, 039SGB0402, 039SGB0501, 039SGB0502, 039SGB0102
	Bromomethane	144.8		
	Vinyl Chloride	110.7		
	Methylene Chloride	132.8		
	Acetone	106.6		
	Carbon Disulfide	123.6		
	1,1-Dichloroethene	137.7		
	1,1-Dichloroethane	87.7		
	1,2-Dichloroethene (total)	123.3		
	Chloroform	108.0		
	2-Butanone	40.7		
	1,1,1-Trichloroethane	98.2		
	Carbon Tetrachloride	43.8		
	Bromodichloromethane	27.3		
	1,2-Dichloropropane	32.6		
	4-Methyl-2-Pentanone	57.4		
	2-Hexanone	42.9		
	Tetrachloroethene	65.9		
	1,1,2,2-Tetrachloroethane	99.0		
Stryene	51.7			
Xylenes	35.9			
October 17, 1996	Chloromethane	44.6	None	039SGB0313,
	Vinyl Chloride	104.9	J (+)/UJ (ND)	039SGB0211,
	Methylene Chloride	28.3	J	039CGB0313,
	1,2-Dichloroethane	48.6	None	039SGB0102Dil,
	Carbon Tetrachloride	47.1	None	039SGB0502,
	cis-1,3-Dichloropropene	29.8	None	039GGB0214,
	Benzene	50.3	J (+)/UJ (ND)	039GGB0247,
	trans-1,3-Dichloropropene	37.8	None	039SGB0211Dil
	4-Methyl-2-Pentanone	45.	None	
	Xylenes	56.4	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 18, 1996	Chloromethane	-71.5	J (+)/UJ (ND)	022HGB0347,
	Vinyl Chloride	-40.0	None	022GGB0347,
	Carbon Disulfide	83.3	J (+)/UJ (ND)	022SGB0201,
	1,1-Dichloroethane	263.6	J (+)/UJ (ND)	022SGB0401,
	2-Butanone	57.8	J (+)/UJ (ND)	063SGB0101
	1,1,1-Trichloroethane	50.0	None	
	cis-1,3-Dichloropropene	33.3	None	
	1,1,2-Trichloroethane	33.3	None	
	trans-1,3-Dichloropropene	50.0	None	
	Bromoform	-40.0	None	
	4-Methyl-2-Pentanone	28.6	None	
	Tetrachloroethene	-33.3	None	
	Xylenes	71.4	J (+)/UJ (ND)	
October 19, 1996	Chloromethane	69.4	J (+)/UJ (ND)	022SGB0301,
	Methylene Chloride	36.1	J (+)	039SGB0413
	Carbon Disulfide	58.8	J (+)/UJ (ND)	
	1,2-Dichloroethane	60.0	J (+)/UJ (ND)	
	2-Butanone	47.5	J (+)	
	1,1,1-Trichloroethane	33.3	None	
	Carbon Tetrachloride	58.8	J (+)/UJ (ND)	
	Bromodichloromethane	33.6	None	
	1,2-Dichloropropane	39.4	None	
	cis-1,3-Dichloropropene	48.1	None	
	1,1,2-Trichloroethane	28.6	J (+)	
	Benzene	90.2	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	36.7	None	
	Bromoform	63.2	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	80.9	J (+)/UJ (ND)	
	2-Hexanone	128.4	J (+)/UJ (ND)	
	Tetrachloroethene	30.8	None	
Toluene	36.4	None		
Ethylbenzene	42.3	J (+)		
Xylenes	94.3	J (+)/UJ (ND)		
October 21, 1996	Chloromethane	116.2	J (+)/UJ (ND)	022SGB0315,
	Vinyl Chloride	40.4	None	022SGB0311,
	Carbon Disulfide	56.0	J (+)/UJ (ND)	022SGB0416,
	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	022GGB0447,
	2-Butanone	37.8	J (+)	022HGB0447,
	1,1,1-Trichloroethane	33.3	None	022CGB0416,
	Carbon Tetrachloride	66.7	J (+)/UJ (ND)	063SGB0108,
	Bromodichloromethane	33.6	None	063SGB0116,
	cis-1,3-Dichloropropene	36.7	None	063GGB0147
	Benzene	83.1	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.4	None	
	Bromoform	53.2	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	33.6	None	
	Tetrachloroethene	32.6	None	
	Xylenes	66.7	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 22, 1996	Chloromethane	79.7	J (+)/UJ (ND)	030SGB0113, 030GGB0138
	Bromomethane	30.9	None	
	Acetone	33.5	None	
	Carbon Disulfide	27.6	None	
	1,2-Dichloroethane	45.0	None	
	Carbon Tetrachloride	41.0	None	
	Bromodichloromethane	39.5	None	
	cis-1,3-Dichloropropene	28.4	None	
	Trichloroethene	38.1	None	
	Benzene	62.6	J (+)/UJ (ND)	
	Bromoform	67.9	J (+)/UJ (ND)	
	Tetrachloroethene	50.8	J (+)/UJ (ND)	
	Xylenes	56.4	J (+)/UJ (ND)	
	October 24, 1996	Chloromethane	72.8	J (+)/UJ (ND)
Bromomethane		79.2	J (+)/UJ (ND)	022GGB0247,
Vinyl Chloride		32.6	None	022SGB0701,
Methylene Chloride		49.4	None	022SGB0716,
Acetone		63.4	J (+)/UJ (ND)	022SGB0616,
1,1-Dichloroethane		59.8	J (+)/UJ (ND)	022SGB0516,
1,2-Dichloroethane		36.1	None	030SGB0201,
Carbon Tetrachloride		50.3	J (+)/UJ (ND)	030SGB0213
Bromodichloromethane		47.5	None	
1,2-Dichloropropane		28.0	None	
cis-1,3-Dichloropropene		38.6	None	
1,1,2-Trichloroethane		26.8	None	
Benzene		68.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		40.4	None	
Bromoform		56.1	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		40.0	None	
Tetrachloroethene		41.9	J (+)	
Ethylbenzene		32.3	J (+)	
Xylenes		38.2	J (+)	
October 25, 1996	Chloromethane	40.2	None	030SGB0513,
	Vinyl Chloride	45.2	None	030GGB0238,
	Carbon Disulfide	52.4	J (+)/UJ (ND)	030SGB0501,
	1,2-Dichloroethane	56.8	J (+)/UJ (ND)	030GGB0545,
	1,1,1-Trichloroethane	40.0	None	022SGB0115,
	Carbon Tetrachloride	74.0	J (+)/UJ (ND)	022SGB0101
	Bromodichloromethane	28.6	None	
	Dibromochloromethane	49.7	None	
	1,1,2-Trichloroethane	46.4	None	
	Benzene	81.6	J (+)/UJ (ND)	
	Bromoform	112.5	J (+)/UJ (ND)	
	Tetrachloroethene	57.0	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	78.2	J (+)/UJ (ND)	
	Xylenes	57.9	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 28, 1996	Chloromethane	110.6	J (+)/UJ (ND)	030SGB0413,
	Bromomethane	91.3	J (+)/UJ (ND)	030GGB0437,
	Vinyl Chloride	35.8	None	030SGB0313,
	Methylene Chloride	27.8	None	030SGB0301,
	Carbon Disulfide	36.0	J (+)	022GGB0145
	1,1-Dichloroethene	32.9	None	
	1,1-Dichloroethane	46.8	None	
	1,2-Dichloroethane	64.7	J (+)/UJ (ND)	
	2-Butanone	41.7	None	
	1,1,1-Trichloroethane	30.5	None	
	Carbon Tetrachloride	66.1	J (+)/UJ (ND)	
	Bromodichloromethane	56.7	J (+)/UJ (ND)	
	cis-1,3-Dichloropropene	28.3	None	
	Benzene	74.4	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.1	None	
	Bromoform	35.3	None	
	4-Methyl-2-Pentanone	62.9	J (+)/UJ (ND)	
	Tetrachloroethene	33.2	None	
	Xylenes	53.2	J (+)/UJ (ND)	
	October 29, 1996	Chloromethane	155.6	J (+)/UJ (ND)
Vinyl Chloride		29.1	None	020SGB0113,
Acetone		44.5	None	020SGB0101,
Carbon Disulfide		79.4	J (+)/UJ (ND)	020SGB0113Dil,
1,1-Dichloroethane		27.3	J (+)	020GGB0147Dil
1,2-Dichloroethane		54.1	J (+)/UJ (ND)	
2-Butanone		43.2	None	
1,1,1-Trichloroethane		31.8	J (+)	
Carbon Tetrachloride		67.4	J (+)/UJ (ND)	
Bromodichloromethane		41.1	None	
1,2-Dichloropropane		31.4	None	
cis-1,3-Dichloropropene		40.6	None	
Benzene		88.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		38.7	None	
Bromoform		53.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		65.0	J (+)/UJ (ND)	
Tetrachloroethene		28.1	None	
Xylenes		56.2	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 30, 1996	Chloromethane	29.3	None	020SGB0213,
	Vinyl Chloride	29.8	None	020SGB0207,
	Carbon Disulfide	51.8	J (+)/UJ (ND)	020GGB0244,
	1,2-Dichloroethane	79.8	J (+)/UJ (ND)	020SGB0413,
	2-Butanone	36.4	None	020SGB0407,
	Carbon Tetrachloride	50.0	None	020SGB0401,
	Benzene	75.6	J (+)/UJ (ND)	020GGB0446
	trans-1,3-Dichloropropene	28.6	None	
	Bromoform	73.6	J (+)/UJ (ND)	
	Tetrachloroethene	46.6	None	
	Ethylbenzene	30.6	None	
	Xylenes	44.4	None	
October 31, 1996	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	020SGB0301
	2-Butanone	36.4	None	020SGB0307
	1,1,1-Trichloroethane	26.1	J (+)	020SGB0313
	Carbon Tetrachloride	58.8	J (+)/UJ (ND)	
	Benzene	73.9	J (+)/UJ (ND)	
	Bromoform	74.3	J (+)/UJ (ND)	
	Tetrachloroethene	49.0	None	
	Xylenes	60.0	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

When the %D was > 25% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %D was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for undetected results.

- The surrogates exceeded the recommended control limits in several samples. Table 4 details the samples, the %Rs and the qualifications.

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
039GGB0343	Toluene-d8	115	88-110	None
039GGB0147	Dibromofluoromethane	130	86-118	None
	4-Bromofluorobenzene	126	86-115	
039GGB0247	Toluene-d8	112	88-110	J (+)
039GGB0413	4-Bromofluorobenzene	116	86-115	J (+)
030GGB0138	4-Bromofluorobenzene	136	86-115	None

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
022GGB0247	4-Bromofluorobenzene	116	86-115	None
030GGB0238	4-Bromofluorobenzene	116	86-115	None
022GGB0145	Dibromofluoromethane	129	86-118	None
	4-Bromofluorobenzene	157	86-115	
030GGB0545	Dibromofluoromethane	52	86-118	J (+)/ UJ (ND)
	4-Bromofluorobenzene	134	86-115	
030GGB0437	Dibromofluoromethane	76	86-115	J (+)/UJ (ND)
	4-Bromofluorobenzene	121		
020GGB0244	Dibromofluoromethane	123	86-118	None
020GGB0446	Dibromofluoromethane	119	86-118	None
039CGB0302	Toluene-d8	121	81-117	None
039SGB0202	Toluene-d8	127	81-117	None
039SGB0301	Toluene-d8	125	81-117	None
039SGB0302	Dibromofluoromethane	121	80-120	J (+)
	Toluene-d8	121	81-117	
022SGB0315	Dibromofluoromethane	122	80-120	J (+)
039SGB0313	Dibromofluoromethane	124	80-120	J (+)
022SGB0701	Dibromofluoromethane	121	80-120	None
030SGB0201	Dibromofluoromethane	128	80-120	None
030SGB0213	Dibromofluoromethane	125	80-120	None
022SGB0115	Dibromofluoromethane	129	80-120	None
030SGB0501	Dibromofluoromethane	123	80-120	None
	4-Bromofluorobenzene	122	74-121	
020SGB0401	Dibromofluoromethane	159	80-120	J (+)
020SGB0407	Dibromofluoromethane	124	80-120	J (+)
020SGB0413	Dibromofluoromethane	122	80-120	J (+)
020SGB0301	Dibromofluoromethane	154	80-120	J (+)
020SGB0307	Dibromofluoromethane	129	80-120	J (+)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

6. Several internal standards exceeded the recommended method control limits. Table 5 lists

the samples, their deficient internal standards, and their qualifications.

Table 5
Internal Standard Outliers

Sample ID	Internal Standard	Area	QC Limits	Qualification
039GGB0147	Pentafluorobenzene	326447	513060-2052240	All compounds were qualified UJ (ND)
	1,4-Difluorobenzene	510112	756770-3027082	
	Chlorobenzene-d5	477669	705741-2822964	
	1,4-Dichlorobenzene-d4	306748	527982-2111926	
039GGB0214	Pentafluorobenzene	245492	571299-2285196	All compounds were qualified as J (+)/UJ (ND)
	1,4-Difluorobenzene	377273	839921-3359682	
	Chlorobenzene-d5	346813	905890-3623558	
	1,4-Dichlorobenzene-d4	362068	785566-3142262	
022HGB0447	Pentafluorobenzene	6298333	363429-1453716	None
030SGB0113	Pentafluorobenzene	361113	442864-1771454	All compounds were qualified as UJ (ND)
	1,4-Difluorobenzene	697510	810218-3240870	
	Chlorobenzene-d5	788238	820372-3281498	
	1,4-Dichlorobenzene-d4	522646	594985-2379940	
022SGB0616	Chlorobenzene-d5	1021486	1064223-4256892	UJ (ND)
022SGB0716	Chlorobenzene-d5	1031855	1064223-4256892	UJ (ND)
030SGB0201	Chlorobenzene-d5	1034261	1064223-4256892	UJ (ND)
020SGB0401	Chlorobenzene-d5	706608	767443-3069772	UJ (ND)
	1,4-Dichlorobenzene-d4	415226	548389-2193554	
020SGB0301	1,4-Dichlorobenzene-d4	455318	463009-1852036	UJ (ND)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.

J (+) = Qualified estimated "J" for positive results.

UJ (ND) = Qualified estimated "UJ" for nondetect results.

Each internal standard is associated with particular analytes. They are as follows.

Pentafluorobenzene	1,4-Difluorobenzene	Chlorobenzene-d5	1,4-Dichlorobenzene-d4
Chloromethane	1,2-Dichloroethane	Dibromochloromethane	1,1,2,2-Tetrachloroethane
Bromomethane	Carbon Tetrachloride	Bromoform	
Vinyl Chloride	Bromodichloromethane	2-Hexanone	
Methylene Chloride	1,2-Dichloropropane	Tetrachloroethene	
Acetone	cis-1,3-Dichloropropene	Chlorobenzene	
Carbon disulfide	Trichloroethene	Ethylbenzene	
1,1-Dichloroethene	1,1,2-Trichloroethane	Styrene	
1,1-Dichloroethane	Benzene	1,3-Dichloropropane	
1,2-Dichloroethene (total)	trans-1,3-Dichloropropene	m-Xylene	
Chloroform	4-Methyl-2-Pentanone	o-Xylene	
2-Butanone	Toluene		
1,1,1-Trichloroethane			
Dichlorodifluoromethane			
Trichlorofluoromethane			

When an internal standard area was greater than the upper control limit, then only positive results in the associated analytes were qualified as estimated "J;" undetected results were accepted "as is," without qualification. When the internal standard area was less than the lower control limits, then all results in the associated analytes were qualified as estimated "J" for positive results and "UJ" for undetected results.

7. Samples 022GGB0347, 039SGB0302, 039SGB0211, 022SGB0416, and 030SGB0113 were used for MS/MSD samples. Table 6 lists the samples whose %Rs or RPDs exceeded the recommended control limits.

Table 6
Matrix Spike/ Matrix Spike Outliers

Sample ID	Analyte	%R	QC Limits	RPD	QC Limits
039SGB0302	Benzene	—	—	25	21
	Chlorobenzene	140 (MSD)	60-133	45	21
039SGB0211	Trichloroethene	—	—	28	24

Chlorobenzene and benzene in sample 039SGB0302 were not qualified because only one %R and the RPD alone, respectively, were outside the QC limits. Trichloroethene was not qualified in sample 039SGB0211 because only the RPD exceeded the QC limits.

8. Fourteen method blanks and eight trip blanks were analyzed with this SDG. Table 7 lists the blanks that demonstrated positive detections and the samples that were negated due to the detections.

Table 7
Blank Detections

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
022T101896	Trip Blank	Methylene Chloride	11	110	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101896	Method Blank	Methylene Chloride	21	210	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101996	Method Blank	Methylene Chloride	10	100	022SGB0301	None
					039SGB0413	U

**Table 7
Blank Detections**

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
VBLK102196	Method Blank	Methylene Chloride	12	120	022SGB0311	U
					022SGB0315	U
					022CGB0416	U
					022SGB0416	U
					022GGB0447	U
					022HGB0447	U
					063SGB0108	U
					063SGB0116	U
					063GGB0147	None

9. Samples 022GGB0347 and 022HGB0347, 022CGB0416 and 022SGB0416, 022GGB0447 and 022HGB0447, 039CGB0302 and 039SGB0302, and 039CGB0313 and 039SGB0313 were analyzed as field duplicates. The RPDs of ethylbenzene in samples 022GGB0347 and 022HGB0347 (33.3%) and carbon disulfide in samples 039CGB0302 and 039SGB0302 (118.4) exceeded the 30% QC limit for water samples an 50% QC limit for soil samples, respectively. Ethyl benzene was qualified as estimated "J" in samples 022GGB0347 and 022HGB0347 while carbon disulfide as qualified as "UJ" in sample 039CGB0302 and "J" in sample 039SGB0302.

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
CTO and Subtask No.: 0106-001-04-730-00
Laboratory: Environmental Testing and Consulting, Memphis, Tennessee
Sample Delivery Group: 9611855
Matrix: Soil and Water
DQO Level: Modified II

Table 1
SDG 9611855, SW846 8240 VOA Sample IDs

022GGB0947	039CGB0910
022GGB1047	039SGB0910
039SGB0610	039SGB0913
039SGB0613	039SGB0917
039SGB0617	039CGB1010
039SGB0710	039SGB1010
039SGB0713	039SGB1013
039SGB0717	039SGB1017
039SGB0810	039GGB1148
039SGB0813	039HGB1148
039SGB0817	039GGB1248

VALIDATION RESULTS

All samples were received by Environmental Testing and Consulting intact and with the proper documentation on November 26 and 27, 1996.

Volatile Organic Compound Fraction

All holding times, and field and rinsate blank results were acceptable. A method blank and MS/MSD was not reported with this SDG.

The %R of surrogate compound 1,2-dichloroethane-d4 exceeded the control limits in samples 039SGB0910 (129%), 039SGB0913 (130%), 039SGB1010 (142%), and 039SGB1013 (139%). Because the %Rs exceeded the upper control limits, only positive results were to be qualified as estimated "J." Since there were no positive results in any of these samples, all results were accepted "as is" without qualification.

Samples 039SGB0910 and 039CGB0910, 039SGB1010 and 039CGB1010, and 039GGB1148 and

039HGB1148 were analyzed as field duplicate pairs. All results in these samples were undetected; therefore, all RPDs were within method criteria.

SWMU 63

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, Method 8240 with CLP deliverables; 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 # 2056

A validation was performed on the Volatile Data from SDG 2056. 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

Continuing calibrations

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

DATA ASSESSMENT AND NARRATIVE

VOLATILE ANALYSIS

PAGE - 2

Continuing calibrations (continued)

Specific Finding:

The continuing calibration, E2551, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

030SGB0513	2-butanone (88.7)
	2-hexanone (59.5)

The continuing calibration, E2551, contained compounds with %Ds greater than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and reject all non detects (UR).

030SGB0513	acetone (91.7)
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System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as reported requires 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.

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

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
030SGB0513	2-butanone (88.7) 2-hexanone (59.5)	+/-	J/UJ
030SGB0513	acetone (91.7)	+/-	J/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

SWMU 63

SCREENING SAMPLES

ENSAFE VALIDATION SUMMARY REPORT

Site Name: NSA Memphis, Millington, Tennessee
 CTO and Subtask No.: 0106-001-04-730-00
 Laboratory: Fibertec Environmental Services, Holt, Michigan
 Sample Delivery Group: 101924
 Matrix: Soil and Water
 DQO Level: III

Table 1
SDG 101924, SW846 8240 VOA Sample IDs

Sample ID	Sample ID	Sample ID
020SGB0101	022HGB0347	039SGB0202
020SGB0107	022SGB0401	039SGB0211
020SGB0113	022CGB0416	039GGB0214
020SGB0147	022SGB0416	039GGB0247
020SGB0207	022GGB0447	039SGB0301
020SGB0213	022HGB0447	039CGB0302
020GGB0244	022SGB0516	039SGB0302
020SGB0301	022SGB0616	039CGB0313
020SGB0307	022SGB0701	039SGB0313
020SGB0313	022SGB0716	039GGB0314
020SGB0401	030SGB0113	039GGB0343
020SGB0407	030GGB0138	039SGB0401
020SGB0413	030SGB0201	039SGB0402
020GGB0446	030SGB0213	039SGB0413
022SGB0101	030GGB0238	039GGB0413
022SGB0115	030SGB0301	039GGB0443
022GGB0145	030SGB0313	039SGB0501
022SGB0201	030SGB0413	039SGB0502
022SGB0216	030GGB0437	039SGB0513
022GGB0247	030SGB0501	039GGB0543
022SGB0301	030SGB0513	063SGB0101
022SGB0311	030GGB0545	063SGB0108
022SGB0315	039SGB0102	063SGB0116
022GGB0347	039SGB0113	063GGB0147
	039GGB0147	

VALIDATION RESULTS

All samples were received by the on-site laboratory intact and with the proper documentation between October 8 and October 31, 1996. The following section summarizes the data validation results. Tentatively identified compounds (TICs) have not been discussed in great detail because most compounds are quantitatively uncertain (many TICs are unidentifiable and are reported as unknowns).

Volatile Organic Compound Fraction

- All holding times were acceptable.
- Samples 039SGB0401, 039SGB0402, 039SGB0501, and 039SGB0102 were analyzed outside the 12-hour QC requirements for the bromofluorobenzene (BFB) GC/MS instrument performance check for October 16, 1996. None of these samples were reanalyzed. All compounds in these four samples were qualified as estimated "J" for positive results and "UJ" for nondetect results.
- The following compounds were outside the acceptable initial calibration criteria.

Table 2
Initial Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 10, 1996	Chloromethane	35.7	None	039GGB0343,
	Bromomethane	35.0	None	039CGB0302,
	Methylene Chloride	32.5	None	039SGB0202,
	Acetone	72.5	J (+)/UJ (ND)	039SGB0301
	2-Butanone	54.0	J (+)/UJ (ND)	
	1,1,2-Trichloroethane	36.9	None	
	Bromoform	60.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	109.0	J (+)/UJ (ND)	
	2-Hexanone	77.0	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	86.2	J (+)/UJ (ND)	
October 16, 1996	Chloromethane	36.3	None	All samples in this SDG except 039GGB0343, 039CGB0302, 039SGB0202, and 039SGB0301
	Trichloroethene	35.6	None	
	1,1,2-Trichloroethane	36.8	J (in 022SGB0301 and 022SGB0311 only)	
	Bromoform	68.8	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	65.5	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results
UJ (ND) = Qualified estimated "UJ" for nondetect results

When the %RSD was > 30% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %RSD was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for

undetected results.

4. The following compounds were outside the acceptable continuing calibration criteria.

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 15, 1996	Chloromethane	64.8	No qualifiers were applied to samples because all samples were reanalyzed or earlier analyses were used for data interpretation. Results associated with this calibration were not supplied to EnSafe by Fibertec.	039SGB0301,
	Bromomethane	144.8		039SGB0401,
	Vinyl Chloride	110.7		039SGB0402,
	Methylene Chloride	132.8		039SGB0501,
	Acetone	106.6		039SGB0502,
	Carbon Disulfide	123.6		039SGB0102
	1,1-Dichloroethene	137.7		
	1,1-Dichloroethane	87.7		
	1,2-Dichloroethene (total)	123.3		
	Chloroform	108.0		
	2-Butanone	40.7		
	1,1,1-Trichloroethane	98.2		
	Carbon Tetrachloride	43.8		
	Bromodichloromethane	27.3		
	1,2-Dichloropropane	32.6		
	4-Methyl-2-Pentanone	57.4		
	2-Hexanone	42.9		
	Tetrachloroethene	65.9		
1,1,2,2-Tetrachloroethane	99.0			
Stryene	51.7			
Xylenes	35.9			
October 17, 1996	Chloromethane	44.6	None	039SGB0313,
	Vinyl Chloride	104.9	J (+)/UJ (ND)	039SGB0211,
	Methylene Chloride	28.3	J	039CGB0313,
	1,2-Dichloroethane	48.6	None	039SGB0102Dil,
	Carbon Tetrachloride	47.1	None	039SGB0502,
	cis-1,3-Dichloropropene	29.8	None	039GGB0214,
	Benzene	50.3	J (+)/UJ (ND)	039GGB0247,
	trans-1,3-Dichloropropene	37.8	None	039SGB0211Dil
	4-Methyl-2-Pentanone	45.	None	
	Xylenes	56.4	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 18, 1996	Chloromethane	-71.5	J (+)/UJ (ND)	022HGB0347,
	Vinyl Chloride	-40.0	None	022GGB0347,
	Carbon Disulfide	83.3	J (+)/UJ (ND)	022SGB0201,
	1,1-Dichloroethane	263.6	J (+)/UJ (ND)	022SGB0401,
	2-Butanone	57.8	J (+)/UJ (ND)	063SGB0101
	1,1,1-Trichloroethane	50.0	None	
	cis-1,3-Dichloropropene	33.3	None	
	1,1,2-Trichloroethane	33.3	None	
	trans-1,3-Dichloropropene	50.0	None	
	Bromoform	-40.0	None	
	4-Methyl-2-Pentanone	28.6	None	
	Tetrachloroethene	-33.3	None	
	Xylenes	71.4	J (+)/UJ (ND)	
	October 19, 1996	Chloromethane	69.4	J (+)/UJ (ND)
Methylene Chloride		36.1	J (+)	039SGB0413
Carbon Disulfide		58.8	J (+)/UJ (ND)	
1,2-Dichloroethane		60.0	J (+)/UJ (ND)	
2-Butanone		47.5	J (+)	
1,1,1-Trichloroethane		33.3	None	
Carbon Tetrachloride		58.8	J (+)/UJ (ND)	
Bromodichloromethane		33.6	None	
1,2-Dichloropropane		39.4	None	
cis-1,3-Dichloropropene		48.1	None	
1,1,2-Trichloroethane		28.6	J (+)	
Benzene		90.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		36.7	None	
Bromoform		63.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		80.9	J (+)/UJ (ND)	
2-Hexanone		128.4	J (+)/UJ (ND)	
Tetrachloroethene		30.8	None	
Toluene		36.4	None	
Ethylbenzene	42.3	J (+)		
Xylenes	94.3	J (+)/UJ (ND)		
October 21, 1996	Chloromethane	116.2	J (+)/UJ (ND)	022SGB0315,
	Vinyl Chloride	40.4	None	022SGB0311,
	Carbon Disulfide	56.0	J (+)/UJ (ND)	022SGB0416,
	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	022GGB0447,
	2-Butanone	37.8	J (+)	022HGB0447,
	1,1,1-Trichloroethane	33.3	None	022CGB0416,
	Carbon Tetrachloride	66.7	J (+)/UJ (ND)	063SGB0108,
	Bromodichloromethane	33.6	None	063SGB0116,
	cis-1,3-Dichloropropene	36.7	None	063GGB0147
	Benzene	83.1	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.4	None	
	Bromoform	53.2	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	33.6	None	
	Tetrachloroethene	32.6	None	
	Xylenes	66.7	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 22, 1996	Chloromethane	79.7	J (+)/UJ (ND)	030SGB0113,
	Bromomethane	30.9	None	030GGB0138
	Acetone	33.5	None	
	Carbon Disulfide	27.6	None	
	1,2-Dichloroethane	45.0	None	
	Carbon Tetrachloride	41.0	None	
	Bromodichloromethane	39.5	None	
	cis-1,3-Dichloropropene	28.4	None	
	Trichloroethene	38.1	None	
	Benzene	62.6	J (+)/UJ (ND)	
	Bromoform	67.9	J (+)/UJ (ND)	
	Tetrachloroethene	50.8	J (+)/UJ (ND)	
	Xylenes	56.4	J (+)/UJ (ND)	
October 24, 1996	Chloromethane	72.8	J (+)/UJ (ND)	022SGB0216,
	Bromomethane	79.2	J (+)/UJ (ND)	022GGB0247,
	Vinyl Chloride	32.6	None	022SGB0701,
	Methylene Chloride	49.4	None	022SGB0716,
	Acetone	63.4	J (+)/UJ (ND)	022SGB0616,
	1,1-Dichloroethane	59.8	J (+)/UJ (ND)	022SGB0516,
	1,2-Dichloroethane	36.1	None	030SGB0201,
	Carbon Tetrachloride	50.3	J (+)/UJ (ND)	030SGB0213
	Bromodichloromethane	47.5	None	
	1,2-Dichloropropane	28.0	None	
	cis-1,3-Dichloropropene	38.6	None	
	1,1,2-Trichloroethane	26.8	None	
	Benzene	68.2	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	40.4	None	
	Bromoform	56.1	J (+)/UJ (ND)	
	4-Methyl-2-Pentanone	40.0	None	
	Tetrachloroethene	41.9	J (+)	
	Ethylbenzene	32.3	J (+)	
	Xylenes	38.2	J (+)	
October 25, 1996	Chloromethane	40.2	None	030SGB0513,
	Vinyl Chloride	45.2	None	030GGB0238,
	Carbon Disulfide	52.4	J (+)/UJ (ND)	030SGB0501,
	1,2-Dichloroethane	56.8	J (+)/UJ (ND)	030GGB0545,
	1,1,1-Trichloroethane	40.0	None	022SGB0115,
	Carbon Tetrachloride	74.0	J (+)/UJ (ND)	022SGB0101
	Bromodichloromethane	28.6	None	
	Dibromochloromethane	49.7	None	
	1,1,2-Trichloroethane	46.4	None	
	Benzene	81.6	J (+)/UJ (ND)	
	Bromoform	112.5	J (+)/UJ (ND)	
	Tetrachloroethene	57.0	J (+)/UJ (ND)	
	1,1,2,2-Tetrachloroethane	78.2	J (+)/UJ (ND)	
	Xylenes	57.9	J (+)/UJ (ND)	

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 28, 1996	Chloromethane	110.6	J (+)/UJ (ND)	030SGB0413,
	Bromomethane	91.3	J (+)/UJ (ND)	030GGB0437,
	Vinyl Chloride	35.8	None	030SGB0313,
	Methylene Chloride	27.8	None	030SGB0301,
	Carbon Disulfide	36.0	J (+)	022GGB0145
	1,1-Dichloroethene	32.9	None	
	1,1-Dichloroethane	46.8	None	
	1,2-Dichloroethane	64.7	J (+)/UJ (ND)	
	2-Butanone	41.7	None	
	1,1,1-Trichloroethane	30.5	None	
	Carbon Tetrachloride	66.1	J (+)/UJ (ND)	
	Bromodichloromethane	56.7	J (+)/UJ (ND)	
	cis-1,3-Dichloropropene	28.3	None	
	Benzene	74.4	J (+)/UJ (ND)	
	trans-1,3-Dichloropropene	38.1	None	
	Bromoform	35.3	None	
	4-Methyl-2-Pentanone	62.9	J (+)/UJ (ND)	
	Tetrachloroethene	33.2	None	
	Xylenes	53.2	J (+)/UJ (ND)	
	October 29, 1996	Chloromethane	155.6	J (+)/UJ (ND)
Vinyl Chloride		29.1	None	020SGB0113,
Acetone		44.5	None	020SGB0101,
Carbon Disulfide		79.4	J (+)/UJ (ND)	020SGB0113Dil,
1,1-Dichloroethane		27.3	J (+)	020GGB0147Dil
1,2-Dichloroethane		54.1	J (+)/UJ (ND)	
2-Butanone		43.2	None	
1,1,1-Trichloroethane		31.8	J (+)	
Carbon Tetrachloride		67.4	J (+)/UJ (ND)	
Bromodichloromethane		41.1	None	
1,2-Dichloropropane		31.4	None	
cis-1,3-Dichloropropene		40.6	None	
Benzene		88.2	J (+)/UJ (ND)	
trans-1,3-Dichloropropene		38.7	None	
Bromoform		53.2	J (+)/UJ (ND)	
4-Methyl-2-Pentanone		65.0	J (+)/UJ (ND)	
Tetrachloroethene		28.1	None	
Xylenes	56.2	J (+)/UJ (ND)		

Table 3
Continuing Calibration Outliers

Calibration Date	Compound	%RSD	Qualifier	Associated Samples
October 30, 1996	Chloromethane	29.3	None	020SGB0213,
	Vinyl Chloride	29.8	None	020SGB0207,
	Carbon Disulfide	51.8	J (+)/UJ (ND)	020GGB0244,
	1,2-Dichloroethane	79.8	J (+)/UJ (ND)	020SGB0413,
	2-Butanone	36.4	None	020SGB0407,
	Carbon Tetrachloride	50.0	None	020SGB0401,
	Benzene	75.6	J (+)/UJ (ND)	020GGB0446
	trans-1,3-Dichloropropene	28.6	None	
	Bromoform	73.6	J (+)/UJ (ND)	
	Tetrachloroethene	46.6	None	
	Ethylbenzene	30.6	None	
	Xylenes	44.4	None	
October 31, 1996	1,2-Dichloroethane	72.7	J (+)/UJ (ND)	020SGB0301
	2-Butanone	36.4	None	020SGB0307
	1,1,1-Trichloroethane	26.1	J (+)	020SGB0313
	Carbon Tetrachloride	58.8	J (+)/UJ (ND)	
	Benzene	73.9	J (+)/UJ (ND)	
	Bromoform	74.3	J (+)/UJ (ND)	
	Tetrachloroethene	49.0	None	
	Xylenes	60.0	J (+)/UJ (ND)	

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

When the %D was > 25% and < 50%, positive results were qualified as estimated "J" and undetected results were accepted "as is" without qualification. When the %D was > 50%, all results were qualified as estimated "J" for positive results and "UJ" for undetected results.

5. The surrogates exceeded the recommended control limits in several samples. Table 4 details the samples, the %Rs and the qualifications.

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
039GGB0343	Toluene-d8	115	88-110	None
039GGB0147	Dibromofluoromethane	130	86-118	None
	4-Bromofluorobenzene	126	86-115	
039GGB0247	Toluene-d8	112	88-110	J (+)
039GGB0413	4-Bromofluorobenzene	116	86-115	J (+)
030GGB0138	4-Bromofluorobenzene	136	86-115	None

Table 4
Surrogate Outliers

Sample ID	Surrogate	%R	QC Limits	Qualification
022GGB0247	4-Bromofluorobenzene	116	86-115	None
030GGB0238	4-Bromofluorobenzene	116	86-115	None
022GGB0145	Dibromofluoromethane	129	86-118	None
	4-Bromofluorobenzene	157	86-115	
030GGB0545	Dibromofluoromethane	52	86-118	J (+)/ UJ (ND)
	4-Bromofluorobenzene	134	86-115	
030GGB0437	Dibromofluoromethane	76	86-115	J (+)/UJ (ND)
	4-Bromofluorobenzene	121		
020GGB0244	Dibromofluoromethane	123	86-118	None
020GGB0446	Dibromofluoromethane	119	86-118	None
039CGB0302	Toluene-d8	121	81-117	None
039SGB0202	Toluene-d8	127	81-117	None
039SGB0301	Toluene-d8	125	81-117	None
039SGB0302	Dibromofluoromethane	121	80-120	J (+)
	Toluene-d8	121	81-117	
022SGB0315	Dibromofluoromethane	122	80-120	J (+)
039SGB0313	Dibromofluoromethane	124	80-120	J (+)
022SGB0701	Dibromofluoromethane	121	80-120	None
030SGB0201	Dibromofluoromethane	128	80-120	None
030SGB0213	Dibromofluoromethane	125	80-120	None
022SGB0115	Dibromofluoromethane	129	80-120	None
030SGB0501	Dibromofluoromethane	123	80-120	None
	4-Bromofluorobenzene	122	74-121	
020SGB0401	Dibromofluoromethane	159	80-120	J (+)
020SGB0407	Dibromofluoromethane	124	80-120	J (+)
020SGB0413	Dibromofluoromethane	122	80-120	J (+)
020SGB0301	Dibromofluoromethane	154	80-120	J (+)
020SGB0307	Dibromofluoromethane	129	80-120	J (+)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
 J (+) = Qualified estimated "J" for positive results.
 UJ (ND) = Qualified estimated "UJ" for nondetect results.

6. Several internal standards exceeded the recommended method control limits. Table 5 lists

the samples, their deficient internal standards, and their qualifications.

Table 5
Internal Standard Outliers

Sample ID	Internal Standard	Area	QC Limits	Qualification
039GGB0147	Pentafluorobenzene	326447	513060-2052240	All compounds were qualified UJ (ND)
	1,4-Difluorobenzene	510112	756770-3027082	
	Chlorobenzene-d5	477669	705741-2822964	
	1,4-Dichlorobenzene-d4	306748	527982-2111926	
039GGB0214	Pentafluorobenzene	245492	571299-2285196	All compounds were qualified as J (+)/UJ (ND)
	1,4-Difluorobenzene	377273	839921-3359682	
	Chlorobenzene-d5	346813	905890-3623558	
	1,4-Dichlorobenzene-d4	362068	785566-3142262	
022HGB0447	Pentafluorobenzene	6298333	363429-1453716	None
030SGB0113	Pentafluorobenzene	361113	442864-1771454	All compounds were qualified as UJ (ND)
	1,4-Difluorobenzene	697510	810218-3240870	
	Chlorobenzene-d5	788238	820372-3281498	
	1,4-Dichlorobenzene-d4	522646	594985-2379940	
022SGB0616	Chlorobenzene-d5	1021486	1064223-4256892	UJ (ND)
022SGB0716	Chlorobenzene-d5	1031855	1064223-4256892	UJ (ND)
030SGB0201	Chlorobenzene-d5	1034261	1064223-4256892	UJ (ND)
020SGB0401	Chlorobenzene-d5	706608	767443-3069772	UJ (ND)
	1,4-Dichlorobenzene-d4	415226	548389-2193554	
020SGB0301	1,4-Dichlorobenzene-d4	455318	463009-1852036	UJ (ND)

NOTE: None = Positive results only were to be qualified. There were no positive hits, thus no qualification.
J (+) = Qualified estimated "J" for positive results.
UJ (ND) = Qualified estimated "UJ" for nondetect results.

Each internal standard is associated with particular analytes. They are as follows.

Pentafluorobenzene	1,4-Difluorobenzene	Chlorobenzene-d5	1,4-Dichlorobenzene-d4
Chloromethane	1,2-Dichloroethane	Dibromochloromethane	1,1,2,2-Tetrachloroethane
Bromomethane	Carbon Tetrachloride	Bromoform	
Vinyl Chloride	Bromodichloromethane	2-Hexanone	
Methylene Chloride	1,2-Dichloropropane	Tetrachloroethene	
Acetone	cis-1,3-Dichloropropene	Chlorobenzene	
Carbon disulfide	Trichloroethene	Ethylbenzene	
1,1-Dichloroethene	1,1,2-Trichloroethane	Styrene	
1,1-Dichloroethane	Benzene	1,3-Dichloropropane	
1,2-Dichloroethane (total)	trans-1,3-Dichloropropene	m-Xylene	
Chloroform	4-Methyl-2-Pentanone	o-Xylene	
2-Butanone	Toluene		
1,1,1-Trichloroethane			
Dichlorodifluoromethane			
Trichlorofluoromethane			

When an internal standard area was greater than the upper control limit, then only positive results in the associated analytes were qualified as estimated "J;" undetected results were accepted "as is," without qualification. When the internal standard area was less than the lower control limits, then all results in the associated analytes were qualified as estimated "J" for positive results and "UJ" for undetected results.

7. Samples 022GGB0347, 039SGB0302, 039SGB0211, 022SGB0416, and 030SGB0113 were used for MS/MSD samples. Table 6 lists the samples whose %Rs or RPDs exceeded the recommended control limits.

Table 6
Matrix Spike/ Matrix Spike Outliers

Sample ID	Analyte	%R	QC Limits	RPD	QC Limits
039SGB0302	Benzene	—	—	25	21
	Chlorobenzene	140 (MSD)	60-133	45	21
039SGB0211	Trichloroethene	—	—	28	24

Chlorobenzene and benzene in sample 039SGB0302 were not qualified because only one %R and the RPD alone, respectively, were outside the QC limits. Trichloroethene was not qualified in sample 039SGB0211 because only the RPD exceeded the QC limits.

8. Fourteen method blanks and eight trip blanks were analyzed with this SDG. Table 7 lists the blanks that demonstrated positive detections and the samples that were negated due to the detections.

Table 7
Blank Detections

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
022T101896	Trip Blank	Methylene Chloride	11	110	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101896	Method Blank	Methylene Chloride	21	210	022SGB0201	U
					022GGB0347	U
					022HGB0347	U
					022SGB0401	U
					063SGB0101	U
VBLK101996	Method Blank	Methylene Chloride	10	100	022SGB0301	None
					039SGB0413	U

**Table 7
Blank Detections**

Blank ID	Type	Analyte	Concentration	Action Level	Associated Samples	Qualification
VBLK102196	Method Blank	Methylene Chloride	12	120	022SGB0311	U
					022SGB0315	U
					022CGB0416	U
					022SGB0416	U
					022GGB0447	U
					022HGB0447	U
					063SGB0108	U
					063SGB0116	U
					063GGB0147	None

9. Samples 022GGB0347 and 022HGB0347, 022CGB0416 and 022SGB0416, 022GGB0447 and 022HGB0447, 039CGB0302 and 039SGB0302, and 039CGB0313 and 039SGB0313 were analyzed as field duplicates. The RPDs of ethylbenzene in samples 022GGB0347 and 022HGB0347 (33.3%) and carbon disulfide in samples 039CGB0302 and 039SGB0302 (118.4) exceeded the 30% QC limit for water samples an 50% QC limit for soil samples, respectively. Ethyl benzene was qualified as estimated "J" in samples 022GGB0347 and 022HGB0347 while carbon disulfide as qualified as "UJ" in sample 039CGB0302 and "J" in sample 039SGB0302.

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SWMU 17 Soil Samples

APX9-METAL		SAMPLE ID ----->	017-S-0001-01				
		ORIGINAL ID ----->	017S000101				
		LAB SAMPLE ID ---->	150964S				
		ID FROM REPORT -->	017S000101				
		SAMPLE DATE ----->	06/28/96				
		MATRIX ----->	Soil				
		UNITS ----->	MG/KG				
CAS #	Parameter	1918	VAL				
7440-36-0	Antimony	9.	J				
7440-38-2	Arsenic	2.5	J				
7440-39-3	Barium	108.					
7440-41-7	Beryllium	0.45	J				
7440-43-9	Cadmium	2.8					
7440-47-3	Chromium	10.9	J				
7440-48-4	Cobalt	8.	J				
7440-50-8	Copper	19.5					
7439-92-1	Lead	14.4	J				
7439-97-6	Mercury	0.13	U				
7440-02-0	Nickel	18.8					
7782-49-2	Selenium	0.26	U				
7440-22-4	Silver	0.78	UJ				
7440-28-0	Thallium	0.92	U				
7440-62-2	Vanadium	21.6					
7440-66-6	Zinc	55.7					
7440-31-5	Tin	25.4	J				

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SWMU 17 Soil Samples

SW846-PEST		SAMPLE ID ----->	017-S-0001-01				
		ORIGINAL ID ----->	017S000101				
		LAB SAMPLE ID ---->	150964RE				
		ID FROM REPORT -->	017S000101				
		SAMPLE DATE ----->	06/28/96				
		DATE EXTRACTED -->	07/08/96				
		DATE ANALYZED ---->	07/27/96				
		MATRIX ----->	Soil				
		UNITS ----->	ug/Kg				
CAS #	Parameter	1918	VAL				
319-84-6	alpha-BHC	2.1	U				
319-85-7	beta-BHC	2.1	U				
319-86-8	delta-BHC	2.1	U				
58-89-9	gamma-BHC (Lindane)	2.1	U				
76-44-8	Heptachlor	2.1	U				
309-00-2	Aldrin	2.1	U				
1024-57-3	Heptachlor epoxide	2.3	J				
959-98-8	Endosulfan I	2.1	U				
60-57-1	Dieldrin	4.3	U				
72-55-9	4,4'-DDE	4.8	J				
72-20-8	Endrin	5.6					
33213-63-9	Endosulfan II	4.4	J				
72-54-8	4,4'-DDD	3.8	J				
1031-07-8	Endosulfan sulfate	4.3	U				
50-29-3	4,4'-DDT	2.4	J				
72-43-5	Methoxychlor	21.	U				
53494-70-5	Endrin ketone	4.3	U				
7421-93-4	Endrin aldehyde	2.3	J				
5103-71-9	alpha-Chlordane	2.6	J				
5103-74-2	gamma-Chlordane	2.1	U				
8001-35-2	Toxaphene	43.	U				
12674-11-2	Aroclor-1016	43.	U				
11104-28-2	Aroclor-1221	43.	U				
11141-16-5	Aroclor-1232	43.	U				
53469-21-9	Aroclor-1242	43.	U				
12672-29-6	Aroclor-1248	43.	U				
11097-69-1	Aroclor-1254	43.	U				
11096-82-5	Aroclor-1260	43.	U				
12789-03-6	Technical Chlordane	43.	U				

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SWMU 17 Soil Samples

SMB46-SVDA		SAMPLE ID -----> 017-S-0001-01					
		ORIGINAL ID -----> 017S000101					
		LAB SAMPLE ID ----> 150964					
		ID FROM REPORT --> 017s000101					
		SAMPLE DATE -----> 06/28/96					
		DATE EXTRACTED --> 07/05/96					
		DATE ANALYZED ----> 07/08/96					
		MATRIX -----> Soil					
		UNITS -----> ug/Kg					
CAS #	Parameter	1918	VAL				
108-95-2	Phenol	8800.	U				
111-44-4	bis(2-Chloroethyl)ether	8800.	U				
95-57-8	2-Chlorophenol	8800.	U				
541-73-1	1,3-Dichlorobenzene	8800.	U				
106-46-7	1,4-Dichlorobenzene	8800.	U				
95-50-1	1,2-Dichlorobenzene	8800.	U				
95-48-7	2-Methylphenol (o-Cresol)	8800.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)	8800.	U				
106-44-5	4-Methylphenol (p-Cresol)	8800.	U				
621-64-7	N-Nitroso-di-n-propylamine	8800.	U				
67-72-1	Hexachloroethane	8800.	U				
98-95-3	Nitrobenzene	8800.	U				
78-59-1	Isophorone	8800.	U				
88-75-5	2-Nitrophenol	8800.	U				
105-67-9	2,4-Dimethylphenol	8800.	U				
120-83-2	2,4-Dichlorophenol	8800.	U				
120-82-1	1,2,4-Trichlorobenzene	8800.	U				
91-20-3	Naphthalene	8700.	J				
106-47-8	4-Chloroaniline	8800.	U				
87-68-3	Hexachlorobutadiene	8800.	U				
111-91-1	bis(2-Chloroethoxy)methane	8800.	U				
59-50-7	4-Chloro-3-methylphenol	8800.	U				
91-57-6	2-Methylnaphthalene	15000.					
77-47-4	Hexachlorocyclopentadiene	8800.	UJ				
88-06-2	2,4,6-Trichlorophenol	8800.	U				
95-95-4	2,4,5-Trichlorophenol	22000.	U				
91-58-7	2-Chloronaphthalene	8800.	U				
88-74-4	2-Nitroaniline	22000.	U				
131-11-3	Dimethylphthalate	8800.	U				
208-96-8	Acenaphthylene	8800.	U				
606-20-2	2,6-Dinitrotoluene	8800.	U				
99-09-2	3-Nitroaniline	22000.	U				
83-32-9	Acenaphthene	8800.	U				
51-28-5	2,4-Dinitrophenol	22000.	U				
100-02-7	4-Nitrophenol	22000.	U				
132-64-9	Dibenzofuran	8800.	U				

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SWMU 17 Soil Samples

SW846-SYDA		SAMPLE ID ----->	017-S-0001-01				
		ORIGINAL ID ----->	017S000101				
		LAB SAMPLE ID ---->	150964				
		ID FROM REPORT -->	017s000101				
		SAMPLE DATE ----->	06/28/96				
		DATE EXTRACTED -->	07/05/96				
		DATE ANALYZED ---->	07/08/96				
		MATRIX ----->	Soil				
		UNITS ----->	ug/Kg				
CAS #	Parameter	1918	VAL				
121-14-2	2,4-Dinitrotoluene	8800.	U				
84-66-2	Diethylphthalate	8800.	U				
7005-72-3	4-Chlorophenylphenyl ether	8800.	U				
86-73-7	Fluorene	8800.	U				
100-01-6	4-Nitroaniline	22000.	U				
534-52-1	2-Methyl-4,6-Dinitrophenol	22000.	U				
86-30-6	N-Nitrosodiphenylamine	8800.	U				
101-55-3	4-Bromophenyl-phenylether	8800.	U				
118-74-1	Hexachlorobenzene	8800.	U				
87-86-5	Pentachlorophenol	22000.	U				
85-01-8	Phenanthrene	1100.	J				
120-12-7	Anthracene	8800.	U				
86-74-8	Carbazole	8800.	U				
84-74-2	Di-n-butylphthalate	8800.	U				
206-44-0	Fluoranthene	8800.	U				
129-00-0	Pyrene	8800.	U				
85-68-7	Butylbenzylphthalate	8800.	U				
91-94-1	3,3'-Dichlorobenzidine	8800.	U				
56-55-3	Benzo(a)anthracene	8800.	U				
218-01-9	Chrysene	8800.	U				
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	8800.	U				
117-84-0	Di-n-octylphthalate	8800.	U				
205-99-2	Benzo(b)fluoranthene	8800.	U				
207-08-9	Benzo(k)fluoranthene	8800.	U				
50-32-8	Benzo(a)pyrene	8800.	U				
193-39-5	Indeno(1,2,3-cd)pyrene	8800.	U				
53-70-3	Dibenz(a,h)anthracene	8800.	U				
191-24-2	Benzo(g,h,i)perylene	8800.	U				

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SWMU 17 Soil Samples

SMB46-VOA		SAMPLE ID -----> 017-S-0001-01					
		ORIGINAL ID -----> 017S000101					
		LAB SAMPLE ID ----> 150964					
		ID FROM REPORT --> 017S000101					
		SAMPLE DATE -----> 06/28/96					
		DATE ANALYZED ----> 07/02/96					
		MATRIX -----> Soil					
		UNITS -----> ug/Kg					
CAS #	Parameter	1918	VAL				
74-87-3	Chloromethane	130.	U				
74-83-9	Bromomethane	130.	U				
75-01-4	Vinyl chloride	130.	U				
75-00-3	Chloroethane	130.	U				
75-09-2	Methylene chloride	130.	U				
67-64-1	Acetone	130.	UJ				
75-15-0	Carbon disulfide	130.	U				
75-35-4	1,1-Dichloroethane	130.	U				
75-34-3	1,1-Dichloroethane	130.	U				
540-59-0	1,2-Dichloroethane (total)	130.	U				
67-66-3	Chloroform	130.	U				
107-06-2	1,2-Dichloroethane	130.	U				
78-93-3	2-Butanone (MEK)	130.	U				
71-55-6	1,1,1-Trichloroethane	130.	U				
56-23-5	Carbon tetrachloride	130.	U				
75-27-4	Bromodichloromethane	130.	U				
78-87-5	1,2-Dichloropropane	130.	U				
10061-01-5	cis-1,3-Dichloropropene	130.	U				
79-01-6	Trichloroethene	130.	U				
124-48-1	Dibromochloromethane	130.	U				
79-00-5	1,1,2-Trichloroethane	130.	U				
71-43-2	Benzene	130.	U				
10061-02-6	trans-1,3-Dichloropropene	130.	U				
75-25-2	Bromoform	130.	U				
108-10-1	4-Methyl-2-Pentanone (MIBK)	130.	U				
591-78-6	2-Hexanone	130.	U				
127-18-4	Tetrachloroethene	17.	J				
79-34-5	1,1,2,2-Tetrachloroethane	130.	U				
108-88-3	Toluene	140.					
108-90-7	Chlorobenzene	130.	U				
100-41-4	Ethylbenzene	370.					
100-42-5	Styrene	31.	J				
1330-20-7	Xylene (Total)	1400.					

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SWMU 19 Soil Samples

APX9-METAL		SAMPLE ID -----> 019-S-0001-01		019-S-0002-01				
	ORIGINAL ID ----->	019S000101		019S000201				
	LAB SAMPLE ID ---->	144647S		144648S				
	ID FROM REPORT -->	019S000101		019S000201				
	SAMPLE DATE ----->	03/19/96		03/19/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	MG/KG		MG/KG				
CAS #	Parameter	1736	VAL	1736	VAL			
7440-36-0	Antimony	7.8	UJ	7.6	UJ			
7440-38-2	Arsenic	5.5		6.2				
7440-39-3	Barium	141.		172.				
7440-41-7	Beryllium	0.44	J	0.53	J			
7440-43-9	Cadmium	0.86	J	0.88	J			
7440-47-3	Chromium	9.2		12.6				
7440-48-4	Cobalt	8.	J	8.6	J			
7440-50-8	Copper	10.6		14.4				
7439-92-1	Lead	96.6		75.3				
7439-97-6	Mercury	0.13	U	0.13	U			
7440-02-0	Nickel	15.6		19.9				
7782-49-2	Selenium	0.37	J	0.25	U			
7440-22-4	Silver	0.78	U	0.76	U			
7440-28-0	Thallium	0.52	U	0.51	U			
7440-62-2	Vanadium	17.	J	20.8				
7440-66-6	Zinc	166.	J	83.6	J			
7440-31-5	Tin	21.3	J	37.6	J			

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SWMU 19 Soil Samples

SW846-PEST		SAMPLE ID -----> 019-S-0001-01		019-S-0002-01				
	ORIGINAL ID ----->	019S000101		019S000201				
	LAB SAMPLE ID --->	144647		144648				
	ID FROM REPORT -->	019S000101		019S000201				
	SAMPLE DATE ----->	03/19/96		03/19/96				
	DATE EXTRACTED -->	03/26/96		03/26/96				
	DATE ANALYZED ---->	04/12/96		04/12/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	ug/Kg		ug/Kg				
CAS #	Parameter	1736	VAL	1736	VAL			
319-84-6	alpha-BHC	2.2	U	2.1	U			
319-85-7	beta-BHC	2.2	U	2.1	U			
319-86-8	delta-BHC	2.2	U	2.1	U			
58-89-9	gamma-BHC (Lindane)	2.2	U	2.1	U			
76-44-8	Heptachlor	2.8	U	2.1	U			
309-00-2	Aldrin	2.2	U	2.1	U			
1024-57-3	Heptachlor epoxide	1.9	J	2.1	U			
959-98-8	Endosulfan I	2.2	U	2.1	U			
60-57-1	Dieldrin	4.4	U	4.2	U			
72-55-9	4,4'-DDE	4.4	UJ	5.6	J			
72-20-8	Endrin	4.4	U	4.2	U			
33213-65-9	Endosulfan II	7.7	J	4.	J			
72-54-8	4,4'-DDD	4.4	U	4.2	U			
1031-07-8	Endosulfan sulfate	4.4	U	4.2	U			
50-29-3	4,4'-DDT	4.8	U	4.2	U			
72-43-5	Methoxychlor	22.	U	21.	U			
53494-70-5	Endrin ketone	4.4	U	4.2	U			
7421-93-4	Endrin aldehyde	4.4	U	4.2	U			
5103-71-9	alpha-Chlordane	2.2	U	2.1	U			
5103-74-2	gamma-Chlordane	2.2	U	2.1	U			
8001-35-2	Toxaphene	44.	U	42.	U			
12674-11-2	Aroclor-1016	44.	U	42.	U			
11104-28-2	Aroclor-1221	44.	U	42.	U			
11141-16-5	Aroclor-1232	44.	U	42.	U			
53469-21-9	Aroclor-1242	44.	U	42.	U			
12672-29-6	Aroclor-1248	44.	U	42.	U			
11097-69-1	Aroclor-1254	44.	U	42.	U			
11096-82-5	Aroclor-1260	44.	U	42.	U			
12789-03-6	Technical Chlordane	44.	U	42.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 19 Soil Samples

SW846-SVDA		SAMPLE ID -----> 019-S-0001-01		019-S-0002-01				
		ORIGINAL ID -----> 019S000101		019S000201				
		LAB SAMPLE ID ----> 144647		144648				
		ID FROM REPORT --> 019s000101		019s000201				
		SAMPLE DATE -----> 03/19/96		03/19/96				
		DATE EXTRACTED --> 03/26/96		03/26/96				
		DATE ANALYZED ---> 03/28/96		03/28/96				
		MATRIX -----> Soil		Soil				
		UNITS -----> ug/Kg		ug/Kg				
CAS #	Parameter	1736	VAL	1736	VAL			
108-95-2	Phenol	8800.	U	8400.	U			
111-44-4	bis(2-Chloroethyl)ether	8800.	U	8400.	U			
95-57-8	2-Chlorophenol	8800.	U	8400.	U			
541-73-1	1,3-Dichlorobenzene	8800.	U	8400.	U			
106-46-7	1,4-Dichlorobenzene	8800.	U	8400.	U			
95-50-1	1,2-Dichlorobenzene	8800.	U	8400.	U			
95-48-7	2-Methylphenol (o-Cresol)	8800.	U	8400.	U			
108-60-1	2,2'-oxybis(1-Chloropropane)	8800.	U	8400.	U			
106-44-5	4-Methylphenol (p-Cresol)	8800.	U	8400.	U			
621-64-7	N-Nitroso-di-n-propylamine	8800.	U	8400.	U			
67-72-1	Hexachloroethane	8800.	U	8400.	U			
98-95-3	Nitrobenzene	8800.	U	8400.	U			
78-59-1	Isophorone	8800.	U	8400.	U			
88-75-5	2-Nitrophenol	8800.	U	8400.	U			
105-67-9	2,4-Dimethylphenol	8800.	U	8400.	U			
120-83-2	2,4-Dichlorophenol	8800.	U	8400.	U			
120-82-1	1,2,4-Trichlorobenzene	8800.	U	8400.	U			
91-20-3	Naphthalene	4400.	J	3600.	J			
106-47-8	4-Chloroaniline	8800.	U	8400.	U			
87-68-3	Hexachlorobutadiene	8800.	U	8400.	U			
111-91-1	bis(2-Chloroethoxy)methane	8800.	U	8400.	U			
59-50-7	4-Chloro-3-methylphenol	8800.	U	8400.	U			
91-57-6	2-Methylnaphthalene	9400.	U	7600.	J			
77-47-4	Hexachlorocyclopentadiene	8800.	UJ	8400.	UJ			
88-06-2	2,4,6-Trichlorophenol	8800.	U	8400.	U			
95-95-4	2,4,5-Trichlorophenol	22000.	U	21000.	U			
91-58-7	2-Chloronaphthalene	8800.	U	8400.	U			
88-74-4	2-Nitroaniline	22000.	U	21000.	U			
131-11-3	Dimethylphthalate	8800.	U	8400.	U			
208-96-8	Acenaphthylene	8800.	U	8400.	U			
606-20-2	2,6-Dinitrotoluene	8800.	U	8400.	U			
99-09-2	3-Nitroaniline	22000.	U	21000.	U			
83-32-9	Acenaphthene	8800.	U	8400.	U			
51-28-5	2,4-Dinitrophenol	22000.	UJ	21000.	UJ			
100-02-7	4-Nitrophenol	22000.	U	21000.	U			
132-64-9	Dibenzofuran	8800.	U	8400.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 19 Soil Samples

SW846-SVDA		SAMPLE ID ----->	019-S-0001-01	019-S-0002-01			
		ORIGINAL ID ----->	019S000101	019S000201			
		LAB SAMPLE ID ---->	144647	144648			
		ID FROM REPORT -->	019s000101	019s000201			
		SAMPLE DATE ----->	03/19/96	03/19/96			
		DATE EXTRACTED -->	03/26/96	03/26/96			
		DATE ANALYZED ---->	03/28/96	03/28/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg			
CAS #	Parameter	1736	VAL	1736	VAL		
121-14-2	2,4-Dinitrotoluene	8800.	U	8400.	U		
84-66-2	Diethylphthalate	8800.	U	8400.	U		
7005-72-3	4-Chlorophenylphenyl ether	8800.	U	8400.	U		
86-73-7	Fluorene	8800.	U	8400.	U		
100-01-6	4-Nitroaniline	22000.	U	21000.	U		
534-52-1	2-Methyl-4,6-Dinitrophenol	22000.	U	21000.	U		
86-30-6	N-Nitrosodiphenylamine	8800.	U	8400.	U		
101-55-3	4-Bromophenyl-phenylether	8800.	U	8400.	U		
118-74-1	Hexachlorobenzene	8800.	U	8400.	U		
87-86-5	Pentachlorophenol	22000.	U	21000.	U		
85-01-8	Phenanthrene	8800.	U	8400.	U		
120-12-7	Anthracene	8800.	U	8400.	U		
86-74-8	Carbazole	8800.	U	8400.	U		
84-74-2	Di-n-butylphthalate	8800.	U	8400.	U		
206-44-0	Fluoranthene	8800.	U	8400.	U		
129-00-0	Pyrene	8800.	U	8400.	U		
85-68-7	Butylbenzylphthalate	8800.	U	8400.	U		
91-94-1	3,3'-Dichlorobenzidine	8800.	U	8400.	U		
56-55-3	Benzo(a)anthracene	8800.	U	8400.	U		
218-01-9	Chrysene	8800.	U	8400.	U		
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	1800.	J	1600.	J		
117-84-0	Di-n-octylphthalate	8800.	U	8400.	U		
205-99-2	Benzo(b)fluoranthene	8800.	U	8400.	U		
207-08-9	Benzo(k)fluoranthene	8800.	U	8400.	U		
50-32-8	Benzo(a)pyrene	8800.	U	8400.	U		
193-39-5	Indeno(1,2,3-cd)pyrene	8800.	U	8400.	U		
53-70-3	Dibenz(a,h)anthracene	8800.	U	8400.	U		
191-24-2	Benzo(g,h,i)perylene	8800.	U	8400.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 19 Soil Samples

SUB46-VOA		SAMPLE ID -----> 019-S-0001-01		019-S-0002-01				
		ORIGINAL ID -----> 019S000101		019S000201				
		LAB SAMPLE ID ----> 144647		144648				
		ID FROM REPORT --> 019S000101		019S000201				
		SAMPLE DATE -----> 03/19/96		03/19/96				
		DATE ANALYZED ----> 03/29/96		03/28/96				
		MATRIX -----> Soil		Soil				
		UNITS -----> UG/KG		UG/KG				
CAS #	Parameter	1736	VAL	1736	VAL			
74-87-3	Chloromethane	1600.	U	63.	U			
74-83-9	Bromomethane	1600.	U	63.	U			
75-01-4	Vinyl chloride	1600.	U	63.	U			
75-00-3	Chloroethane	1600.	U	63.	U			
75-09-2	Methylene chloride	1600.	U	63.	U			
67-64-1	Acetone	1600.	U	330.				
75-15-0	Carbon disulfide	1600.	U	63.	U			
75-35-4	1,1-Dichloroethene	1600.	U	63.	U			
75-34-3	1,1-Dichloroethane	1600.	U	63.	U			
540-59-0	1,2-Dichloroethene (total)	1600.	U	63.	U			
67-66-3	Chloroform	1600.	U	63.	U			
107-06-2	1,2-Dichloroethane	1600.	U	63.	U			
78-93-3	2-Butanone (MEK)	1600.	U	56.	J			
71-59-6	1,1,1-Trichloroethane	1600.	U	63.	U			
56-23-5	Carbon tetrachloride	1600.	U	63.	U			
75-27-4	Bromodichloromethane	1600.	U	63.	U			
78-87-5	1,2-Dichloropropane	1600.	U	63.	U			
10061-01-5	cis-1,3-Dichloropropene	1600.	U	63.	U			
79-01-6	Trichloroethene	1600.	U	63.	U			
124-48-1	Dibromochloromethane	1600.	U	63.	U			
79-00-5	1,1,2-Trichloroethane	1600.	U	63.	U			
71-43-2	Benzene	250.	J	63.	J			
10061-02-6	trans-1,3-Dichloropropene	1600.	U	63.	U			
75-25-2	Bromoform	1600.	U	63.	U			
108-10-1	4-Methyl-2-Pentanone (MIBK)	1600.	U	20.	J			
591-78-6	2-Hexanone	1600.	U	63.	U			
127-18-4	Tetrachloroethene	1600.	U	63.	U			
79-34-5	1,1,2,2-Tetrachloroethane	1600.	U	63.	U			
108-88-3	Toluene	3000.		190.				
108-90-7	Chlorobenzene	1600.	U	63.	U			
100-41-4	Ethylbenzene	1800.		280.				
100-42-5	Styrene	1600.	U	15.	J			
1330-20-7	Xylene (Total)	12000.		1600.				

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

APX9-METAL		SAMPLE ID ----->	020-S-GB01-01	020-S-GB02-01				
		ORIGINAL ID ----->	020SGB0101	020SGB0201				
		LAB SAMPLE ID ---->	156394S	156395S				
		ID FROM REPORT -->	020SGB0101	020SGB0201				
		SAMPLE DATE ----->	10/29/96	10/29/96				
		MATRIX ----->	Soil	Soil				
		LIMITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2066	VAL	2066	VAL			
7440-36-0	Antimony	4.	UR	4.	UR			
7440-38-2	Arsenic	8.8	J	12.	J			
7440-39-3	Barium	140.		82.4				
7440-41-7	Beryllium	0.47	J	0.38	J			
7440-43-9	Cadmium	0.49	U	0.48	U			
7440-47-3	Chromium	11.4		10.8				
7440-48-4	Cobalt	8.6		6.4				
7440-50-8	Copper	14.2		15.1				
7439-92-1	Lead	13.3		12.7				
7439-97-6	Mercury	0.03	J	0.03	J			
7440-02-0	Nickel	22.3		15.7				
7782-49-2	Selenium	0.27	J	0.18	J			
7440-22-4	Silver	0.56	U	2.1				
7440-28-0	Thallium	0.24	UJ	0.24	UJ			
7440-62-2	Vanadium	21.9		20.7				
7440-66-6	Zinc	41.8		44.1				
7440-31-5	Tin	19.6	U	8.3	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

METAL-CN		SAMPLE ID ----->	020-S-GB01-01	020-S-GB02-01				
		ORIGINAL ID ----->	020SGB0101	020SGB0201				
		LAB SAMPLE ID ---->	156394	156395				
		ID FROM REPORT -->	020SGB0101	020SGB0201				
		SAMPLE DATE ----->	10/29/96	10/29/96				
		DATE EXTRACTED -->	11/12/96	11/12/96				
		DATE ANALYZED ---->	11/13/96	11/13/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2066	VAL	2066	VAL			
57-12-5	Cyanide (CN)	0.5	U	0.5	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

SW846-HERB		SAMPLE ID -----> 020-S-GB01-01		020-S-GB02-01				
	ORIGINAL ID ----->	020SGB0101		020SGB0201				
	LAB SAMPLE ID --->	156394		156395				
	ID FROM REPORT --->	020SGB0101		020SGB0201				
	SAMPLE DATE ----->	10/29/96		10/29/96				
	DATE EXTRACTED --->	11/06/96		11/06/96				
	DATE ANALYZED --->	11/09/96		11/09/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	ug/Kg		ug/Kg				
CAS #	Parameter	2066	VAL	2066	VAL			
94-75-7	2,4-D	9.4	UJ	9.4	U			
94-82-6	2,4-DB	9.5	UJ	9.5	U			
88-85-7	Dinoseb	4.7	UJ	4.7	U			
93-76-5	2,4,5-T	0.95	UJ	0.95	U			
93-72-1	2,4,5-TP (Silvex)	0.95	UJ	0.95	U			
75-99-0	Dalapon	23.	UJ	23.	U			
1918-00-9	Dicamba	0.94	UJ	0.94	U			
120-36-5	Dichlorprop	9.4	UJ	9.4	U			
94-74-6	MCPA	940.	UJ	940.	U			
93-65-2	MCPP	940.	UJ	940.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

SUB46-OP P		SAMPLE ID -----> 020-S-GB01-01		020-S-GB02-01				
		ORIGINAL ID -----> 020SGB0101		020SGB0201				
		LAB SAMPLE ID ----> 156394		156395				
		ID FROM REPORT --> 020SGB0101		020SGB0201				
		SAMPLE DATE -----> 10/29/96		10/29/96				
		DATE EXTRACTED --> 11/01/96		11/01/96				
		DATE ANALYZED ----> 11/12/96		11/12/96				
		MATRIX -----> Soil		Soil				
		UNITS -----> UG/KG		UG/KG				
CAS #	Parameter	2066	VAL	2066	VAL			
62-73-7	Dichlorvos	100.	U	100.	U			
7786-34-7	Mevinphos, Alpha	100.	U	100.	U			
8065-48-3	Demeton, O	100.	U	100.	U			
13194-48-4	Ethoprop	100.	U	100.	U			
300-76-5	Naled	100.	U	100.	U			
298-02-2	Phorate	100.	U	100.	U			
126-75-0	Demeton, S	100.	U	100.	U			
333-41-5	Diazinon	100.	U	100.	U			
298-04-4	Disulfoton	100.	U	100.	U			
298-00-0	Methyl parathion	100.	U	100.	U			
299-84-3	Ronnel	100.	U	100.	U			
55-38-9	Fenthion	100.	U	100.	U			
2921-88-2	Chloropyrifos	100.	U	100.	U			
327-98-0	Trichloronate	100.	U	100.	U			
150-50-5	Merphos	100.	U	100.	U			
34643-46-4	Tokuthion	100.	U	100.	U			
115-90-2	Fensulfothion	100.	U	100.	U			
22248-79-9	Stirophos (Tetrachlorovinphos)	100.	U	100.	U			
35400-43-2	Sulprofos (Bolstar)	100.	U	100.	U			
86-50-0	Azinphos methyl	100.	U	100.	U			
56-72-4	Coumaphos	100.	U	100.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

SMB46-PEST		SAMPLE ID -----> 020-S-GB01-01		020-S-GB02-01				
	ORIGINAL ID ----->	020SGB0101		020SGB0201				
	LAB SAMPLE ID ---->	156394		156395				
	ID FROM REPORT -->	020SGB0101		020SGB0201				
	SAMPLE DATE ----->	10/29/96		10/29/96				
	DATE EXTRACTED -->	11/01/96		11/01/96				
	DATE ANALYZED ---->	11/21/96		11/21/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	ug/Kg		ug/Kg				
CAS #	Parameter	2066	VAL	2066	VAL			
319-84-6	alpha-BHC	2.	UJ	2.	UJ			
319-85-7	beta-BHC	2.	UJ	2.	UJ			
319-86-8	delta-BHC	2.	UJ	2.	UJ			
58-89-9	gamma-BHC (Lindane)	2.	UJ	2.	UJ			
76-44-8	Heptachlor	2.	UJ	2.	UJ			
309-00-2	Aldrin	1.1	J	4.	J			
1024-57-3	Heptachlor epoxide	2.	UJ	2.	UJ			
959-98-8	Endosulfan I	2.	UJ	2.	UJ			
60-57-1	Dieldrin	4.	UJ	3.9	J			
72-55-9	4,4'-DDE	4.	UJ	4.	UJ			
72-20-8	Endrin	4.	UJ	4.	UJ			
33213-65-9	Endosulfan II	4.	UJ	4.	UJ			
72-54-8	4,4'-DDD	4.	UJ	4.	UJ			
1031-07-8	Endosulfan sulfate	4.	UJ	4.	UJ			
50-29-3	4,4'-DDT	4.	UJ	4.	UJ			
72-43-5	Methoxychlor	20.	UJ	20.	UJ			
53494-70-5	Endrin ketone	4.	UJ	4.	UJ			
7421-93-4	Endrin aldehyde	4.	UJ	4.	UJ			
5103-71-9	alpha-Chlordane	2.	UJ	2.	UJ			
5103-74-2	gamma-Chlordane	2.	UJ	2.	UJ			
8001-35-2	Toxaphene	40.	UJ	40.	UJ			
12674-11-2	Aroclor-1016	40.	UJ	40.	UJ			
11104-28-2	Aroclor-1221	40.	UJ	40.	UJ			
11141-16-5	Aroclor-1232	40.	UJ	40.	UJ			
53469-21-9	Aroclor-1242	40.	UJ	40.	UJ			
12672-29-6	Aroclor-1248	40.	UJ	40.	UJ			
11097-69-1	Aroclor-1254	40.	UJ	40.	UJ			
11096-82-5	Aroclor-1260	40.	UJ	40.	UJ			
12789-03-6	Technical Chlordane	40.	UJ	40.	UJ			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

SUBS-EVDA		SAMPLE ID ----->	020-S-GB01-01	020-S-GB02-01			
		ORIGINAL ID ----->	020SGB0101	020SGB0201			
		LAB SAMPLE ID ---->	156394	156395			
		ID FROM REPORT -->	020sgb0101	020sgb0201			
		SAMPLE DATE ----->	10/29/96	10/29/96			
		DATE EXTRACTED -->	11/01/96	11/01/96			
		DATE ANALYZED ---->	11/05/96	11/05/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg			
CAS #	Parameter	2066	VAL	2066	VAL		
108-95-2	Phenol	400.	U	400.	U		
111-44-4	bis(2-Chloroethyl)ether	400.	U	400.	U		
95-57-8	2-Chlorophenol	400.	U	400.	U		
541-73-1	1,3-Dichlorobenzene	400.	U	400.	U		
106-46-7	1,4-Dichlorobenzene	400.	U	400.	U		
95-50-1	1,2-Dichlorobenzene	400.	U	400.	U		
95-48-7	2-Methylphenol (o-Cresol)	400.	U	400.	U		
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U	400.	U		
106-44-5	4-Methylphenol (p-Cresol)	400.	U	400.	U		
621-64-7	N-Nitroso-di-n-propylamine	400.	U	400.	U		
67-72-1	Hexachloroethane	400.	U	400.	U		
98-95-3	Nitrobenzene	400.	U	400.	U		
78-59-1	Isophorone	400.	U	400.	U		
88-75-5	2-Nitrophenol	400.	U	400.	U		
105-67-9	2,4-Dimethylphenol	400.	U	400.	U		
120-83-2	2,4-Dichlorophenol	400.	U	400.	U		
120-82-1	1,2,4-Trichlorobenzene	400.	U	400.	U		
91-20-3	Naphthalene	400.	U	400.	U		
106-47-8	4-Chloroaniline	400.	U	400.	U		
87-68-3	Hexachlorobutadiene	400.	U	400.	U		
111-91-1	bis(2-Chloroethoxy)methane	400.	U	400.	U		
59-50-7	4-Chloro-3-methylphenol	400.	U	400.	U		
91-57-6	2-Methylnaphthalene	400.	U	400.	U		
77-47-4	Hexachlorocyclopentadiene	400.	U	400.	U		
88-06-2	2,4,6-Trichlorophenol	400.	U	400.	U		
95-95-4	2,4,5-Trichlorophenol	1000.	U	1000.	U		
91-58-7	2-Chloronaphthalene	400.	U	400.	U		
88-74-4	2-Nitroaniline	1000.	U	1000.	U		
131-11-3	Dimethylphthalate	400.	U	400.	U		
208-96-8	Acenaphthylene	400.	U	400.	U		
606-20-2	2,6-Dinitrotoluene	400.	U	400.	U		
99-09-2	3-Nitroaniline	1000.	U	1000.	U		
83-32-9	Acenaphthene	400.	U	400.	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	400.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

SUBS-SVDA		SAMPLE ID ----->	020-S-G801-01	020-S-G802-01			
		ORIGINAL ID ----->	020SG80101	020SG80201			
		LAB SAMPLE ID ---->	156394	156395			
		ID FROM REPORT -->	020sgb0101	020sgb0201			
		SAMPLE DATE ----->	10/29/96	10/29/96			
		DATE EXTRACTED -->	11/01/96	11/01/96			
		DATE ANALYZED ---->	11/05/96	11/05/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg			
CAS #	Parameter	2066	VAL	2066	VAL		
121-14-2	2,4-Dinitrotoluene	400.	U	400.	U		
84-66-2	Diethylphthalate	400.	U	400.	U		
7005-72-3	4-Chlorophenylphenyl ether	400.	U	400.	U		
86-73-7	Fluorene	400.	U	400.	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	400.	U		
101-55-3	4-Bromophenyl-phenylether	400.	U	400.	U		
118-74-1	Hexachlorobenzene	400.	U	400.	U		
87-86-5	Pentachlorophenol	1000.	U	1000.	U		
85-01-8	Phenanthrene	400.	U	400.	U		
120-12-7	Anthracene	400.	U	400.	U		
86-74-8	Carbazole	400.	U	400.	U		
84-74-2	Di-n-butylphthalate	400.	U	400.	U		
206-44-0	Fluoranthene	400.	U	400.	U		
129-00-0	Pyrene	400.	U	400.	U		
85-68-7	Butylbenzylphthalate	400.	U	400.	U		
91-94-1	3,3'-Dichlorobenzidine	400.	U	400.	U		
56-55-3	Benzo(a)anthracene	400.	U	400.	U		
218-01-9	Chrysene	400.	U	400.	U		
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	400.	U	780.			
117-84-0	Di-n-octylphthalate	400.	U	400.	U		
205-99-2	Benzo(b)fluoranthene	400.	U	400.	U		
207-08-9	Benzo(k)fluoranthene	400.	U	400.	U		
50-32-8	Benzo(a)pyrene	400.	U	400.	U		
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U	400.	U		
53-70-3	Dibenz(a,h)anthracene	400.	U	400.	U		
191-24-2	Benzo(g,h,i)perylene	400.	U	400.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

SMB46-VOA		SAMPLE ID ----->	020-S-GB01-01	020-S-GB02-01	020-S-GB03-07	020-S-GB04-13			
		ORIGINAL ID ----->	020SGB0101	020SGB0201	020SGB0307	020SGB0413			
		LAB SAMPLE ID ---->	156394	156395	156510	156511			
		ID FROM REPORT -->	020sgb0101	020sgb0201	020sgb0307	020sgb0413			
		SAMPLE DATE ----->	10/29/96	10/29/96	10/31/96	10/31/96			
		DATE ANALYZED ----->	11/01/96	11/01/96	11/06/96	11/05/96			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg	ug/Kg	ug/Kg			
CAS #	Parameter	2066	VAL	2066	VAL	2066	VAL	2066	VAL
74-87-3	Chloromethane	12.	U	12.	U	16.	U	13.	U
74-83-9	Bromomethane	12.	U	12.	U	16.	U	13.	U
75-01-4	Vinyl chloride	12.	U	12.	U	16.	U	13.	U
75-00-3	Chloroethane	12.	U	12.	U	16.	U	13.	U
75-09-2	Methylene chloride	12.	U	12.	U	32.	U	13.	U
67-64-1	Acetone	120.	J	41.	J	16.	U	13.	U
75-15-0	Carbon disulfide	12.	U	12.	U	16.	U	13.	U
75-35-4	1,1-Dichloroethene	8.	J	12.	U	50.		210.	
75-34-3	1,1-Dichloroethane	6.	J	12.	U	120.		150.	D
540-59-0	1,2-Dichloroethene (total)	12.	U	12.	U	16.	U	2.	J
67-66-3	Chloroform	12.	U	12.	U	16.	U	13.	U
107-06-2	1,2-Dichloroethane	12.	U	12.	U	16.	U	13.	U
78-93-3	2-Butanone (MEK)	12.	U	12.	U	16.	U	13.	U
71-55-6	1,1,1-Trichloroethane	12.	U	12.	U	46.		160.	
56-23-5	Carbon tetrachloride	12.	U	12.	U	16.	U	13.	U
75-27-4	Bromodichloromethane	12.	U	12.	U	16.	U	13.	U
78-87-5	1,2-Dichloropropane	12.	U	12.	U	16.	U	13.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	12.	U	16.	U	13.	U
79-01-6	Trichloroethene	12.	U	12.	U	16.	U	4.	J
124-48-1	Dibromochloromethane	12.	U	12.	U	16.	U	13.	U
79-00-5	1,1,2-Trichloroethane	12.	U	12.	U	16.	U	7.	J
71-43-2	Benzene	12.	U	12.	U	3.	J	5.	J
10061-02-6	trans-1,3-Dichloropropene	12.	U	12.	U	16.	U	13.	U
75-25-2	Bromoform	12.	U	12.	U	16.	U	13.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	12.	U	16.	U	13.	U
591-78-6	2-Hexanone	12.	U	12.	U	16.	U	13.	U
127-18-4	Tetrachloroethene	12.	U	12.	U	16.	U	13.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	12.	U	16.	U	13.	U
108-88-3	Toluene	12.	U	1.	J	16.	U	13.	U
108-90-7	Chlorobenzene	12.	U	12.	U	16.	U	13.	U
100-41-4	Ethylbenzene	12.	U	12.	U	16.	U	13.	U
100-42-5	Styrene	12.	U	12.	U	16.	U	13.	U
1330-20-7	Xylene (Total)	12.	U	12.	U	18.		5.	J

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

TPH		SAMPLE ID ----->	020-S-GB01-01	020-S-GB02-01				
		ORIGINAL ID ----->	020SGB0101	020SGB0201				
		LAB SAMPLE ID --->	156394	156395				
		ID FROM REPORT -->	020SGB0101	020SGB0201				
		SAMPLE DATE ----->	10/29/96	10/29/96				
		DATE EXTRACTED -->	11/01/96	11/01/96				
		DATE ANALYZED --->	11/06/96	11/06/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2066	VAL	2066	VAL			
9999900-02-4	Petroleum Hydrocarbons, TPH	680.	J	180.	J			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

TPH-DRO		SAMPLE ID ----->	020-S-GB01-01	020-S-GB02-01			
		ORIGINAL ID ----->	020SGB0101	020SGB0201			
		LAB SAMPLE ID ---->	156394	156395			
		ID FROM REPORT -->	020SGB0101	020SGB0201			
		SAMPLE DATE ----->	10/29/96	10/29/96			
		DATE EXTRACTED -->	11/01/96	11/01/96			
		DATE ANALYZED ---->	11/12/96	11/12/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG			
CAS #	Parameter	2066	VAL	2066	VAL		
9999900-02-6	TPH - Diesel Range Organics	18000.		69000.			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Soil Samples

TPH-GRO		SAMPLE ID ----->	020-S-GB01-01	020-S-GB02-01				
		ORIGINAL ID ----->	020SGB0101	020SGB0201				
		LAB SAMPLE ID ---->	156394	156395				
		ID FROM REPORT -->	020SGB0101	020SGB0201				
		SAMPLE DATE ----->	10/29/96	10/29/96				
		DATE ANALYZED -->	11/06/96	11/06/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG				
CAS #	Parameter	2066	VAL	2066	VAL			
9999900-02-5	TPH - Gasoline Range Organics	63.		70.				

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 20 Groundwater Samples

SWMU 20		SAMPLE ID ----->	020-G-G801-47	020-H-G801-47				
		ORIGINAL ID ----->	020GG80147	020HGB0147				
		LAB SAMPLE ID --->	156398	156399				
		ID FROM REPORT -->	020gg80147	020hgb0147				
		SAMPLE DATE ----->	10/29/96	10/29/96				
		DATE ANALYZED --->	10/31/96	10/31/96				
		MATRIX ----->	Water	Water				
		UNITS ----->	ug/L	ug/L				
CAS #	Parameter	2066	VAL	2066	VAL			
74-87-3	Chloromethane	10.	U	10.	U			
74-83-9	Bromomethane	10.	U	10.	U			
75-01-4	Vinyl chloride	10.	U	10.	U			
75-00-3	Chloroethane	10.	U	10.	U			
75-09-2	Methylene chloride	10.	U	10.	U			
67-64-1	Acetone	10.	UJ	10.	UJ			
75-15-0	Carbon disulfide	10.	U	10.	U			
75-35-4	1,1-Dichloroethene	70.	J	34.	J			
75-34-3	1,1-Dichloroethane	280.	DJ	160.	DJ			
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U			
67-66-3	Chloroform	10.	U	10.	U			
107-06-2	1,2-Dichloroethane	5.	J	10.	U			
78-93-3	2-Butanone (MEK)	10.	UR	10.	UR			
71-55-6	1,1,1-Trichloroethane	21.	J	7.	J			
56-23-5	Carbon tetrachloride	10.	U	10.	U			
75-27-4	Bromodichloromethane	10.	U	10.	U			
78-87-5	1,2-Dichloropropane	10.	U	10.	U			
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U			
79-01-6	Trichloroethene	10.	U	10.	U			
124-48-1	Dibromochloromethane	10.	U	10.	U			
79-00-5	1,1,2-Trichloroethane	17.	J	10.	UJ			
71-43-2	Benzene	7.	J	10.	U			
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U			
75-25-2	Bromoform	10.	U	10.	U			
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U			
591-78-6	2-Hexanone	10.	UJ	10.	UJ			
127-18-4	Tetrachloroethene	10.	U	10.	U			
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	10.	U			
108-88-3	Toluene	10.	U	10.	U			
108-90-7	Chlorobenzene	10.	U	10.	U			
100-41-4	Ethylbenzene	10.	U	10.	U			
100-42-5	Styrene	10.	U	10.	U			
1330-20-7	Xylene (Total)	10.	U	10.	U			

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 20 Soil Samples

SW846-VOA		SAMPLE ID ----->	020-S-G801-01	020-S-G801-07	020-S-G801-13	020-S-G802-07	020-S-G802-13	020-S-G803-01	
		ORIGINAL ID ----->	020SG80101	020SG80107	020SG80113	020SG80207	020SG80213	020SG80301	
		LAB SAMPLE ID ---->	020S0101	020S0107	020S0113	020S0207	020S0213	020S0301	
		ID FROM REPORT -->	020SG80101	020SG80107	020SG80113	020SG80207	020SG80213	020SG80301	
		SAMPLE DATE ----->	10/29/96	10/29/96	10/29/96	10/30/96	10/30/96	10/31/96	
		DATE ANALYZED ---->	10/29/96	10/29/96	10/29/96	10/30/96	10/30/96	10/31/96	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	UJ	10.	UJ	10.	UJ	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	13.	U	16.	U	10.	U	10.	U
67-64-1	Acetone	100.	U	100.	U	100.	U	100.	U
75-15-0	Carbon disulfide	10.	UJ	10.	UJ	10.	UJ	10.	UJ
75-35-4	1,1-Dichloroethene	24.	U	220.	D	270.	D	43.	J
75-34-3	1,1-Dichloroethane	10.	U	290.	J	1100.	DJ	35.	J
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	20.	U	10.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	U	50.	U
71-55-6	1,1,1-Trichloroethane	10.	U	34.	J	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ	10.	UJ	10.	U
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U
71-43-2	Benzene	10.	UJ	10.	UJ	10.	UJ	10.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	UJ	50.	UJ	50.	U	50.	U
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	50.	U
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	10.	U
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	10.	U
100-42-5	Styrene	10.	U	10.	U	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	U	10.	U
108-38-3	m-Xylene	20.	UJ	20.	UJ	20.	U	20.	UJ
95-47-6	o-Xylene	10.	UJ	10.	UJ	10.	U	10.	UJ

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 20 Soil Samples

SW846-VOA		SAMPLE ID ----->	020-S-GB03-07	020-S-GB03-13	020-S-GB04-01	020-S-GB04-07	020-S-GB04-13		
		ORIGINAL ID ----->	020SGB0307	020SGB0313	020SGB0401	020SGB0407	020SGB0413		
		LAB SAMPLE ID ---->	020S0307	020S0313	020S0401	020S0407	020S0413		
		ID FROM REPORT -->	020SGB0307	020SGB0313	020SGB0401	020SGB0407	020SGB0413		
		SAMPLE DATE ----->	10/31/96	10/31/96	10/30/96	10/30/96	10/30/96		
		DATE ANALYZED ---->	10/31/96	10/31/96	10/30/96	10/30/96	10/30/96		
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil		
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG		
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	32.	J	10.	U	12.	J	10.	U
67-64-1	Acetone	100.	U	100.	U	100.	U	100.	U
75-15-0	Carbon disulfide	10.	U	10.	U	10.	UJ	10.	UJ
75-35-4	1,1-Dichloroethene	140.	J	180.	J	77.	J	150.	J
75-34-3	1,1-Dichloroethane	140.	J	212.	J	22.	J	68.	J
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	U	50.	U
71-55-6	1,1,1-Trichloroethane	28.	J	14.	J	10.	U	25.	J
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ	10.	U	10.	U
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	UJ	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U
71-43-2	Benzene	10.	UJ	10.	UJ	10.	UJ	10.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	U	50.	U
591-78-6	2-Hexanone	50.	U	50.	U	50.	UJ	50.	U
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	UJ	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	UJ	10.	U
100-41-4	Ethylbenzene	10.	U	10.	U	10.	UJ	10.	U
100-42-5	Styrene	10.	U	10.	U	10.	UJ	10.	U
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	UJ	10.	U
108-38-3	m-Xylene	20.	UJ	20.	UJ	20.	UJ	20.	U
95-47-6	o-Xylene	10.	UJ	10.	UJ	10.	UJ	10.	U

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 20 Groundwater Samples

SWS46-VOA		SAMPLE ID ----->	020-G-GB01-47	020-G-GB02-44	020-G-GB04-46			
		ORIGINAL ID ----->	020GG80147	020GG80244	020GG80446			
		LAB SAMPLE ID ----->	020G0147	020G0244	020G0446			
		ID FROM REPORT ----->	020GG80147	020GG80244	020GG80446			
		SAMPLE DATE ----->	10/29/96	10/30/96	10/30/96			
		DATE ANALYZED ----->	10/29/96	10/30/96	10/30/96			
		MATRIX ----->	Water	Water	Water			
		UNITS ----->	ug/L	ug/L	ug/L			
CAS #	Parameter	1	VAL	1	VAL	1	VAL	
74-87-3	Chloromethane	10.	UJ	10.	U	10.	U	
74-83-9	Bromomethane	10.	U	10.	U	10.	U	
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	
75-09-2	Methylene chloride	10.	U	10.	U	10.	U	
67-64-1	Acetone	100.	U	100.	U	100.	U	
75-15-0	Carbon disulfide	10.	UJ	10.	UJ	10.	UJ	
75-35-4	1,1-Dichloroethene	77.	D	10.	U	10.	U	
75-34-3	1,1-Dichloroethane	520.	DJ	10.	U	10.	U	
540-59-0	1,2-Dichloroethene (total)	20.	U	10.	U	10.	U	
67-66-3	Chloroform	10.	U	10.	U	10.	U	
107-06-2	1,2-Dichloroethane	10.	UJ	10.	UJ	10.	UJ	
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	
56-23-5	Carbon tetrachloride	10.	UJ	10.	U	10.	U	
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	
71-43-2	Benzene	10.	UJ	10.	UJ	10.	UJ	
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	UJ	50.	U	50.	U	
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	
108-88-3	Toluene	10.	U	10.	U	10.	U	
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	
100-42-5	Styrene	10.	U	10.	U	10.	U	
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	U	
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	U	
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	U	
108-38-3	m-Xylene	20.	UJ	20.	U	20.	U	
95-47-6	o-Xylene	10.	UJ	10.	U	10.	U	

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 20 Soil Samples

SMB45-V0A		SAMPLE ID -----> 020-S-GB05-07		020-S-GB05-13		020-S-GB06-07		020-S-GB06-13	
		ORIGINAL ID -----> 020SGB0507		020SGB0513		020SGB0607		020SGB0613	
		LAB SAMPLE ID ----> 9611760-01		9611760-02		9611760-03		9611760-04	
		ID FROM REPORT --> 020SGB0507		020SGB0513		020SGB0607		020SGB0613	
		SAMPLE DATE -----> 11/25/96		11/25/96		11/25/96		11/25/96	
		DATE ANALYZED ----> 12/06/96		12/06/96		12/06/96		12/06/96	
		MATRIX -----> Soil		Soil		Soil		Soil	
		UNITS -----> ug/KG		ug/KG		ug/KG		ug/KG	
CAS #	Parameter	9611760	VAL	9611760	VAL	9611760	VAL	9611760	VAL
67-64-1	Acetone	50.	U	50.	U	50.	U	50.	U
107-02-8	Acrolein	50.	U	50.	U	50.	U	50.	U
107-13-1	Acrylonitrile	50.	U	50.	U	50.	U	50.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U
74-83-9	Bromomethane	5.	U	5.	U	5.	U	5.	U
75-15-0	Carbon disulfide	50.	U	50.	U	50.	U	50.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U
75-00-3	Chloroethane	5.	U	5.	U	5.	U	5.	U
110-75-8	2-Chloroethylvinylether	50.	U	50.	U	50.	U	50.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U
74-95-3	Dibromomethane	5.	U	5.	U	5.	U	5.	U
764-41-0	1,4-Dichloro-2-butene	10.	U	10.	U	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	5.	U	5.	U	5.	U	5.	U
95-50-1	1,2-Dichlorobenzene	5.	U	5.	U	5.	U	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U	5.	U	5.	U	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	1.4	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	5.	U
156-60-5	trans-1,2-Dichloroethene	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U
97-63-2	Ethyl methacrylate	50.	U	50.	U	50.	U	50.	U
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	50.	U
74-88-4	Methyl iodide	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	U	50.	U
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	U	50.	U
75-09-2	Methylene chloride	10.	U	10.	U	10.	U	10.	U
1634-04-4	Methyl tert-butyl ether	10.	U	10.	U	10.	U	10.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 20 Soil Samples

SUB46-VOA		SAMPLE ID ----->	020-S-G805-07	020-S-G805-13	020-S-G806-07	020-S-G806-13			
		ORIGINAL ID ----->	020SGB0507	020SGB0513	020SGB0607	020SGB0613			
		LAB SAMPLE ID ---->	9611760-01	9611760-02	9611760-03	9611760-04			
		ID FROM REPORT -->	020SGB0507	020SGB0513	020SGB0607	020SGB0613			
		SAMPLE DATE ----->	11/25/96	11/25/96	11/25/96	11/25/96			
		DATE ANALYZED ---->	12/06/96	12/06/96	12/06/96	12/06/96			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG			
CAS #	Parameter	9611760	VAL	9611760	VAL	9611760	VAL	9611760	VAL
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U
75-69-4	Trichlorofluoromethane	5.	U	5.	U	5.	U	5.	U
96-18-4	1,2,3-Trichloropropane	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	50.	U	50.	U	50.	U	50.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U
156-59-2	cis-1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U

*** Validation Complete ***

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

APXS-METAL		SAMPLE ID -----> 022-S-GB03-01		022-S-GB04-01				
	ORIGINAL ID ----->	022SG80301		022SG80401				
	LAB SAMPLE ID ---->	155797S		155909S				
	ID FROM REPORT -->	022SG80301		022SG80401				
	SAMPLE DATE ----->	10/17/96		10/18/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	MG/KG		MG/KG				
CAS #	Parameter	2045	VAL	2056	VAL			
7440-36-0	Antimony	4.1	UR	3.9	UJ			
7440-38-2	Arsenic	22.2		12.5				
7440-39-3	Barium	51.9		45.2				
7440-41-7	Beryllium	0.36	J	0.34	J			
7440-43-9	Cadmium	0.49	UJ	0.48	U			
7440-47-3	Chromium	13.8		12.3				
7440-48-4	Cobalt	6.7		4.9	J			
7440-50-8	Copper	12.5		11.2				
7439-92-1	Lead	35.1		12.4				
7439-97-6	Mercury	0.04	J	0.04	J			
7440-02-0	Nickel	12.1		8.9				
7782-49-2	Selenium	0.35	UJ	0.51	J			
7440-22-4	Silver	0.57	U	0.55	U			
7440-28-0	Thallium	0.33	J	0.24	U			
7440-62-2	Vanadium	26.7		25.4				
7440-66-6	Zinc	37.6		35.3				
7440-31-5	Tin	5.6	U	5.4	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

METAL-CN		SAMPLE ID ----->	022-S-GB03-01	022-S-GB04-01				
		ORIGINAL ID ----->	022SBG0301	022SGB0401				
		LAB SAMPLE ID ---->	155797	155909				
		ID FROM REPORT -->	022SBG0301	022SGB0401				
		SAMPLE DATE ----->	10/17/96	10/18/96				
		DATE EXTRACTED -->		10/30/96				
		DATE ANALYZED ---->	10/18/96	11/01/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2045	VAL	2056	VAL			
57-12-5	Cyanide (CN)	0.5	U	0.5	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

SW846-HERB		SAMPLE ID ----->	022-S-GB03-01	022-S-GB04-01			
		ORIGINAL ID ----->	022SG80301	022SG80401			
		LAB SAMPLE ID ---->	155797	155909			
		ID FROM REPORT -->	022SG80301	022SG80401			
		SAMPLE DATE ----->	10/17/96	10/18/96			
		DATE EXTRACTED -->	10/30/96	10/30/96			
		DATE ANALYZED ---->	11/02/96	11/02/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg			
CAS #	Parameter	2045	VAL	2056	VAL		
94-75-7	2,4-D	9.4	U	9.4	U		
94-82-6	2,4-DB	9.5	UJ	9.5	U		
88-85-7	Dinoseb	4.7	U	4.7	U		
93-76-5	2,4,5-T	0.95	U	0.95	U		
93-72-1	2,4,5-TP (Silvex)	0.95	U	1.9	NJ		
75-99-0	Dalapon	23.	U	23.	U		
1918-00-9	Dicamba	0.94	U	0.94	U		
120-36-5	Dichlorprop	9.4	U	9.4	U		
94-74-6	MCPA	940.	U	940.	U		
93-65-2	MCPP	940.	U	940.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

SW846-OP P		SAMPLE ID ----->	022-S-GB03-01	022-S-GB04-01				
		ORIGINAL ID ----->	022SGB0301	022SGB0401				
		LAB SAMPLE ID ---->	155797	155909				
		ID FROM REPORT -->	022SGB0301	022SGB0401				
		SAMPLE DATE ----->	10/17/96	10/18/96				
		DATE EXTRACTED -->	10/21/96	10/24/96				
		DATE ANALYZED ---->	10/24/96	11/12/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	ug/Kg	ug/Kg				
CAS #	Parameter	2045	VAL	2056	VAL			
62-73-7	Dichlorvos	100.	U	100.	U			
7786-34-7	Mevinphos, Alpha	100.	U	100.	U			
8065-48-3	Demeton, O	100.	U	100.	U			
13194-48-4	Ethoprop	100.	U	100.	U			
300-76-5	Naled	200.	U	100.	U			
298-02-2	Phorate	100.	U	100.	U			
126-75-0	Demeton, S	100.	U	100.	U			
333-61-5	Diazinon	100.	U	100.	U			
298-04-4	Disulfoton	100.	U	100.	U			
298-00-0	Methyl parathion	100.	U	100.	U			
299-84-3	Ronnel	100.	U	100.	U			
55-38-9	Fenthion	100.	U	100.	U			
2921-88-2	Chloropyrifos	100.	U	100.	U			
327-98-0	Trichloronate	100.	U	100.	U			
150-50-5	Merphos	100.	U	100.	U			
34643-46-4	Tokuthion	100.	U	100.	U			
115-90-2	Fensulfothion	100.	U	100.	U			
22248-79-9	Stirophos (Tetrachlorovinphos)	100.	U	100.	U			
35400-43-2	Sulprofos (Bolstar)	100.	U	100.	U			
86-50-0	Azinphos methyl	100.	U	100.	U			
56-72-4	Coumaphos	100.	U	100.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

SMB46-PEST		SAMPLE ID -----> 022-S-G803-01		022-S-G804-01				
	ORIGINAL ID ----->	022SG80301		022SG80401				
	LAB SAMPLE ID ---->	155797		155909				
	ID FROM REPORT -->	022SG80301		022SG80401				
	SAMPLE DATE ----->	10/17/96		10/18/96				
	DATE EXTRACTED -->	10/21/96		10/24/96				
	DATE ANALYZED ---->	10/31/96		10/31/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	ug/Kg		ug/Kg				
CAS #	Parameter	2045	VAL	2056	VAL			
319-84-6	alpha-BHC	2.	U	2.	U			
319-85-7	beta-BHC	2.	U	2.	U			
319-86-8	delta-BHC	2.	U	2.	U			
58-89-9	gamma-BHC (Lindene)	2.	U	2.	U			
76-44-8	Heptachlor	2.	U	2.	U			
309-00-2	Aldrin	2.	U	2.	U			
1024-57-3	Heptachlor epoxide	1.4	U	2.3	U			
959-98-8	Endosulfan I	2.	U	2.	U			
60-57-1	Dieldrin	4.1	U	4.1	U			
72-55-9	4,4'-DDE	4.1	U	4.1	U			
72-20-8	Endrin	4.1	U	4.1	U			
33213-65-9	Endosulfan II	4.1	U	4.1	U			
72-54-8	4,4'-DDD	4.1	U	4.1	U			
1031-07-8	Endosulfan sulfate	4.1	U	4.1	U			
50-29-3	4,4'-DDT	4.1	U	4.3	U			
72-43-5	Methoxychlor	20.	U	20.	U			
53494-70-5	Endrin ketone	4.1	U	4.1	U			
7421-93-4	Endrin aldehyde	4.1	U	4.1	U			
5103-71-9	alpha-Chlordane	2.	U	2.	U			
5103-74-2	gamma-Chlordane	2.	U	2.	U			
8001-35-2	Toxaphene	41.	U	41.	U			
12674-11-2	Aroclor-1016	41.	U	41.	U			
11104-28-2	Aroclor-1221	41.	U	41.	U			
11141-16-5	Aroclor-1232	41.	U	41.	U			
53469-21-9	Aroclor-1242	41.	U	41.	U			
12672-29-6	Aroclor-1248	41.	U	41.	U			
11097-69-1	Aroclor-1254	41.	U	41.	U			
11096-82-5	Aroclor-1260	41.	U	41.	U			
12789-03-6	Technical Chlordane	41.	U	41.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

SUB46-SVOA		SAMPLE ID ----->	022-S-GB03-01	022-S-GB04-01			
		ORIGINAL ID ----->	022SGB0301	022SGB0404			
		LAB SAMPLE ID ---->	155797	155909			
		ID FROM REPORT -->	022sgb0301	022SGB0404			
		SAMPLE DATE ----->	10/17/96	10/18/96			
		DATE EXTRACTED -->	10/22/96	10/24/96			
		DATE ANALYZED -->	10/22/96	10/25/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	UG/KG			
CAS #	Parameter	2045	VAL	2056	VAL		
108-95-2	Phenol	420.	U	410.	U		
111-44-4	bis(2-Chloroethyl)ether	420.	U	410.	U		
95-57-8	2-Chlorophenol	420.	U	410.	U		
541-73-1	1,3-Dichlorobenzene	420.	U	410.	U		
106-46-7	1,4-Dichlorobenzene	420.	U	410.	U		
95-50-1	1,2-Dichlorobenzene	420.	U	410.	U		
95-48-7	2-Methylphenol (o-Cresol)	420.	U	410.	U		
108-60-1	2,2'-oxybis(1-Chloropropane)	420.	U	410.	U		
106-44-5	4-Methylphenol (p-Cresol)	420.	U	410.	U		
621-64-7	N-Nitroso-di-n-propylamine	420.	U	410.	U		
67-72-1	Hexachloroethane	420.	U	410.	U		
98-95-3	Nitrobenzene	420.	U	410.	U		
78-59-1	Isophorone	420.	U	410.	U		
88-75-5	2-Nitrophenol	420.	U	410.	U		
105-67-9	2,4-Dimethylphenol	420.	U	410.	U		
120-83-2	2,4-Dichlorophenol	420.	U	410.	U		
120-82-1	1,2,4-Trichlorobenzene	420.	U	410.	U		
91-20-3	Naphthalene	280.	J	410.	U		
106-47-8	4-Chloroaniline	420.	U	410.	U		
87-68-3	Hexachlorobutadiene	420.	U	410.	U		
111-91-1	bis(2-Chloroethoxy)methane	420.	U	410.	U		
59-50-7	4-Chloro-3-methylphenol	420.	U	410.	U		
91-57-6	2-Methylnaphthalene	360.	J	410.	U		
77-47-4	Hexachlorocyclopentadiene	420.	U	410.	U		
88-06-2	2,4,6-Trichlorophenol	420.	U	410.	U		
95-95-4	2,4,5-Trichlorophenol	1000.	U	1000.	U		
91-58-7	2-Chloronaphthalene	420.	U	410.	U		
88-74-4	2-Nitroaniline	1000.	U	1000.	U		
131-11-3	Dimethylphthalate	420.	U	410.	U		
208-96-8	Acenaphthylene	420.	U	110.	J		
606-20-2	2,6-Dinitrotoluene	420.	U	410.	U		
99-09-2	3-Nitroaniline	1000.	U	1000.	U		
83-32-9	Acenaphthene	420.	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	420.	U	410.	U		

*** Validation Complete ***

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

SW846-SV0A	SAMPLE ID ----->	022-S-GB03-01	022-S-GB04-01
	ORIGINAL ID ----->	022SGB0301	022SGB0404
	LAB SAMPLE ID ---->	155797	155909
	ID FROM REPORT -->	022sgb0301	022SGB0404
	SAMPLE DATE ----->	10/17/96	10/18/96
	DATE EXTRACTED -->	10/22/96	10/24/96
	DATE ANALYZED ---->	10/22/96	10/25/96
	MATRIX ----->	Soil	Soil
	UNITS ----->	ug/Kg	UG/KG

CAS #	Parameter	2045	VAL	2056	VAL
121-14-2	2,4-Dinitrotoluene	420.	U	410.	U
84-66-2	Diethylphthalate	420.	U	410.	U
7005-72-3	4-Chlorophenylphenyl ether	420.	U	410.	U
86-73-7	Fluorene	420.	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	420.	U	410.	U
101-55-3	4-Bromophenyl-phenylether	420.	U	410.	U
118-74-1	Hexachlorobenzene	420.	U	410.	U
87-86-5	Pentachlorophenol	1000.	U	1000.	U
85-01-8	Phenanthrene	420.	U	410.	U
120-12-7	Anthracene	420.	U	77.	J
86-74-8	Carbazole	420.	U	410.	U
84-74-2	Di-n-butylphthalate	420.	U	410.	U
206-44-0	Fluoranthene	75.	J	140.	J
129-00-0	Pyrene	65.	J	240.	J
85-68-7	Butylbenzylphthalate	420.	U	410.	U
91-94-1	3,3'-Dichlorobenzidine	420.	U	410.	U
56-55-3	Benzo(a)anthracene	420.	U	140.	J
218-01-9	Chrysene	53.	J	240.	J
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	420.	U	74.	J
117-84-0	Di-n-octylphthalate	420.	U	410.	U
205-99-2	Benzo(b)fluoranthene	77.	J	400.	J
207-08-9	Benzo(k)fluoranthene	60.	J	330.	J
50-32-8	Benzo(a)pyrene	58.	J	320.	J
193-39-5	Indeno(1,2,3-cd)pyrene	48.	J	290.	J
53-70-3	Dibenz(a,h)anthracene	420.	U	110.	J
191-24-2	Benzo(g,h,i)perylene	61.	J	40.	

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

SW846-VOA		SAMPLE ID -----> 022-S-G801-15		022-S-G803-01		022-S-G804-01				
	ORIGINAL ID ----->	022SG80115		022SG80301		022SG80401				
	LAB SAMPLE ID ---->	156279		155797		155909				
	ID FROM REPORT -->	022sgb0115		022SG80301		022sgb0401				
	SAMPLE DATE ----->	10/25/96		10/17/96		10/18/96				
	DATE ANALYZED -->	11/01/96		10/23/96		10/23/96				
	MATRIX ----->	Soil		Soil		Soil				
	UNITS ----->	ug/Kg		ug/Kg		ug/Kg				
CAS #	Parameter	2056	VAL	2045	VAL	2056	VAL			
74-87-3	Chloromethane	13.	U	12.	U	12.	U			
74-83-9	Bromomethane	13.	U	12.	U	12.	U			
75-01-4	Vinyl chloride	13.	U	12.	U	12.	U			
75-00-3	Chloroethane	13.	U	12.	U	12.	U			
75-09-2	Methylene chloride	13.	U	12.	U	12.	U			
67-64-1	Acetone	52.		76.		31.				
75-15-0	Carbon disulfide	13.	U	12.	U	12.	U			
75-35-4	1,1-Dichloroethane	13.	U	12.	U	12.	U			
75-34-3	1,1-Dichloroethane	13.	U	12.	U	12.	U			
540-59-0	1,2-Dichloroethane (total)	13.	U	12.	U	12.	U			
67-66-3	Chloroform	13.	U	12.	U	12.	U			
107-06-2	1,2-Dichloroethane	13.	U	12.	U	12.	U			
78-93-3	2-Butanone (MEK)	13.	U	12.	U	12.	U			
71-55-6	1,1,1-Trichloroethane	13.	U	12.	U	12.	U			
56-23-5	Carbon tetrachloride	13.	U	12.	U	12.	U			
75-27-4	Bromodichloromethane	13.	U	12.	U	12.	U			
78-87-5	1,2-Dichloropropane	13.	U	12.	U	12.	U			
10061-01-5	cis-1,3-Dichloropropene	13.	U	12.	U	12.	U			
79-01-6	Trichloroethene	13.	U	12.	U	12.	U			
124-48-1	Dibromochloromethane	13.	U	12.	U	12.	U			
79-00-5	1,1,2-Trichloroethane	13.	U	12.	U	12.	U			
71-43-2	Benzene	13.	U	12.	U	12.	U			
10061-02-6	trans-1,3-Dichloropropene	13.	U	12.	U	12.	U			
75-25-2	Bromoform	13.	U	12.	U	12.	U			
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	U	12.	U	12.	U			
591-78-6	2-Hexanone	13.	U	12.	U	12.	U			
127-18-4	Tetrachloroethene	13.	U	12.	U	12.	U			
79-34-5	1,1,2,2-Tetrachloroethane	13.	U	12.	U	12.	U			
108-88-3	Toluene	13.	U	12.	U	12.	U			
108-90-7	Chlorobenzene	13.	U	12.	U	12.	U			
100-41-4	Ethylbenzene	13.	U	12.	U	12.	U			
100-42-5	Styrene	13.	U	12.	U	12.	U			
1330-20-7	Xylene (Total)	13.	U	12.	U	12.	U			

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SWMU 22 Soil Samples

TPH		SAMPLE ID ----->	022-S-GB03-01	022-S-GB04-01				
		ORIGINAL ID ----->	022SGB0301	022SGB0401				
		LAB SAMPLE ID ---->	155797	155909				
		ID FROM REPORT -->	022SGB0301	022SGB0401				
		SAMPLE DATE ----->	10/17/96	10/18/96				
		DATE EXTRACTED -->		11/01/96				
		DATE ANALYZED ---->	11/01/96	11/06/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2045	VAL	2056	VAL			
9999900-02-4	Petroleum Hydrocarbons, TPH	380.		81.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

TPH-DRO		SAMPLE ID ----->	022-S-G803-01	022-S-G804-01				
		ORIGINAL ID ----->	022SGB0301	022SGB0401				
		LAB SAMPLE ID ---->	155797	155909				
		ID FROM REPORT -->	022SGB0301	022SGB0401				
		SAMPLE DATE ----->	10/17/96	10/18/96				
		DATE EXTRACTED -->	10/22/96	10/30/96				
		DATE ANALYZED ---->	10/30/96	10/30/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG				
CAS #	Parameter	2045	VAL	2056	VAL			
9999900-02-6	TPH - Diesel Range Organics	340000.	D	41000.				

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NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 22 Soil Samples

TPH-GRO		SAMPLE ID ----->	022-S-G803-01	022-S-G804-01				
		ORIGINAL ID ----->	022SG80301	022SG80401				
		LAB SAMPLE ID ---->	155797	155909				
		ID FROM REPORT -->	022SG80301	022SG80401				
		SAMPLE DATE ----->	10/17/96	10/18/96				
		DATE ANALYZED ---->	10/24/96	10/25/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG				
CAS #	Parameter	2045	VAL	2056	VAL			
9999900-02-5	TPH - Gasoline Range Organics	310000.	J	77.	U			

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SWMU 22 Groundwater Samples

SW846-VOA		SAMPLE ID ----->	022-G-GB10-47				
		ORIGINAL ID ----->	022GG81047				
		LAB SAMPLE ID ---->	158165				
		ID FROM REPORT -->	022GG81047				
		SAMPLE DATE ----->	11/26/96				
		DATE ANALYZED -->	12/06/96				
		MATRIX ----->	Water				
		UNITS ----->	ug/L				
CAS #	Parameter	2105	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	10.	U				
75-15-0	Carbon disulfide	10.	U				
75-35-4	1,1-Dichloroethene	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	10.	U				
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				

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 22 Soil Samples

SMB46-VOA		SAMPLE ID ----->	022-S-GB01-01	022-S-GB01-15	022-S-GB02-01	022-S-GB02-16	022-S-GB03-01	022-S-GB03-11	
		ORIGINAL ID ----->	022SGB0101	022SGB0115	022SGB0201	022SGB0216	022SGB0301	022SGB0311	
		LAB SAMPLE ID ---->	022S0101	022S0115	022S0201	022S0216	022S0301	022S0311	
		ID FROM REPORT -->	022SGB0101	022SGB0115	022SGB0201	022SGB0216	022SGB0301	022SGB0311	
		SAMPLE DATE ----->	10/25/96	10/25/96	10/18/96	10/24/96	10/17/96	10/17/96	
		DATE ANALYZED ---->	10/25/96	10/25/96	10/18/96	10/24/96	10/19/96	10/21/96	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	UJ	10.	UJ
74-83-9	Bromomethane	10.	U	10.	U	10.	UJ	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	10.	U	10.	U	30.	U	650.	J
67-64-1	Acetone	100.	U	100.	U	100.	UJ	400.	U
75-15-0	Carbon disulfide	10.	UJ	10.	UJ	10.	UJ	10.	UJ
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	U	10.	U	10.	UJ	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	UJ	10.	U	10.	UJ
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	UJ	150.	J
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ	10.	U	10.	UJ
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	21.	J
71-43-2	Benzene	10.	UJ	10.	UJ	10.	U	10.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	U	50.	UJ
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	50.	UJ
127-18-4	Tetrachloroethene	10.	UJ	10.	UJ	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	10.	U
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	81.	J
100-42-5	Styrene	10.	U	10.	U	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	U	100.	U
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	U	10.	U
108-38-3	m-Xylene	20.	UJ	20.	UJ	20.	UJ	63.	J
95-47-6	o-Xylene	10.	UJ	10.	UJ	10.	U	10.	UJ

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 22 Soil Samples

SMB46-VOA		SAMPLE ID ----->	022-S-GB03-15	022-S-GB04-01	022-C-GB04-16	022-S-GB04-16	022-S-GB05-16	022-S-GB06-16	
		ORIGINAL ID ----->	022SGB0315	022SGB0401	022CGB0416	022SGB0416	022SGB0516	022SGB0616	
		LAB SAMPLE ID ---->	022S0315	022S0401	022C0416	022S0416	022G0516	022G0616	
		ID FROM REPORT -->	022SGB0315	022SGB0401	022CGB0416	022SGB0416	022SGB0516	022SGB0616	
		SAMPLE DATE ----->	10/17/96	10/18/96	10/21/96	10/21/96	10/24/96	10/24/96	
		DATE ANALYZED ---->	10/21/96	10/18/96	10/21/96	10/21/96	10/24/96	10/24/96	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	UJ
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	48.	U	23.	U	23.	U	10.	U
67-64-1	Acetone	100.	U	100.	U	100.	U	100.	UJ
75-15-0	Carbon disulfide	10.	UJ	10.	UJ	10.	UJ	10.	U
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	U	10.	UJ	10.	U	10.	UJ
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	20.	U	10.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	U	10.	UJ	10.	U
78-93-3	2-Butanone (MEK)	50.	U	50.	UJ	50.	U	50.	U
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	UJ	10.	U	10.	UJ	10.	UJ
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	10.	UJ
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U
71-43-2	Benzene	10.	UJ	10.	U	10.	UJ	60.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	U	50.	U
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	50.	UJ
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	10.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	10.	UJ
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	10.	UJ
100-42-5	Styrene	10.	U	10.	U	10.	U	10.	UJ
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	U	10.	UJ
108-38-3	m-Xylene	20.	UJ	20.	UJ	20.	UJ	20.	UJ
95-47-6	o-Xylene	10.	UJ	10.	UJ	10.	UJ	10.	UJ

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 22 Soil Samples

SW846-VDA		SAMPLE ID -----> 022-S-GB07-01		022-S-GB07-16				
	ORIGINAL ID ----->	022SGB0701		022SGB0716				
	LAB SAMPLE ID ---->	022S0701		022S0716				
	ID FROM REPORT -->	022SGB0701		022SGB0716				
	SAMPLE DATE ----->	10/24/96		10/24/96				
	DATE ANALYZED ---->	10/24/96		10/24/96				
	MATRIX ----->	Soil		Soil				
	LIMITS ----->	ug/KG		ug/KG				
CAS #	Parameter	1	VAL	1	VAL			
74-87-3	Chloromethane	10.	UJ	10.	UJ			
74-83-9	Bromomethane	10.	UJ	10.	UJ			
75-01-4	Vinyl chloride	10.	U	10.	U			
75-09-2	Methylene chloride	10.	U	10.	U			
67-64-1	Acetone	100.	UJ	100.	UJ			
75-15-0	Carbon disulfide	10.	U	77.				
75-35-4	1,1-Dichloroethene	10.	U	10.	U			
75-34-3	1,1-Dichloroethane	10.	UJ	10.	UJ			
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U			
67-66-3	Chloroform	10.	U	10.	U			
107-06-2	1,2-Dichloroethane	10.	U	10.	U			
78-93-3	2-Butanone (MEK)	50.	U	50.	U			
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U			
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ			
75-27-4	Bromodichloromethane	10.	U	10.	U			
78-87-5	1,2-Dichloropropane	10.	U	10.	U			
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U			
79-01-6	Trichloroethene	10.	U	10.	U			
124-48-1	Dibromochloromethane	10.	U	10.	UJ			
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U			
71-43-2	Benzene	10.	UJ	10.	UJ			
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U			
75-25-2	Bromoform	10.	UJ	10.	UJ			
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U			
591-78-6	2-Hexanone	50.	U	50.	UJ			
127-18-4	Tetrachloroethene	10.	U	10.	UJ			
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ			
108-88-3	Toluene	10.	U	10.	U			
108-90-7	Chlorobenzene	10.	U	10.	UJ			
100-41-4	Ethylbenzene	10.	U	10.	UJ			
100-42-5	Styrene	10.	U	10.	UJ			
75-71-8	Dichlorodifluoromethane	10.	U	10.	U			
75-69-4	Trichlorofluoromethane	10.	U	10.	U			
142-28-9	1,3-Dichloropropane	10.	U	10.	UJ			
108-38-3	m-Xylene	20.	U	20.	UJ			
95-47-6	o-Xylene	10.	U	10.	UJ			

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 22 Groundwater Samples

SMB46-V0A		SAMPLE ID ----->	022-G-GB01-45	022-G-GB02-47	022-G-GB03-47	022-H-GB03-47	022-G-GB04-47	022-H-GB04-47	
		ORIGINAL ID ----->	022GG80145	022GG80247	022GG80347	022CG80347	022GG80447	022HGB0447	
		LAB SAMPLE ID ---->	022G0145	022G0247	022G0347	022C0347	022G0447	022H0447	
		ID FROM REPORT -->	022GG80145	022GG80247	022GG80347	022CG80347	022GG80447	022HGB0447	
		SAMPLE DATE ----->	10/23/96	10/24/96	10/18/96	10/18/96	10/21/96	10/21/96	
		DATE ANALYZED ---->	10/28/96	10/24/96	10/18/96	10/18/96	10/21/96	10/21/96	
		MATRIX ----->	Water	Water	Water	Water	Water	Water	
		UNITS ----->	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
74-83-9	Bromomethane	10.	UJ	10.	UJ	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	10.	U	10.	U	19.	U	13.	U
67-64-1	Acetone	100.	U	100.	UJ	100.	U	100.	U
75-15-0	Carbon disulfide	10.	U	10.	U	10.	UJ	10.	UJ
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	U	10.	UJ	10.	UJ	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	U	10.	U	10.	UJ
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	UJ	50.	U
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ	10.	U	10.	UJ
75-27-4	Bromodichloromethane	10.	UJ	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropene	10.	U	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U
71-43-2	Benzene	10.	UJ	10.	UJ	10.	U	10.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	UJ	50.	U	50.	U	50.	U
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	50.	U
127-18-4	Tetrachloroethene	10.	UJ	10.	U	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	10.	U
100-41-4	Ethylbenzene	10.	U	10.	U	35.	J	10.	U
100-42-5	Styrene	10.	U	10.	U	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	U	10.	U
108-38-3	m-Xylene	20.	UJ	20.	U	50.	J	20.	UJ
95-47-6	o-Xylene	10.	UJ	10.	U	10.	UJ	10.	UJ

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 22 Groundwater Samples

SW846-VDA		SAMPLE ID ----->	022-G-GB08-47	022-G-GB09-47	022-G-GB10-47		
		ORIGINAL ID ----->	022GG80847	022GG80947	022GG81047		
		LAB SAMPLE ID ---->	9611760-05	9611855-01	9611855-02		
		ID FROM REPORT -->	022GG80847	022GG80947	022GG81047		
		SAMPLE DATE ----->	11/25/96	11/26/96	11/26/96		
		DATE ANALYZED ---->	12/06/96	12/09/96	12/09/96		
		MATRIX ----->	Water	Water	Water		
		UNITS ----->	ug/L	ug/L	ug/L		
CAS #	Parameter	9611760	VAL	9611855	VAL	9611855	VAL
67-64-1	Acetone	100.	U	100.	U	100.	U
107-02-8	Acrolein	50.	U	50.	U	50.	U
107-13-1	Acrylonitrile	50.	U	50.	U	50.	U
71-43-2	Benzene	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U
74-83-9	Bromomethane	5.	U	5.	U	5.	U
75-15-0	Carbon disulfide	50.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U
75-00-3	Chloroethane	5.	U	5.	U	5.	U
110-75-8	2-Chloroethylvinylether	50.	U	50.	U	50.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U
74-95-3	Dibromomethane	5.	U	5.	U	5.	U
764-41-0	1,4-Dichloro-2-butene	10.	U	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	5.	U	5.	U	5.	U
95-50-1	1,2-Dichlorobenzene	5.	U	5.	U	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U	5.	U	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U
156-60-5	trans-1,2-Dichloroethene	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U
97-63-2	Ethyl methacrylate	50.	U	50.	U	50.	U
591-78-6	2-Hexanone	50.	U	50.	U	50.	U
74-88-4	Methyl iodide	20.	U	20.	U	20.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	U
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	U
75-09-2	Methylene chloride	50.	U	50.	U	50.	U
1634-04-4	Methyl tert-butyl ether	10.	U	50.	U	10.	U
100-42-5	Styrene	5.	U	5.	U	5.	U

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 22 Groundwater Samples

SUB46-VOA		SAMPLE ID ----->	022-G-GB08-47	022-G-GB09-47	022-G-GB10-47			
		ORIGINAL ID ----->	022GG80847	022GG80947	022GG81047			
		LAB SAMPLE ID ---->	9611760-05	9611855-01	9611855-02			
		ID FROM REPORT -->	022GG80847	022GG80947	022GG81047			
		SAMPLE DATE ----->	11/25/96	11/26/96	11/26/96			
		DATE ANALYZED -->	12/06/96	12/09/96	12/09/96			
		MATRIX ----->	Water	Water	Water			
		UNITS ----->	ug/L	ug/L	ug/L			
CAS #	Parameter	9611760	VAL	9611855	VAL	9611855	VAL	
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	
108-88-3	Toluene	5.	U	5.	U	5.	U	
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	
75-69-4	Trichlorofluoromethane	5.	U	5.	U	5.	U	
96-18-4	1,2,3-Trichloropropane	5.	U	5.	U	5.	U	
108-05-4	Vinyl acetate	50.	U	50.	U	50.	U	
75-01-4	Vinyl chloride	5.	U	5.	U	5.	U	
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	
156-59-2	cis-1,2-Dichloroethane	5.	U	5.	U	5.	U	

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

APX9-METAL		SAMPLE ID -----> 030-S-G801-01		030-S-G804-01				
	ORIGINAL ID ----->	030SG80101		030SG80401				
	LAB SAMPLE ID ---->	155221S		155222S				
	ID FROM REPORT ---->	030SG80101		030SG80401				
	SAMPLE DATE ----->	10/07/96		10/07/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	MG/KG		MG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
7440-36-0	Antimony	3.7	UJ	4.3	UJ			
7440-38-2	Arsenic	7.2	J	4.2	J			
7440-39-3	Barium	105.		99.9				
7440-41-7	Beryllium	0.41	U	0.31	U			
7440-43-9	Cadmium	0.44	UJ	0.52	UJ			
7440-47-3	Chromium	7.4		7.6				
7440-48-4	Cobalt	5.5	J	5.1	J			
7440-50-8	Copper	11.7		17.				
7439-92-1	Lead	25.6		30.4				
7439-97-6	Mercury	0.1	J	0.1	J			
7440-02-0	Nickel	13.2		12.6				
7782-49-2	Selenium	0.13	J	0.13	U			
7440-22-4	Silver	0.51	U	0.59	U			
7440-28-0	Thallium	0.23	U	0.26	U			
7440-62-2	Vanadium	15.1		13.1				
7440-66-6	Zinc	50.		52.8				
7440-31-5	Tin	5.	U	5.8	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

METAL-CN		SAMPLE ID ----->	030-S-GB01-01	030-S-GB04-01				
		ORIGINAL ID ----->	030SGB0101	030SGB0401				
		LAB SAMPLE ID ---->	155221	155222				
		ID FROM REPORT -->	030SGB0101	030SGB0401				
		SAMPLE DATE ----->	10/07/96	10/07/96				
		DATE EXTRACTED -->	10/17/96	10/17/96				
		DATE ANALYZED -->	10/18/96	10/18/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
57-12-5	Cyanide (CN)	0.5	U	0.5	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

SMB46-HERB		SAMPLE ID -----> 030-S-GB01-01		030-S-GB04-01				
		ORIGINAL ID -----> 030SGB0101		030SGB0401				
		LAB SAMPLE ID ----> 155221		155222				
		ID FROM REPORT --> 030SGB0101		030SGB0401				
		SAMPLE DATE -----> 10/07/96		10/07/96				
		DATE EXTRACTED --> 10/14/96		10/14/96				
		DATE ANALYZED ----> 10/19/96		10/19/96				
		MATRIX -----> Soil		Soil				
		UNITS -----> UG/KG		UG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
94-75-7	2,4-D	9.4	U	9.4	U			
94-82-6	2,4-DB	9.5	U	9.5	U			
88-85-7	Dinoseb	4.7	U	4.7	U			
93-76-5	2,4,5-T	0.95	U	0.95	U			
93-72-1	2,4,5-TP (Silvex)	0.95	U	0.95	U			
75-99-0	Dalapon	23.	U	23.	U			
1918-00-9	Dicamba	0.94	U	0.94	U			
120-36-5	Dichlorprop	9.4	U	9.4	U			
94-74-6	MCPA	940.	U	940.	U			
93-65-2	MCPB	940.	U	940.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

SW846-GP F		SAMPLE ID -----> 030-S-GB01-01		030-S-GB04-01				
	ORIGINAL ID ----->	030SGB0101		030SGB0401				
	LAB SAMPLE ID --->	155221		155222				
	ID FROM REPORT --->	030SGB0101		030SGB0401				
	SAMPLE DATE ----->	10/07/96		10/07/96				
	DATE EXTRACTED --->	10/09/96		10/09/96				
	DATE ANALYZED --->	10/24/96		10/24/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	ug/Kg		ug/Kg				
CAS #	Parameter	2035	VAL	2035	VAL			
62-73-7	Dichlorvos	99.	U	97.	U			
7786-34-7	Mevinphos, Alpha	99.	U	97.	U			
8065-48-3	Demeton, O	99.	U	97.	U			
13194-48-4	Ethoprop	99.	U	97.	U			
300-76-5	Naled	200.	U	190.	U			
298-02-2	Phorate	99.	U	97.	U			
126-75-0	Demeton, S	99.	U	97.	U			
333-41-5	Diazinon	99.	U	97.	U			
298-04-4	Disulfoton	99.	U	97.	U			
298-00-0	Methyl parathion	99.	U	97.	U			
299-84-3	Ronnel	99.	U	97.	U			
55-38-9	Fenthion	99.	U	97.	U			
2921-88-2	Chloropyrifos	99.	U	97.	U			
327-98-0	Trichloronate	99.	U	97.	U			
150-50-5	Merphos	99.	U	97.	U			
34643-46-4	Tokuthion	99.	U	97.	U			
115-90-2	Fensulfothion	99.	U	97.	U			
22248-79-9	Stirophos (Tetrachlorovinphos)	99.	U	97.	U			
35400-43-2	Sulprofos (Bolstar)	99.	U	97.	U			
86-50-0	Azinphos methyl	99.	U	97.	U			
56-72-4	Coumaphos	99.	U	97.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

SM846-PEST		SAMPLE ID -----> 030-S-GB01-01		030-S-GB04-01				
	ORIGINAL ID ----->	030SGB0101		030SGB0401				
	LAB SAMPLE ID ---->	155221		155222				
	ID FROM REPORT -->	030SGB0101		030SGB0401				
	SAMPLE DATE ----->	10/07/96		10/07/96				
	DATE EXTRACTED -->	10/09/96		10/09/96				
	DATE ANALYZED ---->	10/15/96		10/16/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	ug/Kg		ug/Kg				
CAS #	Parameter	2035	VAL	2035	VAL			
319-84-6	alpha-BHC	2.	U	1.9	U			
319-85-7	beta-BHC	2.	U	1.9	U			
319-86-8	delta-BHC	2.	U	1.9	U			
58-89-9	gamma-BHC (Lindane)	2.	U	1.9	U			
76-44-8	Heptachlor	2.	U	1.9	U			
309-00-2	Aldrin	2.	U	1.9	U			
1024-57-3	Heptachlor epoxide	2.	U	1.9	U			
959-98-8	Endosulfan I	2.	U	1.	NJ			
60-57-1	Dieldrin	4.	U	7.3				
72-55-9	4,4'-DDE	4.6	NJ	5.7				
72-20-8	Endrin	4.	U	3.9	U			
33213-65-9	Endosulfan II	4.	U	3.9	U			
72-54-8	4,4'-DDD	4.	U	3.9	U			
1031-07-8	Endosulfan sulfate	2.	J	3.9	U			
50-29-3	4,4'-DDT	2.5	NJ	7.4				
72-43-5	Methoxychlor	20.	U	19.	U			
53494-70-5	Endrin ketone	3.1	U	3.9	U			
7421-93-4	Endrin aldehyde	4.	U	3.9	U			
5103-71-9	alpha-Chlordane	3.8	U	1.5	NJ			
5103-74-2	gamma-Chlordane	2.	U	1.9	U			
8001-35-2	Toxaphene	40.	U	39.	U			
12674-11-2	Aroclor-1016	40.	U	39.	U			
11104-28-2	Aroclor-1221	40.	U	39.	U			
11141-16-5	Aroclor-1232	40.	U	39.	U			
53469-21-9	Aroclor-1242	40.	U	39.	U			
12672-29-6	Aroclor-1248	40.	U	39.	U			
11097-69-1	Aroclor-1254	40.	U	39.	U			
11096-82-5	Aroclor-1260	40.	U	39.	U			
12789-03-6	Technical Chlordane	40.	U	39.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

SUB46-SYDA		SAMPLE ID ----->	030-S-GB01-01	030-S-GB04-01			
		ORIGINAL ID ----->	030SGB0101	030SGB0401			
		LAB SAMPLE ID ---->	155221	155222			
		ID FROM REPORT -->	030SGB0101	030SGB0401			
		SAMPLE DATE ----->	10/07/96	10/07/96			
		DATE EXTRACTED -->	10/09/96	10/09/96			
		DATE ANALYZED ---->	10/11/96	10/11/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg			
CAS #	Parameter	2035	VAL	2035	VAL		
108-95-2	Phenol	400.	U	390.	U		
111-44-4	bis(2-Chloroethyl)ether	400.	U	390.	U		
95-57-8	2-Chlorophenol	400.	U	390.	U		
541-73-1	1,3-Dichlorobenzene	400.	U	390.	U		
106-46-7	1,4-Dichlorobenzene	400.	U	390.	U		
95-50-1	1,2-Dichlorobenzene	400.	U	390.	U		
95-48-7	2-Methylphenol (o-Cresol)	400.	U	390.	U		
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U	390.	U		
106-44-5	4-Methylphenol (p-Cresol)	400.	U	390.	U		
621-64-7	N-Nitroso-di-n-propylamine	400.	U	390.	U		
67-72-1	Hexachloroethane	400.	U	390.	U		
98-95-3	Nitrobenzene	400.	U	390.	U		
78-59-1	Isophorone	400.	U	390.	U		
88-75-5	2-Nitrophenol	400.	U	390.	U		
105-67-9	2,4-Dimethylphenol	400.	U	390.	U		
120-83-2	2,4-Dichlorophenol	400.	U	390.	U		
120-82-1	1,2,4-Trichlorobenzene	400.	U	390.	U		
91-20-3	Naphthalene	400.	U	390.	U		
106-47-8	4-Chloroaniline	400.	U	390.	U		
87-68-3	Hexachlorobutadiene	400.	U	390.	U		
111-91-1	bis(2-Chloroethoxy)methane	400.	U	390.	U		
59-50-7	4-Chloro-3-methylphenol	400.	U	390.	U		
91-57-6	2-Methylnaphthalene	400.	U	390.	U		
77-47-4	Hexachlorocyclopentadiene	400.	U	390.	U		
88-06-2	2,4,6-Trichlorophenol	400.	U	390.	U		
95-95-4	2,4,5-Trichlorophenol	990.	U	970.	U		
91-58-7	2-Chloronaphthalene	400.	U	390.	U		
88-74-4	2-Nitroaniline	990.	U	970.	U		
131-11-3	Dimethylphthalate	400.	U	390.	U		
208-96-8	Acenaphthylene	400.	U	390.	U		
606-20-2	2,6-Dinitrotoluene	400.	U	390.	U		
99-09-2	3-Nitroaniline	990.	U	970.	U		
83-32-9	Acenaphthene	400.	U	390.	U		
51-28-5	2,4-Dinitrophenol	990.	U	970.	U		
100-02-7	4-Nitrophenol	990.	U	970.	U		
132-64-9	Dibenzofuran	400.	U	390.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

SW846-SYDA		SAMPLE ID -----> 030-S-GB01-01		030-S-GB04-01				
		ORIGINAL ID -----> 030SGB0101		030SGB0401				
		LAB SAMPLE ID ----> 155221		155222				
		ID FROM REPORT ---> 030SGB0101		030SGB0401				
		SAMPLE DATE -----> 10/07/96		10/07/96				
		DATE EXTRACTED ---> 10/09/96		10/09/96				
		DATE ANALYZED ---> 10/11/96		10/11/96				
		MATRIX -----> Soil		Soil				
		UNITS -----> ug/Kg		ug/Kg				
CAS #	Parameter	2035	VAL	2035	VAL			
121-14-2	2,4-Dinitrotoluene	400.	U	390.	U			
84-66-2	Diethylphthalate	400.	U	390.	U			
7005-72-3	4-Chlorophenylphenyl ether	400.	U	390.	U			
86-73-7	Fluorene	400.	U	390.	U			
100-01-6	4-Nitroaniline	990.	U	970.	U			
534-52-1	2-Methyl-4,6-Dinitrophenol	990.	U	970.	U			
86-30-6	N-Nitrosodiphenylamine	400.	U	390.	U			
101-55-3	4-Bromophenyl-phenylether	400.	U	390.	U			
118-74-1	Hexachlorobenzene	400.	U	390.	U			
87-86-5	Pentachlorophenol	990.	U	970.	U			
85-01-8	Phenanthrene	340.	J	61.	J			
120-12-7	Anthracene	88.	J	390.	U			
86-74-8	Carbazole	66.	J	390.	U			
84-74-2	Di-n-butylphthalate	400.	U	210.	J			
206-44-0	Fluoranthene	660.		160.	J			
129-00-0	Pyrene	720.		190.	J			
85-68-7	Butylbenzylphthalate	400.	U	390.	U			
91-94-1	3,3'-Dichlorobenzidine	400.	U	390.	U			
56-55-3	Benzo(a)anthracene	280.	J	76.	J			
218-01-9	Chrysene	300.	J	86.	J			
117-81-7	bis(2-Ethylhexyl)phthalate (BENP)	400.	U	140.	J			
117-84-0	Di-n-octylphthalate	400.	U	390.	U			
205-99-2	Benzo(b)fluoranthene	300.	J	71.	J			
207-08-9	Benzo(k)fluoranthene	250.	J	70.	J			
50-32-8	Benzo(a)pyrene	300.	J	90.	J			
193-39-5	Indeno(1,2,3-cd)pyrene	200.	J	62.	J			
53-70-3	Dibenz(a,h)anthracene	70.	J	390.	U			
191-24-2	Benzo(g,h,i)perylene	240.	J	71.	J			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

SW846-VOA		SAMPLE ID ----->	030-S-G801-01	030-S-G803-01	030-C-G803-01	030-S-G804-01	030-S-G805-13				
		ORIGINAL ID ----->	030SG80101	030SG80301	030CG80301	030SG80401	030SG80513				
		LAB SAMPLE ID --->	155221	156396	156397	155222	156280				
		ID FROM REPORT -->	030SG80101	030sgb0301	030cgb0301	030SG80401	030sgb0513				
		SAMPLE DATE ----->	10/07/96	10/28/96	10/28/96	10/07/96	10/25/96				
		DATE ANALYZED --->	10/09/96	11/01/96	11/08/96	10/09/96	11/04/96				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg				
CAS #	Parameter	2035	VAL	2066	VAL	2066	VAL	2035	VAL	2056	VAL
74-87-3	Chloromethane	11.	U	12.	U	11.	U	12.	U	13.	U
74-83-9	Bromomethane	11.	U	12.	U	11.	U	12.	U	13.	U
75-01-4	Vinyl chloride	11.	U	12.	U	11.	U	12.	U	13.	U
75-00-3	Chloroethane	11.	U	12.	U	11.	U	12.	U	13.	U
75-09-2	Methylene chloride	11.	U	12.	U	11.	U	12.	U	13.	U
67-64-1	Acetone	11.	U	580.	DJ	25.	J	12.	U	23.	J
75-15-0	Carbon disulfide	11.	U	12.	U	11.	U	12.	U	13.	U
75-35-4	1,1-Dichloroethene	11.	U	12.	U	11.	U	12.	U	13.	U
75-34-3	1,1-Dichloroethane	11.	U	12.	U	11.	U	12.	U	13.	U
540-59-0	1,2-Dichloroethene (total)	11.	U	12.	U	11.	U	12.	U	13.	U
67-66-3	Chloroform	11.	U	12.	U	11.	U	12.	U	13.	U
107-06-2	1,2-Dichloroethane	11.	U	12.	U	11.	U	12.	U	13.	U
78-93-3	2-Butanone (MEK)	11.	U	12.	U	11.	U	12.	U	13.	UJ
71-55-6	1,1,1-Trichloroethane	11.	U	12.	U	11.	U	12.	U	13.	U
56-23-5	Carbon tetrachloride	11.	U	12.	U	11.	U	12.	U	13.	U
75-27-4	Bromodichloromethane	11.	U	12.	U	11.	U	12.	U	13.	U
78-87-5	1,2-Dichloropropane	11.	U	12.	U	11.	U	12.	U	13.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U	12.	U	11.	U	12.	U	13.	U
79-01-6	Trichloroethene	11.	U	12.	U	11.	U	12.	U	13.	U
124-48-1	Dibromochloromethane	11.	U	12.	U	11.	U	12.	U	13.	U
79-00-5	1,1,2-Trichloroethane	11.	U	12.	U	11.	U	12.	U	13.	U
71-43-2	Benzene	11.	U	12.	U	11.	U	12.	U	13.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U	12.	U	11.	U	12.	U	13.	U
75-25-2	Bromoform	11.	U	12.	U	11.	U	12.	U	13.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	11.	U	12.	U	11.	U	12.	U	13.	U
591-78-6	2-Hexanone	11.	U	12.	U	11.	U	12.	U	13.	UJ
127-18-4	Tetrachloroethene	11.	U	12.	U	11.	U	12.	U	13.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U	12.	U	11.	U	12.	U	13.	U
108-88-3	Toluene	11.	U	12.	U	11.	U	12.	U	13.	U
108-90-7	Chlorobenzene	11.	U	12.	U	11.	U	12.	U	13.	U
100-41-4	Ethylbenzene	11.	U	12.	U	11.	U	12.	U	13.	U
100-42-5	Styrene	11.	U	12.	U	11.	U	12.	U	13.	U
1330-20-7	Xylene (Total)	11.	U	12.	U	11.	U	12.	U	13.	U

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

TPH		SAMPLE ID ----->	030-S-GB01-01	030-S-GB04-01			
		ORIGINAL ID ----->	030SGB0101	030SGB0401			
		LAB SAMPLE ID ---->	155221	155222			
		ID FROM REPORT -->	030SGB0101	030SGB0401			
		SAMPLE DATE ----->	10/07/96	10/07/96			
		DATE EXTRACTED -->	10/18/96	10/18/96			
		DATE ANALYZED ---->	10/31/96	10/31/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG			
CAS #	Parameter	2035	VAL	2035	VAL		
9999900-02-4	Petroleum Hydrocarbons, TPH	78.	U	90.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

TPH-DRO		SAMPLE ID ----->	030-S-G801-01	030-S-G804-01				
		ORIGINAL ID ----->	030SGB0101	030SGB0401				
		LAB SAMPLE ID ---->	155221	155222				
		ID FROM REPORT -->	030SGB0101	030SGB0401				
		SAMPLE DATE ----->	10/07/96	10/07/96				
		DATE EXTRACTED -->	10/09/96	10/09/96				
		DATE ANALYZED --->	10/14/96	10/14/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
9999900-02-6	TPH - Diesel Range Organics	14000.		14000.				

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 30 Soil Samples

TPH-GRO		SAMPLE ID ----->	030-S-GB01-01	030-S-GB04-01				
		ORIGINAL ID ----->	030SGB0101	030SGB0401				
		LAB SAMPLE ID ---->	155221	155222				
		ID FROM REPORT -->	030SGB0101	030SGB0401				
		SAMPLE DATE ----->	10/07/96	10/07/96				
		DATE ANALYZED ---->	10/10/96	10/10/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
9999900-02-5	TPH - Gasoline Range Organics	82.	U	94.	U			

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 30 Soil Samples

SMB46-VOA		SAMPLE ID ----->	030-S-GB01-13	030-S-GB02-01	030-S-GB02-13	030-S-GB03-01	030-S-GB03-13	030-S-GB04-13	
		ORIGINAL ID ----->	030SG80113	030SG80201	030SG80213	030SG80301	030SG80313	030SG80413	
		LAB SAMPLE ID ---->	030G0138	030S0201	22S02130	30S03010	030S0313	030S0413	
		ID FROM REPORT -->	030SG80113	030SG80201	030SG80213	030SG80301	030S0313	030SG80413	
		SAMPLE DATE ----->	10/22/96	10/24/96	10/24/96	10/28/96	10/28/96	10/28/96	
		DATE ANALYZED ---->	10/22/96	10/24/96	10/24/96	10/28/96	10/28/96	10/28/96	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
74-83-9	Bromomethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
75-01-4	Vinyl chloride	10.	UJ	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	10.	UJ	10.	U	10.	U	10.	U
67-64-1	Acetone	100.	UJ	100.	UJ	100.	U	100.	U
75-15-0	Carbon disulfide	10.	UJ	10.	U	10.	U	13.	J
75-35-4	1,1-Dichloroethene	10.	UJ	10.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	UJ	10.	UJ	10.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	UJ	10.	U	10.	U	10.	U
67-66-3	Chloroform	10.	UJ	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	U	10.	UJ	10.	UJ
78-93-3	2-Butanone (MEK)	50.	UJ	50.	U	50.	U	50.	U
71-55-6	1,1,1-Trichloroethane	10.	UJ	10.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ	10.	UJ	10.	UJ
75-27-4	Bromodichloromethane	10.	UJ	10.	U	10.	UJ	10.	UJ
78-87-5	1,2-Dichloropropane	10.	UJ	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	UJ	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	UJ	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	UJ	10.	UJ	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	UJ	10.	U	10.	U	10.	U
71-43-2	Benzene	10.	UJ	10.	UJ	10.	UJ	10.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	UJ	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	UJ	50.	U	50.	UJ	50.	UJ
591-78-6	2-Hexanone	50.	UJ	50.	UJ	50.	U	50.	U
127-18-4	Tetrachloroethene	10.	UJ	10.	UJ	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	UJ	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	UJ	10.	UJ	10.	U	10.	U
100-41-4	Ethylbenzene	10.	UJ	10.	UJ	10.	U	10.	U
100-42-5	Styrene	10.	UJ	10.	UJ	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	10.	UJ	10.	U	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	UJ	10.	U	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	UJ	10.	UJ	10.	U	10.	U
108-38-3	m-Xylene	20.	UJ	20.	UJ	20.	UJ	20.	UJ
95-47-6	o-Xylene	10.	UJ	10.	UJ	10.	UJ	10.	UJ

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 30 Soil Samples

SW846-VDA		SAMPLE ID ----->	030-S-GB05-01	030-S-GB05-13			
		ORIGINAL ID ----->	030SGB0501	030SGB0513			
		LAB SAMPLE ID ---->	030S0501	030S0513			
		ID FROM REPORT -->	030SGB0501	030SGB0513			
		SAMPLE DATE ----->	10/25/96	10/25/96			
		DATE ANALYZED ---->	10/25/96	10/25/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/KG	ug/KG			
CAS #	Parameter	1	VAL	1	VAL		
74-87-3	Chloromethane	10.	U	10.	U		
74-83-9	Bromomethane	10.	U	10.	U		
75-01-4	Vinyl chloride	10.	U	10.	U		
75-09-2	Methylene chloride	10.	U	10.	U		
67-64-1	Acetone	100.	U	100.	U		
75-15-0	Carbon disulfide	10.	UJ	10.	UJ		
75-35-4	1,1-Dichloroethane	10.	U	10.	U		
75-34-3	1,1-Dichloroethane	10.	U	10.	U		
540-59-0	1,2-Dichloroethane (total)	10.	U	10.	U		
67-66-3	Chloroform	10.	U	10.	U		
107-06-2	1,2-Dichloroethane	10.	UJ	10.	UJ		
78-93-3	2-Butanone (MEK)	50.	U	50.	U		
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U		
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ		
75-27-4	Bromodichloromethane	10.	U	10.	U		
78-87-5	1,2-Dichloropropane	10.	U	10.	U		
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U		
79-01-6	Trichloroethene	10.	U	10.	U		
124-48-1	Dibromochloromethane	10.	U	10.	U		
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U		
71-43-2	Benzene	10.	UJ	10.	UJ		
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U		
75-25-2	Bromoform	10.	UJ	10.	UJ		
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U		
591-78-6	2-Hexanone	50.	U	50.	U		
127-18-4	Tetrachloroethene	10.	UJ	10.	UJ		
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ		
108-88-3	Toluene	10.	U	10.	U		
108-90-7	Chlorobenzene	10.	U	10.	U		
100-41-4	Ethylbenzene	10.	U	10.	U		
100-42-5	Styrene	10.	U	10.	U		
75-71-8	Dichlorodifluoromethane	10.	U	10.	U		
75-69-4	Trichlorofluoromethane	10.	U	10.	U		
142-28-9	1,3-Dichloropropane	10.	U	10.	U		
108-38-3	m-Xylene	20.	UJ	20.	UJ		
95-47-6	o-Xylene	10.	UJ	10.	UJ		

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 30 Groundwater Samples

SMB46-VOA		SAMPLE ID ----->	030-G-GB01-38	030-G-GB02-38	030-G-GB04-37	030-G-GB05-45			
		ORIGINAL ID ----->	030GG80138	030GG80238	030GG80437	030GG80545			
		LAB SAMPLE ID ---->	030S0113	030G0238	030G0437	30G05450			
		ID FROM REPORT -->	030GG80138	030GG80238	030GG80437	030GG80545			
		SAMPLE DATE ----->	10/22/96	10/24/96	10/28/96	10/25/96			
		DATE ANALYZED ----->	10/22/96	10/25/96	10/28/96	10/25/96			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	ug/L	ug/L	ug/L	ug/L			
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	UJ	10.	U	10.	UJ	10.	UJ
74-83-9	Bromomethane	10.	U	10.	U	10.	UJ	10.	UJ
75-01-4	Vinyl chloride	10.	U	10.	U	10.	UJ	10.	UJ
75-09-2	Methylene chloride	10.	U	10.	U	10.	UJ	10.	UJ
67-64-1	Acetone	100.	U	100.	U	100.	UJ	120.	J
75-15-0	Carbon disulfide	10.	U	10.	UJ	10.	UJ	10.	UJ
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	UJ	10.	UJ
75-34-3	1,1-Dichloroethane	10.	U	10.	U	10.	UJ	10.	UJ
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	UJ	10.	UJ
67-66-3	Chloroform	10.	U	10.	U	10.	UJ	10.	UJ
107-06-2	1,2-Dichloroethane	10.	U	10.	UJ	10.	UJ	10.	UJ
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	UJ	50.	UJ
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	UJ	10.	UJ
56-23-5	Carbon tetrachloride	10.	U	10.	UJ	10.	UJ	10.	UJ
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	UJ	10.	UJ
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	UJ	10.	UJ
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	UJ	10.	UJ
79-01-6	Trichloroethene	10.	U	10.	U	10.	UJ	10.	UJ
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	UJ	10.	UJ
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	UJ	10.	UJ
71-43-2	Benzene	10.	UJ	10.	UJ	10.	UJ	10.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	UJ	10.	UJ
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	UJ	50.	UJ
591-78-6	2-Hexanone	50.	U	50.	U	50.	UJ	50.	UJ
127-18-4	Tetrachloroethene	10.	UJ	10.	UJ	10.	UJ	10.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	U	10.	U	10.	UJ	10.	UJ
108-90-7	Chlorobenzene	10.	U	10.	U	10.	UJ	10.	UJ
100-41-4	Ethylbenzene	10.	U	10.	U	10.	UJ	10.	UJ
100-42-5	Styrene	10.	U	10.	U	10.	UJ	10.	UJ
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	UJ	10.	UJ
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	UJ	10.	UJ
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	UJ	10.	UJ
108-38-3	m-Xylene	20.	UJ	20.	UJ	20.	UJ	20.	UJ
95-47-6	o-Xylene	10.	UJ	10.	UJ	10.	UJ	10.	UJ

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NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

APX9-METAL		SAMPLE ID -----> 039-S-GB01-01		039-S-GB02-01				
	ORIGINAL ID ----->	039SG80101		039SG80201				
	LAB SAMPLE ID ---->	155223S		155224S				
	ID FROM REPORT -->	039SG80101		039SG80201				
	SAMPLE DATE ----->	10/07/96		10/07/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	MG/KG		MG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
7440-36-0	Antimony	3.9	UJ	3.9	UJ			
7440-38-2	Arsenic	2.9	J	5.4	J			
7440-39-3	Barium	68.4		157.				
7440-41-7	Beryllium	0.26	U	0.38	U			
7440-43-9	Cadmium	1.	J	0.48	UJ			
7440-47-3	Chromium	10.3		8.5				
7440-48-4	Cobalt	5.	J	11.6				
7440-50-8	Copper	16.2		12.4				
7439-92-1	Lead	155.		44.				
7439-97-6	Mercury	0.07	J	0.08	J			
7440-02-0	Nickel	14.3		16.4				
7782-49-2	Selenium	0.12	U	0.12	U			
7440-22-4	Silver	0.54	U	0.55	U			
7440-28-0	Thallium	0.23	U	0.24	U			
7440-62-2	Vanadium	15.4		22.8				
7440-66-6	Zinc	172.		60.3				
7440-31-5	Tin	5.3	U	5.3	U			

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SWMU 39 Soil Samples

METAL-CN		SAMPLE ID ----->	039-S-G801-01	039-S-G802-01				
		ORIGINAL ID ----->	039SG80101	039SG80201				
		LAB SAMPLE ID ---->	155223	155224				
		ID FROM REPORT -->	039SG80101	039SG80201				
		SAMPLE DATE ----->	10/07/96	10/07/96				
		DATE EXTRACTED -->	10/17/96	10/17/96				
		DATE ANALYZED ---->	10/18/96	10/18/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
57-12-5	Cyanide (CN)	0.5	U	0.5	U			

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NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SMB46-HERB		SAMPLE ID -----> 039-S-GB01-01		039-S-GB02-01				
	ORIGINAL ID ----->	039SGB0101		039SGB0201				
	LAB SAMPLE ID ---->	155223		155224				
	ID FROM REPORT -->	039SGB0101		039SGB0201				
	SAMPLE DATE ----->	10/07/96		10/07/96				
	DATE EXTRACTED -->	10/14/96		10/14/96				
	DATE ANALYZED ---->	10/19/96		10/19/96				
	MATRIX ----->	Soil		Soil				
	UNITS ----->	UG/KG		UG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
94-75-7	2,4-D	9.4	U	9.4	U			
94-82-6	2,4-DB	9.5	U	9.5	U			
88-85-7	Dinoseb	4.7	U	4.7	U			
93-76-5	2,4,5-T	0.95	U	0.95	U			
93-72-1	2,4,5-TP (Silvex)	0.95	U	0.95	U			
75-99-0	Dalapon	23.	U	23.	U			
1918-00-9	Dicamba	0.94	U	0.94	U			
120-36-5	Dichlorprop	9.4	U	9.4	U			
94-74-6	MCPA	940.	U	930.	U			
93-65-2	MCPP	940.	U	940.	U			

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NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SUB46-OP P		SAMPLE ID -----> 039-S-GB01-01		039-S-GB02-01				
		ORIGINAL ID ----->	039SGB0101	039SGB0201				
		LAB SAMPLE ID ---->	155223	155224				
		ID FROM REPORT -->	039SGB0101	039SGB0201				
		SAMPLE DATE ----->	10/07/96	10/07/96				
		DATE EXTRACTED -->	10/09/96	10/09/96				
		DATE ANALYZED ---->	10/24/96	10/24/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	ug/Kg	ug/Kg				
CAS #	Parameter	2035	VAL	2035	VAL			
62-73-7	Dichlorvos	100.	U	100.	U			
7786-34-7	Mevinphos, Alpha	100.	U	100.	U			
8065-48-3	Demeton, O	100.	U	100.	U			
13194-48-4	Ethoprop	100.	U	100.	U			
300-76-5	Naled	200.	U	200.	U			
298-02-2	Phorate	100.	U	100.	U			
126-75-0	Demeton, S	100.	U	100.	U			
333-41-5	Diazinon	100.	U	100.	U			
298-04-4	Disulfoton	100.	U	100.	U			
298-00-0	Methyl parathion	100.	U	100.	U			
299-84-3	Ronnel	100.	U	100.	U			
55-38-9	Fenthion	100.	U	100.	U			
2921-88-2	Chloropyrifos	100.	U	100.	U			
327-98-0	Triphloronate	100.	U	100.	U			
150-50-5	Merphos	100.	U	100.	U			
34643-46-4	Tokuthion	100.	U	100.	U			
115-90-2	Fensulfothion	100.	U	100.	U			
22248-79-9	Stirophos (Tetrachlorovinphos)	100.	U	100.	U			
35400-43-2	Sulprofos (Bolstar)	100.	U	100.	U			
86-50-0	Azinphos methyl	100.	U	100.	U			
56-72-4	Coumaphos	100.	U	100.	U			

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NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SMB46-PCB		SAMPLE ID ----->	039-S-G801-02	039-S-G801-13	039-S-G802-02	039-S-G802-11	039-S-G803-01	039-S-G803-02			
		ORIGINAL ID ----->	039SG80102	039SG80113	039SG80202	039SG80211	039SG80301	039SG80302			
		LAB SAMPLE ID --->	155286	155656	155287	155799	155288	155289			
		ID FROM REPORT -->	039SG80102	039SG80113	039SG80202	039SG80211	039SG80301	039SG80302			
		SAMPLE DATE ----->	10/08/96	10/15/96	10/08/96	10/17/96	10/08/96	10/08/96			
		DATE EXTRACTED -->	10/12/96	10/23/96	10/12/96	10/23/96	10/12/96	10/12/96			
		DATE ANALYZED --->	10/16/96	10/25/96	10/16/96	10/25/96	10/16/96	10/16/96			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg			
CAS #	Parameter	2037	VAL	2045	VAL	2037	VAL	2045	VAL	2037	VAL
12674-11-2	Aroclor-1016	42.	U	43.	U	39.	U	43.	U	41.	UJ
11104-28-2	Aroclor-1221	42.	U	43.	U	39.	U	43.	U	41.	UJ
11141-16-5	Aroclor-1232	42.	U	43.	U	39.	U	43.	U	41.	UJ
53469-21-9	Aroclor-1242	42.	U	43.	U	39.	U	43.	U	41.	UJ
12672-29-6	Aroclor-1248	42.	U	43.	U	39.	U	43.	U	41.	UJ
11097-69-1	Aroclor-1254	42.	U	43.	U	39.	U	43.	U	41.	UJ
11096-82-5	Aroclor-1260	42.	U	43.	U	39.	U	43.	U	41.	UJ

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SW846-PCB		SAMPLE ID ----->	039-C-GB03-02	039-S-GB03-13	039-C-GB03-13	039-S-GB04-01	039-S-GB04-02	039-S-GB04-13					
		ORIGINAL ID ----->	039CG80302	039SG80313	039CG80313	039SG80401	039SG80402	039SG80413					
		LAB SAMPLE ID ---->	155285	155800	155798	155292	155290	155801					
		ID FROM REPORT -->	039CG80302	039SG80313	039CG80313	039SG80401	039SG80402	039SG80413					
		SAMPLE DATE ----->	10/08/96	10/17/96	10/17/96	10/08/96	10/08/96	10/17/96					
		DATE EXTRACTED -->	10/12/96	10/23/96	10/23/96	10/12/96	10/12/96	10/23/96					
		DATE ANALYZED ---->	10/16/96	10/25/96	10/25/96	10/17/96	10/16/96	10/25/96					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
CAS #	Parameter	2037	VAL	2045	VAL	2045	VAL	2037	VAL	2037	VAL	2045	VAL
12674-11-2	Aroclor-1016	40.	U	43.	U	43.	U	39.	U	40.	U	43.	U
11104-28-2	Aroclor-1221	40.	U	43.	U	43.	U	39.	U	40.	U	43.	U
11141-16-5	Aroclor-1232	40.	U	43.	U	43.	U	39.	U	40.	U	43.	U
53469-21-9	Aroclor-1242	40.	U	43.	U	43.	U	39.	U	40.	U	43.	U
12672-29-6	Aroclor-1248	40.	U	43.	U	43.	U	39.	U	40.	U	43.	U
11097-69-1	Aroclor-1254	40.	U	43.	U	43.	U	39.	U	40.	U	43.	U
11096-82-5	Aroclor-1260	40.	U	43.	U	43.	U	39.	U	40.	U	43.	U

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SMB46-PCB		SAMPLE ID ----->	039-S-GB05-01	039-S-GB05-02	039-S-GB05-13			
		ORIGINAL ID ----->	039SGB0501	039SGB0502	039SGB0513			
		LAB SAMPLE ID --->	155291	155293	155786			
		ID FROM REPORT -->	039SGB0501	039SGB0502	039SGB0513			
		SAMPLE DATE ----->	10/08/96	10/08/96	10/16/96			
		DATE EXTRACTED -->	10/12/96	10/12/96	10/23/96			
		DATE ANALYZED --->	10/17/96	10/17/96	10/25/96			
		MATRIX ----->	Soil	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg	ug/Kg			
CAS #	Parameter	2037	VAL	2037	VAL	2045	VAL	
12674-11-2	Aroclor-1016	39.	U	43.	U	43.	U	
11104-28-2	Aroclor-1221	39.	U	43.	U	43.	U	
11141-16-5	Aroclor-1232	39.	U	43.	U	43.	U	
53469-21-9	Aroclor-1242	39.	U	43.	U	43.	U	
12672-29-6	Aroclor-1248	39.	U	43.	U	43.	U	
11097-69-1	Aroclor-1254	39.	U	43.	U	43.	U	
11096-82-5	Aroclor-1260	43.		43.	U	43.	U	

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SMB46-PEST		SAMPLE ID ----->	039-S-GB01-01	039-S-GB02-01			
		ORIGINAL ID ----->	039SGB0101	039SGB0201			
		LAB SAMPLE ID ---->	155223	155224			
		ID FROM REPORT -->	039SGB0101	039SGB0201			
		SAMPLE DATE ----->	10/07/96	10/07/96			
		DATE EXTRACTED -->	10/09/96	10/09/96			
		DATE ANALYZED ---->	10/16/96	10/16/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg			
CAS #	Parameter	2035	VAL	2035	VAL		
319-84-6	alpha-BHC	2.	UJ	2.	U		
319-85-7	beta-BHC	2.	UJ	2.	U		
319-86-8	delta-BHC	2.	UJ	2.	U		
58-89-9	gamma-BHC (Lindane)	2.	UJ	2.	U		
76-44-8	Heptachlor	2.	UJ	4.6	J		
309-00-2	Aldrin	2.	UJ	4.6	U		
1024-57-3	Heptachlor epoxide	2.	UJ	2.	U		
959-98-8	Endosulfan I	2.2	UJ	15.	DNJ		
60-57-1	Dieldrin	4.	UJ	130.	DNJ		
72-35-9	4,4'-DDE	5.6	NJ	260.	D		
72-20-8	Endrin	4.	UJ	3.1	U		
33213-65-9	Endosulfan II	4.	UJ	4.1	U		
72-54-8	4,4'-DDD	4.4	UJ	88.	NJ		
1031-07-8	Endosulfan sulfate	4.	UJ	40.	U		
50-29-3	4,4'-DDT	18.	J	380.	D		
72-43-5	Methoxychlor	20.	UJ	20.	U		
53494-70-5	Endrin ketone	4.	UJ	2.5	NJ		
7421-93-4	Endrin aldehyde	4.	UJ	4.	U		
5103-71-9	alpha-Chlordane	4.	UJ	140.	D		
5103-74-2	gamma-Chlordane	2.6	J	170.	D		
8001-35-2	Toxaphene	40.	UJ	41.	U		
12674-11-2	Aroclor-1016	40.	UJ	41.	U		
11104-28-2	Aroclor-1221	40.	UJ	41.	U		
11141-16-5	Aroclor-1232	40.	UJ	41.	U		
53469-21-9	Aroclor-1242	40.	UJ	41.	U		
12672-29-6	Aroclor-1248	40.	UJ	41.	U		
11097-69-1	Aroclor-1254	40.	UJ	41.	U		
11096-82-5	Aroclor-1260	40.	UJ	40.	U		
12789-03-6	Technical Chlordane	40.	UJ	1200.	D		

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SWMU 39 Soil Samples

SMB46-SVDA		SAMPLE ID ----->	039-S-GB01-01	039-S-GB02-01			
		ORIGINAL ID ----->	039SGB0101	039SGB0201			
		LAB SAMPLE ID ---->	155223	155224			
		ID FROM REPORT -->	039SGB0101	039SGB0201			
		SAMPLE DATE ----->	10/07/96	10/07/96			
		DATE EXTRACTED -->	10/09/96	10/09/96			
		DATE ANALYZED ---->	10/11/96	10/11/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg			
CAS #	Parameter	2035	VAL	2035	VAL		
108-95-2	Phenol	4000.	U	4100.	U		
111-44-4	bis(2-Chloroethyl)ether	4000.	U	4100.	U		
95-57-8	2-Chlorophenol	4000.	U	4100.	U		
541-73-1	1,3-Dichlorobenzene	4000.	U	4100.	U		
106-46-7	1,4-Dichlorobenzene	4000.	U	4100.	U		
95-50-1	1,2-Dichlorobenzene	4000.	U	4100.	U		
95-48-7	2-Methylphenol (o-Cresol)	4000.	U	4100.	U		
108-60-1	2,2'-oxybis(1-Chloropropane)	4000.	U	4100.	U		
106-44-5	4-Methylphenol (p-Cresol)	4000.	U	4100.	U		
621-64-7	N-Nitroso-di-n-propylamine	4000.	U	4100.	U		
67-72-1	Hexachloroethane	4000.	U	4100.	U		
98-95-3	Nitrobenzene	4000.	U	4100.	U		
78-59-1	Isophorone	4000.	U	4100.	U		
88-75-5	2-Nitrophenol	4000.	U	4100.	U		
105-67-9	2,4-Dimethylphenol	4000.	U	4100.	U		
120-83-2	2,4-Dichlorophenol	4000.	U	4100.	U		
120-82-1	1,2,4-Trichlorobenzene	4000.	U	4100.	U		
91-20-3	Naphthalene	4000.	U	4100.	U		
106-47-8	4-Chloroaniline	4000.	U	4100.	U		
87-68-3	Hexachlorobutadiene	4000.	U	4100.	U		
111-91-1	bis(2-Chloroethoxy)methane	4000.	U	4100.	U		
59-50-7	4-Chloro-3-methylphenol	4000.	U	4100.	U		
91-57-6	2-Methylnaphthalene	4000.	U	4100.	U		
77-47-4	Hexachlorocyclopentadiene	4000.	U	4100.	U		
88-06-2	2,4,6-Trichlorophenol	4000.	U	4100.	U		
95-95-4	2,4,5-Trichlorophenol	10000.	U	10000.	U		
91-58-7	2-Chloronaphthalene	4000.	U	4100.	U		
88-74-4	2-Nitroaniline	10000.	U	10000.	U		
131-11-3	Dimethylphthalate	4000.	U	4100.	U		
208-96-8	Acenaphthylene	4000.	U	4100.	U		
606-20-2	2,6-Dinitrotoluene	4000.	U	4100.	U		
99-09-2	3-Nitroaniline	10000.	U	10000.	U		
83-32-9	Acenaphthene	4000.	U	4100.	U		
51-28-5	2,4-Dinitrophenol	10000.	U	10000.	U		
100-02-7	4-Nitrophenol	10000.	U	10000.	U		
132-64-9	Dibenzofuran	4000.	U	4100.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SMB46-SVDA		SAMPLE ID -----> 039-S-G801-01		039-S-G802-01				
		ORIGINAL ID -----> 039SG80101		039SG80201				
		LAB SAMPLE ID -----> 155223		155224				
		ID FROM REPORT -----> 039SG80101		039SG80201				
		SAMPLE DATE -----> 10/07/96		10/07/96				
		DATE EXTRACTED -----> 10/09/96		10/09/96				
		DATE ANALYZED -----> 10/11/96		10/11/96				
		MATRIX -----> Soil		Soil				
		UNITS -----> ug/Kg		ug/Kg				
CAS #	Parameter	2035	VAL	2035	VAL			
121-14-2	2,4-Dinitrotoluene	4000.	U	4100.	U			
84-66-2	Diethylphthalate	4000.	U	4100.	U			
7005-72-3	4-Chlorophenylphenyl ether	4000.	U	4100.	U			
86-73-7	Fluorene	4000.	U	4100.	U			
100-01-6	4-Nitroaniline	10000.	U	10000.	U			
534-52-1	2-Methyl-4,6-Dinitrophenol	10000.	U	10000.	U			
86-30-6	N-Nitrosodiphenylamine	4000.	U	4100.	U			
101-55-3	4-Bromophenyl-phenylether	4000.	U	4100.	U			
118-74-1	Hexachlorobenzene	4000.	U	4100.	U			
87-86-5	Pentachlorophenol	10000.	U	10000.	U			
85-01-8	Phenanthrene	4000.	U	4100.	U			
120-12-7	Anthracene	4000.	U	4100.	U			
86-74-8	Carbazole	4000.	U	4100.	U			
84-74-2	Di-n-butylphthalate	4000.	U	4100.	U			
206-44-0	Fluoranthene	4000.	U	4100.	U			
129-00-0	Pyrene	4000.	U	4100.	U			
85-68-7	Butylbenzylphthalate	4000.	U	4100.	U			
91-94-1	3,3'-Dichlorobenzidine	4000.	U	4100.	U			
56-55-3	Benzo(a)anthracene	4000.	U	4100.	U			
218-01-9	Chrysene	4000.	U	4100.	U			
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	4000.	U	4100.	U			
117-84-0	Di-n-octylphthalate	4000.	U	4100.	U			
205-99-2	Benzo(b)fluoranthene	4000.	U	4100.	U			
207-08-9	Benzo(k)fluoranthene	4000.	U	4100.	U			
50-32-8	Benzo(a)pyrene	4000.	U	4100.	U			
193-39-5	Indeno(1,2,3-cd)pyrene	4000.	U	4100.	U			
53-70-3	Dibenz(a,h)anthracene	4000.	U	4100.	U			
191-24-2	Benzo(g,h,i)perylene	4000.	U	4100.	U			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SMB46-VOA		SAMPLE ID ----->	039-S-GB01-01	039-S-GB02-01	039-S-GB04-01	039-S-GB04-13	039-S-GB05-02	039-S-GB06-10					
		ORIGINAL ID ----->	039SG80101	039SG80201	039SG80401	039SG80413	039SG80502	039SG80610					
		LAB SAMPLE ID ---->	155223	155224	155292	155801	155293	158160					
		ID FROM REPORT -->	039SG80101	039SG80201	039sgb0401	039SG80413	039sgb0502	039SG80610					
		SAMPLE DATE ----->	10/07/96	10/07/96	10/08/96	10/10/96	10/08/96	11/26/96					
		DATE ANALYZED ---->	10/09/96	10/09/96	10/10/96	10/23/96	10/10/96	12/06/96					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg					
CAS #	Parameter	2035	VAL	2035	VAL	2037	VAL	2045	VAL	2037	VAL	2105	VAL
74-87-3	Chloromethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
74-83-9	Bromomethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-01-4	Vinyl chloride	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-00-3	Chloroethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-09-2	Methylene chloride	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
67-64-1	Acetone	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-15-0	Carbon disulfide	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-35-4	1,1-Dichloroethene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-34-3	1,1-Dichloroethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
540-59-0	1,2-Dichloroethene (total)	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
67-66-3	Chloroform	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
107-06-2	1,2-Dichloroethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
78-93-3	2-Butanone (MEK)	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
71-55-6	1,1,1-Trichloroethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
56-23-5	Carbon tetrachloride	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-27-4	Bromodichloromethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
78-87-5	1,2-Dichloropropane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
10061-01-5	cis-1,3-Dichloropropene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
79-01-6	Trichloroethene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
124-48-1	Dibromochloromethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
79-00-5	1,1,2-Trichloroethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
71-43-2	Benzene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
10061-02-6	trans-1,3-Dichloropropene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
75-25-2	Bromoform	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
591-78-6	2-Hexanone	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
127-18-4	Tetrachloroethene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
108-88-3	Toluene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
108-90-7	Chlorobenzene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
100-41-4	Ethylbenzene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
100-42-5	Styrene	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U
1330-20-7	Xylene (Total)	12.	U	12.	U	12.	U	13.	U	13.	U	1600.	U

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

SW846-VOA		SAMPLE ID ----->	039-S-GB07-13	039-S-GB08-17	039-S-GB09-13	039-S-GB09-17			
		ORIGINAL ID ----->	039SG80713	039SG80817	039SG80913	039SG80917			
		LAB SAMPLE ID ---->	158161	158162	158163	158164			
		ID FROM REPORT -->	039SG80713	039SG80817	039SG80913	039SG80917			
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96	11/26/96			
		DATE ANALYZED ---->	12/04/96	12/05/96	12/04/96	12/04/96			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/Kg	ug/Kg	ug/Kg	ug/Kg			
CAS #	Parameter	2105	VAL	2105	VAL	2105	VAL	2105	VAL
74-87-3	Chloromethane	13.	U	13.	U	13.	U	13.	U
74-83-9	Bromomethane	13.	U	13.	U	13.	U	13.	U
75-01-4	Vinyl chloride	13.	U	13.	U	13.	U	13.	U
75-00-3	Chloroethane	13.	U	13.	U	13.	U	13.	U
75-09-2	Methylene chloride	13.	U	13.	U	13.	U	13.	U
67-64-1	Acetone	26.		39.	J	13.	U	25.	
75-15-0	Carbon disulfide	13.	U	13.	U	13.	U	13.	U
75-35-4	1,1-Dichloroethane	13.	U	13.	U	13.	U	13.	U
75-34-3	1,1-Dichloroethane	13.	U	13.	U	13.	U	13.	U
540-59-0	1,2-Dichloroethane (total)	13.	U	13.	U	13.	U	13.	U
67-66-3	Chloroform	13.	U	13.	U	13.	U	13.	U
107-06-2	1,2-Dichloroethane	13.	U	13.	U	13.	U	13.	U
78-93-3	2-Butanone (MEK)	13.	U	13.	U	13.	U	13.	U
71-55-6	1,1,1-Trichloroethane	13.	U	13.	U	13.	U	13.	U
56-23-5	Carbon tetrachloride	13.	U	13.	U	13.	U	13.	U
75-27-4	Bromodichloromethane	13.	U	13.	U	13.	U	13.	U
78-87-5	1,2-Dichloropropane	13.	U	13.	U	13.	U	13.	U
10061-01-5	cis-1,3-Dichloropropene	13.	U	13.	U	13.	U	13.	U
79-01-6	Trichloroethene	13.	U	13.	U	13.	U	13.	U
124-48-1	Dibromochloromethane	13.	U	13.	U	13.	U	13.	U
79-00-5	1,1,2-Trichloroethane	13.	U	13.	U	13.	U	13.	U
71-43-2	Benzene	13.	U	13.	U	13.	U	13.	U
10061-02-6	trans-1,3-Dichloropropene	13.	U	13.	U	13.	U	13.	U
75-25-2	Bromoform	13.	U	13.	U	13.	U	13.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	U	13.	UJ	13.	U	13.	U
591-78-6	2-Hexanone	13.	U	13.	U	13.	U	13.	U
127-18-4	Tetrachloroethene	13.	U	13.	U	13.	U	13.	U
79-34-5	1,1,2,2-tetrachloroethane	13.	U	13.	U	13.	U	13.	U
108-88-3	Toluene	13.	U	13.	U	13.	U	13.	U
108-90-7	Chlorobenzene	13.	U	13.	U	13.	U	13.	U
100-41-4	Ethylbenzene	10.	J	13.	U	13.	U	13.	U
100-42-5	Styrene	13.	U	13.	U	13.	U	13.	U
1330-20-7	Xylene (Total)	2.	J	14.		13.	U	13.	U

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

TPH		SAMPLE ID ----->	039-S-GB01-01	039-S-GB02-01				
		ORIGINAL ID ----->	039SGB0101	039SGB0201				
		LAB SAMPLE ID ---->	155223	155224				
		ID FROM REPORT -->	039SGB0101	039SGB0201				
		SAMPLE DATE ----->	10/07/96	10/07/96				
		DATE EXTRACTED -->	10/18/96	10/18/96				
		DATE ANALYZED ---->	10/31/96	10/31/96				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG				
CAS #	Parameter	2035	VAL	2035	VAL			
9999900-02-4	Petroleum Hydrocarbons, TPH	740.		240.				

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

TPH-DRO		SAMPLE ID ----->	039-S-GB01-01	039-S-GB02-01			
		ORIGINAL ID ----->	039SGB0101	039SGB0201			
		LAB SAMPLE ID ---->	155223	155224			
		ID FROM REPORT -->	039SGB0101	039SGB0201			
		SAMPLE DATE ----->	10/07/96	10/07/96			
		DATE EXTRACTED -->	10/09/96	10/09/96			
		DATE ANALYZED ---->	10/14/96	10/14/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG			
CAS #	Parameter	2035	VAL	2035	VAL		
9999900-02-6	TPH - Diesel Range Organics	120000.		95000.			

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Soil Samples

TPH-GRO		SAMPLE ID ----->	039-S-GB01-01	039-S-GB02-01			
		ORIGINAL ID ----->	039SGB0101	039SGB0201			
		LAB SAMPLE ID ---->	155223	155224			
		ID FROM REPORT -->	039SGB0101	039SGB0201			
		SAMPLE DATE ----->	10/07/96	10/07/96			
		DATE ANALYZED ---->	10/10/96	10/10/96			
		MATRIX ----->	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG			
CAS #	Parameter	2035	VAL	2035	VAL		
9999900-02-5	TPH - Gasoline Range Organics	71.	U	61.	U		

NSA MEMPHIS
NSA MEMPHIS, CSI, ASSEMBLY F
SWMU 39 Groundwater Samples

SUB46-VOA		SAMPLE ID ----->	039-H-0100-44	039-G-GB04-43			
		ORIGINAL ID ----->	039H010044	039GGB0443			
		LAB SAMPLE ID ---->	139437	155657			
		ID FROM REPORT -->	039H010044	039ggb0443			
		SAMPLE DATE ----->		10/14/96			
		DATE ANALYZED ---->	11/30/95	10/22/96			
		MATRIX ----->	Water	Water			
		UNITS ----->	UG/L	ug/L			
CAS #	Parameter	1631	VAL	2045	VAL		
74-87-3	Chloromethane	10.	U	10.	U		
74-83-9	Bromomethane	10.	U	10.	U		
75-01-4	Vinyl chloride	10.	U	10.	U		
75-00-3	Chloroethane	10.	U	10.	U		
75-09-2	Methylene chloride	10.	U	10.	U		
67-64-1	Acetone	10.	U	16.	U		
75-15-0	Carbon disulfide	10.	U	10.	U		
75-35-4	1,1-Dichloroethene	10.	U	10.	U		
75-34-3	1,1-Dichloroethane	10.	U	10.	U		
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U		
67-66-3	Chloroform	10.	U	10.	U		
107-06-2	1,2-Dichloroethane	10.	U	10.	U		
78-93-3	2-Butanone (MEK)	10.	U	10.	U		
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U		
56-23-5	Carbon tetrachloride	10.	U	10.	U		
75-27-4	Bromodichloromethane	10.	U	10.	U		
78-87-5	1,2-Dichloropropane	10.	U	10.	U		
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U		
79-01-6	Trichloroethene	10.	U	5.	J		
124-48-1	Dibromochloromethane	10.	U	10.	U		
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U		
71-43-2	Benzene	10.	U	10.	U		
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U		
75-25-2	Bromoform	10.	U	10.	U		
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U		
591-78-6	2-Hexanone	10.	U	10.	U		
127-18-4	Tetrachloroethene	10.	U	10.	U		
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	10.	U		
108-88-3	Toluene	10.	U	10.	U		
108-90-7	Chlorobenzene	10.	U	10.	U		
100-41-4	Ethylbenzene	10.	U	10.	U		
100-42-5	Styrene	10.	U	10.	U		
1330-20-7	Xylene (Total)	21.		10.	U		

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 39 Soil Samples

SMB46-VQA		SAMPLE ID ----->	039-S-GB01-02	039-S-GB01-13	039-S-GB02-02	039-S-GB02-11	039-S-GB03-01	039-C-GB03-02	
		ORIGINAL ID ----->	039SGB0102	039SGB0113	039SGB0202	039SGB0211	039SGB0301	039CGB0302	
		LAB SAMPLE ID ---->	039S0102	039S0113	039S0202	039S2110	039S0301	039C0302	
		ID FROM REPORT -->	039SGB0102	039SGB0113	039SGB0202	039SGB0211	039SGB0301	039CGB0302	
		SAMPLE DATE ----->	10/08/96	10/15/96	10/08/96	10/17/96	10/08/96	10/08/96	
		DATE ANALYZED ----->	10/17/96	10/16/96	10/10/96	10/17/96	10/10/96	10/10/96	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	UJ	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	UJ	10.	U	10.	U	10.	U
75-01-4	Vinyl chloride	10.	UJ	10.	U	10.	UJ	10.	U
75-09-2	Methylene chloride	310.	DJ	10.	U	10.	U	10.	U
67-64-1	Acetone	100.	UJ	100.	U	100.	UJ	100.	UJ
75-15-0	Carbon disulfide	10.	UJ	10.	U	10.	U	10.	UJ
75-35-4	1,1-Dichloroethene	10.	UJ	10.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	UJ	10.	U	10.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	20.	UJ	10.	U	20.	U	10.	U
67-66-3	Chloroform	10.	UJ	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	U	10.	U	10.	U
78-93-3	2-Butanone (MEK)	50.	UJ	50.	U	50.	UJ	50.	UJ
71-55-6	1,1,1-Trichloroethane	10.	UJ	10.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	UJ	10.	U	10.	U	10.	U
75-27-4	Bromodichloromethane	10.	UJ	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	UJ	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	UJ	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	UJ	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	UJ	10.	U	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	UJ	10.	U	10.	U	10.	U
71-43-2	Benzene	10.	UJ	10.	U	10.	UJ	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	UJ	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	UJ	50.	U	50.	UJ	50.	UJ
591-78-6	2-Hexanone	50.	UJ	50.	UJ	50.	UJ	50.	UJ
127-18-4	Tetrachloroethene	10.	UJ	10.	U	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	UJ	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	UJ	10.	U	10.	U	10.	U
100-41-4	Ethylbenzene	10.	UJ	10.	U	18000.	D	10.	U
100-42-5	Styrene	10.	UJ	10.	U	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	10.	UJ	10.	U	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	UJ	10.	U	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	UJ	10.	U	10.	U	10.	U
108-38-3	m-Xylene	20.	UJ	20.	U	110000.	DJ	20.	U
95-47-6	o-Xylene	10.	UJ	10.	U	56000.	DJ	10.	U

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 39 Soil Samples

SW846-VOA		SAMPLE ID ----->	039-S-GB03-02	039-C-GB03-13	039-S-GB03-13	039-S-GB04-01	039-S-GB04-02	039-S-GB04-13	
		ORIGINAL ID ----->	039SGB0302	039CGB0313	039SGB0313	039SGB0401	039SGB0402	039SGB0413	
		LAB SAMPLE ID ---->	039S0302	039C0313	039S0313	039S0401	039S0402	039S0413	
		ID FROM REPORT -->	039SGB0302	039CGB0313	039SGB0313	039SGB0401	039SGB0402	039SGB0413	
		SAMPLE DATE ----->	10/08/96	10/17/96	10/17/96	10/08/96	10/08/96	10/17/96	
		DATE ANALYZED --->	10/16/96	10/17/96	10/17/96	10/16/96	10/16/96	10/19/96	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	UJ
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	UJ
75-01-4	Vinyl chloride	10.	U	10.	UJ	10.	UJ	10.	UJ
75-09-2	Methylene chloride	10.	U	10.	U	10.	U	10.	U
67-64-1	Acetone	100.	U	100.	U	100.	U	100.	U
75-15-0	Carbon disulfide	39.	J	27.	J	28.	J	10.	UJ
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	10.	UJ
75-34-3	1,1-Dichloroethane	10.	U	10.	U	10.	U	10.	UJ
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	10.	UJ
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	UJ
107-06-2	1,2-Dichloroethane	10.	U	10.	U	10.	U	10.	UJ
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	U	50.	UJ
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	UJ
56-23-5	Carbon tetrachloride	10.	U	10.	U	10.	U	10.	UJ
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	10.	UJ
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	UJ
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	UJ
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	UJ
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	10.	UJ
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	UJ
71-43-2	Benzene	10.	U	10.	UJ	10.	UJ	10.	UJ
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	UJ
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	U	50.	UJ
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	50.	UJ
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	10.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	230.	J	150.	J	10.	UJ
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	UJ
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	10.	UJ
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	10.	UJ
100-42-5	Styrene	10.	U	10.	U	10.	U	10.	UJ
75-71-8	Dichlorodifluoromethane	10.	U	10.	U	10.	U	10.	UJ
75-69-4	Trichlorofluoromethane	10.	U	10.	U	10.	U	10.	UJ
142-28-9	1,3-Dichloropropane	10.	U	10.	U	10.	U	10.	UJ
108-38-3	m-Xylene	20.	U	20.	UJ	20.	UJ	20.	UJ
95-47-6	o-Xylene	10.	U	10.	UJ	10.	UJ	10.	UJ

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 39 Soil Samples

SW846-VOA		SAMPLE ID ----->	039-G-GB04-43	039-S-GB05-01	039-S-GB05-02	039-S-GB05-13			
		ORIGINAL ID ----->	039GG80443	039SG80501	039SG80502	039SG80513			
		LAB SAMPLE ID ---->	039G0443	039S0501	039S0502	039S0513			
		ID FROM REPORT -->	039GG80443	039SG80501	039SG80502	039SG80513			
		SAMPLE DATE ----->	10/14/96	10/08/96	10/08/96	10/16/96			
		DATE ANALYZED --->	10/16/96	10/16/96	10/17/96	10/16/96			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG			
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	U	10.	UJ	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	UJ	10.	U	10.	U
75-01-4	Vinyl chloride	10.	U	10.	UJ	10.	UJ	10.	U
75-09-2	Methylene chloride	10.	U	450.	J	290.	J	16.	
67-64-1	Acetone	100.	U	100.	UJ	100.	U	100.	U
75-15-0	Carbon disulfide	10.	U	10.	UJ	10.	U	10.	U
75-35-4	1,1-Dichloroethene	10.	U	10.	UJ	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	U	10.	UJ	10.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	UJ	10.	U	10.	U
67-66-3	Chloroform	10.	U	10.	UJ	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	U	10.	UJ	10.	U	10.	U
78-93-3	2-Butanone (MEK)	50.	U	50.	UJ	50.	U	50.	U
71-55-6	1,1,1-Trichloroethane	10.	U	10.	UJ	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	U	10.	UJ	10.	U	10.	U
75-27-4	Bromodichloromethane	10.	U	10.	UJ	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	UJ	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	UJ	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	UJ	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	UJ	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	UJ	10.	U	10.	U
71-43-2	Benzene	10.	U	10.	UJ	10.	UJ	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	UJ	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	UJ	50.	U	50.	U
591-78-6	2-Hexanone	50.	U	50.	UJ	50.	U	50.	U
127-18-4	Tetrachloroethene	10.	U	10.	UJ	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	U	10.	UJ	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	UJ	10.	U	10.	U
100-41-4	Ethylbenzene	10.	U	10.	UJ	10.	U	10.	U
100-42-5	Styrene	10.	U	10.	UJ	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	10.	U	10.	UJ	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	U	10.	UJ	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	U	10.	UJ	10.	U	10.	U
108-38-3	m-Xylene	20.	U	20.	UJ	20.	UJ	20.	U
95-47-6	o-Xylene	10.	U	10.	UJ	10.	UJ	10.	U

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 39 Groundwater Samples

SMB45-VOA		SAMPLE ID ----->	039-G-GB01-47	039-G-GB02-14	039-G-GB02-47	039-G-GB03-14	039-G-GB03-43	039-G-GB04-13	
		ORIGINAL ID ----->	039GG80147	039GG80214	039GG80247	039GG80314	039GG80343	039GG80413	
		LAB SAMPLE ID ---->	039G0147	039G0214	039G0247	039G0314	039G0343	039G0413	
		ID FROM REPORT -->	039GG80147	039GG80214	039GG80247	039GG80314	039GG80343	039GG80413	
		SAMPLE DATE ----->	10/15/96	10/15/96	10/15/96	10/15/96	10/10/96	10/16/96	
		DATE ANALYZED --->	10/16/96	10/17/96	10/17/96	10/16/96	10/10/96	10/16/96	
		MATRIX ----->	Water	Water	Water	Water	Water	Water	
		UNITS ----->	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
CAS #	Parameter	1	VAL	1	VAL	1	VAL	1	VAL
74-87-3	Chloromethane	10.	UJ	10.	UJ	10.	U	10.	U
74-83-9	Bromomethane	10.	UJ	10.	UJ	10.	U	10.	U
75-01-4	Vinyl chloride	10.	UJ	10.	UJ	10.	U	10.	U
75-09-2	Methylene chloride	10.	UJ	10.	UJ	10.	U	10.	U
67-64-1	Acetone	100.	UJ	100.	UJ	100.	U	100.	UJ
75-15-0	Carbon disulfide	10.	UJ	10.	UJ	10.	U	10.	U
75-35-4	1,1-Dichloroethene	10.	UJ	10.	UJ	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	UJ	10.	UJ	10.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	UJ	10.	UJ	10.	U	20.	U
67-66-3	Chloroform	10.	UJ	10.	UJ	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	UJ	10.	UJ	10.	U	10.	U
78-93-3	2-Butanone (MEK)	50.	UJ	50.	UJ	50.	U	50.	UJ
71-55-6	1,1,1-Trichloroethane	10.	UJ	10.	UJ	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	UJ	10.	UJ	10.	U	10.	U
75-27-4	Bromodichloromethane	10.	UJ	10.	UJ	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	UJ	10.	UJ	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	UJ	10.	UJ	10.	U	10.	U
79-01-6	Trichloroethene	10.	UJ	10.	UJ	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	UJ	10.	UJ	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	UJ	10.	UJ	10.	U	10.	U
71-43-2	Benzene	10.	UJ	10.	UJ	10.	UJ	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	UJ	10.	UJ	10.	U	10.	U
75-25-2	Bromoform	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	UJ	50.	UJ	50.	U	50.	UJ
591-78-6	2-Hexanone	50.	UJ	50.	UJ	50.	U	50.	UJ
127-18-4	Tetrachloroethene	10.	UJ	10.	UJ	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
108-88-3	Toluene	10.	UJ	10.	UJ	10.	U	10.	U
108-90-7	Chlorobenzene	10.	UJ	10.	UJ	10.	U	10.	U
100-41-4	Ethylbenzene	10.	UJ	260.	J	33.	J	10.	U
100-42-5	Styrene	10.	UJ	10.	UJ	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	10.	UJ	10.	UJ	10.	U	10.	U
75-69-4	Trichlorofluoromethane	10.	UJ	10.	UJ	10.	U	10.	U
142-28-9	1,3-Dichloropropane	10.	UJ	10.	UJ	10.	U	10.	U
108-38-3	m-Xylene	20.	UJ	1050.	J	130.	J	20.	U
95-47-6	o-Xylene	10.	UJ	10.	UJ	64.	J	10.	U

*** Validation Complete ***

NSA MEMPHIS, ASSEMBLY F, CSI
GEOPROBE SCREEN - ONSITE LAB DATA
SWMU 39 Groundwater Samples

SW846-VOA		SAMPLE ID -----> 039-G-GB05-43					
		ORIGINAL ID -----> 039GG80543					
		LAB SAMPLE ID ----> 039G0543					
		ID FROM REPORT --> 039GG80543					
		SAMPLE DATE -----> 10/16/96					
		DATE ANALYZED ----> 10/16/96					
		MATRIX -----> Water					
		UNITS -----> ug/L					
CAS #	Parameter	1	VAL				
74-87-3	Chloromethane	10.	U				
74-83-9	Bromomethane	10.	U				
75-01-4	Vinyl chloride	10.	U				
75-09-2	Methylene chloride	11.	U				
67-64-1	Acetone	100.	U				
75-15-0	Carbon disulfide	10.	U				
75-35-4	1,1-Dichloroethene	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)	50.	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.	UJ				
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U				
591-78-6	2-Hexanone	50.	U				
127-18-4	Tetrachloroethene	10.	U				
79-34-5	1,1,2,2-Tetrachloroethane	10.	UJ				
108-88-3	Toluene	10.	U				
108-90-7	Chlorobenzene	10.	U				
100-41-4	Ethylbenzene	10.	U				
100-42-5	Styrene	10.	U				
75-71-8	Dichlorodifluoromethane	10.	U				
75-69-4	Trichlorofluoromethane	10.	U				
142-28-9	1,3-Dichloropropane	10.	U				
108-38-3	m-Xylene	20.	U				
95-47-6	o-Xylene	10.	U				

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 39 Soil Samples

SUB46-VOA		SAMPLE ID ----->	039-S-G806-10	039-S-G806-13	039-S-G806-17	039-S-G807-10	039-S-G807-13	039-S-G807-17				
		ORIGINAL ID ----->	039SG80610	039SG80613	039SG80617	039SG80710	039SG80713	039SG80717				
		LAB SAMPLE ID ---->	9611855-05	9611855-06	9611855-07	9611855-08	9611855-09	9611855-10				
		ID FROM REPORT ---->	039SG80610	039SG80613	039SG80617	039SG80710	039SG80713	039SG80717				
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96				
		DATE ANALYZED ---->	12/06/96	12/06/96	12/06/96	12/09/96	12/09/96	12/09/96				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG				
CAS #	Parameter	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL			
67-64-1	Acetone	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
107-02-8	Acrolein	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
107-13-1	Acrylonitrile	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
71-43-2	Benzene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
75-27-4	Bromodichloromethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
75-25-2	Bromoform	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
74-83-9	Bromomethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
73-15-0	Carbon disulfide	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
56-23-5	Carbon tetrachloride	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
108-90-7	Chlorobenzene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
124-48-1	Dibromochloromethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
75-00-3	Chloroethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
110-75-8	2-Chloroethylvinylether	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
67-66-3	Chloroform	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
74-87-3	Chloromethane	50.	UD	10.	U	10.	U	2000.	UD	10.	U	
74-95-3	Dibromomethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
764-41-0	1,4-Dichloro-2-butene	50.	UD	10.	U	10.	U	2000.	UD	10.	U	
73-71-8	Dichlorodifluoromethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
95-50-1	1,2-Dichlorobenzene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
541-73-1	1,3-Dichlorobenzene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
106-46-7	1,4-Dichlorobenzene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
75-34-3	1,1-Dichloroethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
107-06-2	1,2-Dichloroethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
75-35-4	1,1-Dichloroethene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
156-60-5	trans-1,2-Dichloroethene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
78-87-5	1,2-Dichloropropane	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
10061-01-5	cis-1,3-Dichloropropene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
10061-02-6	trans-1,3-Dichloropropene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
100-41-4	Ethylbenzene	55.3	D	58.4		24.8		2270.	D	10.8		21.6
97-63-2	Ethyl methacrylate	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
591-78-6	2-Hexanone	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
74-88-4	Methyl iodide	25.	UD	5.	U	5.	U	1000.	UD	5.	U	
108-10-1	4-Methyl-2-Pentanone (MIBK)	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
78-93-3	2-Butanone (MEK)	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
75-09-2	Methylene chloride	250.	UD	50.	U	50.	U	10000.	UD	50.	U	
1634-04-4	Methyl tert-butyl ether	50.	UD	10.	U	10.	U	2000.	UD	10.	U	
100-42-5	Styrene	25.	UD	5.	U	5.	U	1000.	UD	5.	U	

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 39 Soil Samples

SMB46-VOA		SAMPLE ID ----->	039-S-GB06-10	039-S-GB06-13	039-S-GB06-17	039-S-GB07-10	039-S-GB07-13	039-S-GB07-17			
		ORIGINAL ID ----->	039SGB0610	039SGB0613	039SGB0617	039SGB0710	039SGB0713	039SGB0717			
		LAB SAMPLE ID ---->	9611855-05	9611855-06	9611855-07	9611855-08	9611855-09	9611855-10			
		ID FROM REPORT -->	039SGB0610	039SGB0613	039SGB0617	039SGB0710	039SGB0713	039SGB0717			
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96			
		DATE ANALYZED ---->	12/06/96	12/06/96	12/06/96	12/09/96	12/09/96	12/09/96			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG			
CAS #	Parameter	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL
79-34-5	1,1,2,2-Tetrachloroethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U
127-18-4	Tetrachloroethene	25.	UD	5.	U	5.	U	1000.	UD	5.	U
108-88-3	Toluene	25.	UD	5.	U	5.	U	1000.	UD	5.	U
71-55-6	1,1,1-Trichloroethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U
79-00-5	1,1,2-Trichloroethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U
79-01-6	Trichloroethene	25.	UD	5.	U	5.	U	1000.	UD	5.	U
75-69-4	Trichlorofluoromethane	25.	UD	5.	U	5.	U	1000.	UD	5.	U
96-18-4	1,2,3-Trichloropropane	25.	UD	5.	U	5.	U	1000.	UD	5.	U
108-05-4	Vinyl acetate	250.	UD	50.	U	50.	U	10000.	UD	50.	U
75-01-4	Vinyl chloride	50.	UD	10.	U	10.	U	2000.	UD	10.	U
1330-20-7	Xylene (Total)	25.	UD	5.	U	33.1	D	3310.	D	5.	U
156-59-2	cis-1,2-Dichloroethene	25.	UD	5.	U	1.9	J	1000.	UD	5.	U

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 39 Soil Samples

SMB46-VOA		SAMPLE ID ----->	039-S-G808-10	039-S-G808-13	039-S-G808-17	039-C-G809-10	039-S-G809-10	039-S-G809-13			
		ORIGINAL ID ----->	039SG80810	039SG80813	039SG80817	039CG80910	039SG80910	039SG80913			
		LAB SAMPLE ID ---->	9611855-11	9611855-12	9611855-13	9611855-03	9611855-14	9611855-15			
		ID FROM REPORT -->	039SG80810	039SG80813	039SG80817	039CG80910	039SG80910	039SG80913			
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96			
		DATE ANALYZED ----->	12/09/96	12/10/96	12/10/96	12/06/96	12/10/96	12/10/96			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG			
CAS #	Parameter	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL
67-64-1	Acetone	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
107-02-8	Acrolein	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
107-13-1	Acrylonitrile	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
71-43-2	Benzene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
75-27-4	Bromodichloromethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
75-25-2	Bromoform	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
74-83-9	Bromomethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
75-15-0	Carbon disulfide	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
56-23-5	Carbon tetrachloride	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
108-90-7	Chlorobenzene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
124-48-1	Dibromochloromethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
75-00-3	Chloroethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
110-75-8	2-Chloroethylvinylether	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
67-66-3	Chloroform	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
74-87-3	Chloromethane	2000.	UD	250.	UD	1000.	UD	10.	U	10.	U
74-95-3	Dibromomethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
764-41-0	1,4-Dichloro-2-butene	2000.	UD	250.	UD	1000.	UD	10.	U	10.	U
75-71-8	Dichlorodifluoromethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
95-50-1	1,2-Dichlorobenzene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
541-73-1	1,3-Dichlorobenzene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
106-46-7	1,4-Dichlorobenzene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
75-34-3	1,1-Dichloroethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
107-06-2	1,2-Dichloroethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
75-35-4	1,1-Dichloroethene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
156-60-5	trans-1,2-Dichloroethene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
78-87-5	1,2-Dichloropropane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
100-41-4	Ethylbenzene	1000.	UD	250.	UD	500.	UD	5.	U	50.	U
97-63-2	Ethyl methacrylate	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
591-78-6	2-Hexanone	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
74-88-4	Methyl iodide	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
78-93-3	2-Butanone (MEK)	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
75-09-2	Methylene chloride	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
1634-04-4	Methyl tert-butyl ether	2000.	UD	500.	UD	1000.	UD	10.	U	10.	U
100-42-5	Styrene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 39 Soil Samples

SUB46-VOA		SAMPLE ID ----->	039-S-G808-10	039-S-G808-13	039-S-G808-17	039-C-G809-10	039-S-G809-10	039-S-G809-13			
		ORIGINAL ID ----->	039SG80810	039SG80813	039SG80817	039CG80910	039SG80910	039SG80913			
		LAB SAMPLE ID ----->	9611855-11	9611855-12	9611855-13	9611855-03	9611855-14	9611855-15			
		ID FROM REPORT -->	039SG80810	039SG80813	039SG80817	039CG80910	039SG80910	039SG80913			
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96			
		DATE ANALYZED ----->	12/09/96	12/10/96	12/10/96	12/06/96	12/10/96	12/10/96			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG			
CAS #	Parameter	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL
79-34-5	1,1,2,2-Tetrachloroethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
127-18-4	Tetrachloroethene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
108-88-3	Toluene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
71-55-6	1,1,1-Trichloroethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
79-01-6	Trichloroethene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
75-69-4	Trichlorofluoromethane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
96-18-4	1,2,3-Trichloropropane	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
108-05-4	Vinyl acetate	10000.	UD	2500.	UD	5000.	UD	50.	U	50.	U
75-01-4	Vinyl chloride	2000.	UD	500.	UD	1000.	UD	10.	U	10.	U
1330-20-7	Xylene (Total)	1000.	UD	250.	UD	500.	UD	5.	U	5.	U
156-59-2	cis-1,2-Dichloroethene	1000.	UD	250.	UD	500.	UD	5.	U	5.	U

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 39 Soil Samples

SM846-VOA		SAMPLE ID ----->	039-S-GB09-17	039-C-GB10-10	039-S-GB10-10	039-S-GB10-13	039-S-GB10-17		
		ORIGINAL ID ----->	039SGB0917	039CGB1010	039SGB1010	039SGB1013	039SGB1017		
		LAB SAMPLE ID ---->	9611855-16	9611855-04	9611855-17	9611855-18	9611855-19		
		ID FROM REPORT -->	039SGB0917	039CGB1010	039SGB1010	039SGB1013	039SGB1017		
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96		
		DATE ANALYZED ---->	12/10/96	12/06/96	12/10/96	12/10/96	12/10/96		
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil		
		LIMITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG		
CAS #	Parameter	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL
67-64-1	Acetone	5000.	UD	50.	U	50.	U	50.	U
107-02-8	Acrolein	5000.	UD	50.	U	50.	U	5000.	UD
107-13-1	Acrylonitrile	5000.	UD	50.	U	50.	U	5000.	UD
71-43-2	Benzene	500.	UD	5.	U	5.	U	500.	UD
75-27-4	Bromodichloromethane	500.	UD	5.	U	5.	U	500.	UD
75-25-2	Bromoform	500.	UD	5.	U	5.	U	500.	UD
74-83-9	Bromomethane	500.	UD	5.	U	5.	U	500.	UD
75-15-0	Carbon disulfide	5000.	UD	50.	U	50.	U	5000.	UD
56-23-5	Carbon tetrachloride	500.	UD	5.	U	5.	U	500.	UD
108-90-7	Chlorobenzene	500.	UD	5.	U	5.	U	500.	UD
124-48-1	Dibromochloromethane	500.	UD	5.	U	5.	U	500.	UD
73-00-3	Chloroethane	500.	UD	5.	U	5.	U	500.	UD
110-75-8	2-Chloroethylvinylether	5000.	UD	50.	U	50.	U	5000.	UD
67-66-3	Chloroform	500.	UD	5.	U	5.	U	500.	UD
74-87-3	Chloromethane	1000.	UD	10.	U	10.	U	1000.	UD
74-95-3	Dibromomethane	500.	UD	5.	U	5.	U	500.	UD
764-41-0	1,4-Dichloro-2-butene	1000.	UD	10.	U	10.	U	1000.	UD
75-71-8	Dichlorodifluoromethane	500.	UD	5.	U	5.	U	500.	UD
95-50-1	1,2-Dichlorobenzene	500.	UD	5.	U	5.	U	500.	UD
541-73-1	1,3-Dichlorobenzene	500.	UD	5.	U	5.	U	500.	UD
106-46-7	1,4-Dichlorobenzene	500.	UD	5.	U	5.	U	500.	UD
75-34-3	1,1-Dichloroethane	500.	UD	5.	U	5.	U	500.	UD
107-06-2	1,2-Dichloroethane	500.	UD	5.	U	5.	U	500.	UD
75-35-4	1,1-Dichloroethene	500.	UD	5.	U	5.	U	500.	UD
156-60-5	trans-1,2-Dichloroethene	500.	UD	5.	U	5.	U	500.	UD
78-87-5	1,2-Dichloropropane	500.	UD	5.	U	5.	U	500.	UD
10061-01-5	cis-1,3-Dichloropropene	500.	UD	5.	U	5.	U	500.	UD
10061-02-6	trans-1,3-Dichloropropene	500.	UD	5.	U	5.	U	500.	UD
100-41-4	Ethylbenzene	500.	UD	5.	U	5.	U	500.	UD
97-63-2	Ethyl methacrylate	5000.	UD	50.	U	50.	U	5000.	UD
591-78-6	2-Hexanone	5000.	UD	50.	U	50.	U	5000.	UD
74-88-4	Methyl iodide	500.	UD	5.	U	5.	U	500.	UD
108-10-1	4-Methyl-2-Pentanone (MIBK)	5000.	UD	50.	U	50.	U	5000.	UD
78-93-3	2-Butanone (MEK)	5000.	UD	50.	U	50.	U	5000.	UD
75-09-2	Methylene chloride	5000.	UD	50.	U	50.	U	5000.	UD
1634-04-4	Methyl tert-butyl ether	1000.	UD	10.	U	10.	U	1000.	UD
100-42-5	Styrene	500.	UD	5.	U	5.	U	500.	UD

*** Validation Complete ***

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 39 Soil Samples

SW846-VDA		SAMPLE ID ----->	039-S-GB09-17	039-C-GB10-10	039-S-GB10-10	039-S-GB10-13	039-S-GB10-17		
		ORIGINAL ID ----->	039SGB0917	039CGB1010	039SGB1010	039SGB1013	039SGB1017		
		LAB SAMPLE ID ---->	9611855-16	9611855-04	9611855-17	9611855-18	9611855-19		
		ID FROM REPORT -->	039SGB0917	039CGB1010	039SGB1010	039SGB1013	039SGB1017		
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96	11/26/96	11/26/96		
		DATE ANALYZED -->	12/10/96	12/06/96	12/10/96	12/10/96	12/10/96		
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil		
		UNITS ----->	ug/KG	ug/KG	ug/KG	ug/KG	ug/KG		
CAS #	Parameter	9611855	VAL	9611855	VAL	9611855	VAL	9611855	VAL
79-34-5	1,1,2,2-Tetrachloroethane	500.	UD	5.	U	5.	U	5.	UD
127-18-4	Tetrachloroethane	500.	UD	5.	U	5.	U	500.	UD
108-88-3	Toluene	500.	UD	5.	U	5.	U	500.	UD
71-55-6	1,1,1-Trichloroethane	500.	UD	5.	U	5.	U	500.	UD
79-00-5	1,1,2-Trichloroethane	500.	UD	5.	U	5.	U	500.	UD
79-01-6	Trichloroethane	500.	UD	5.	U	5.	U	500.	UD
75-69-4	Trichlorofluoromethane	500.	UD	5.	U	5.	U	500.	UD
96-18-4	1,2,3-Trichloropropane	500.	UD	5.	U	5.	U	500.	UD
108-05-4	Vinyl acetate	5000.	UD	50.	U	50.	U	5000.	UD
75-01-4	Vinyl chloride	1000.	UD	10.	U	10.	U	1000.	UD
1330-20-7	Xylene (Total)	500.	UD	5.	U	5.	U	500.	UD
156-59-2	cis-1,2-Dichloroethene	500.	UD	5.	U	5.	U	500.	UD

NSA MEMPHIS, ASSMEBLY F, CSI
NSA MEMPHIS, SCREENING DATA
SWMU 39 Groundwater Samples

SMB46-VOA		SAMPLE ID ----->	039-G-GB11-48	039-H-GB11-48	039-G-GB12-48			
		ORIGINAL ID ----->	039GGB1148	039HGB1148	039GGB1248			
		LAB SAMPLE ID ---->	9611855-22	9611855-24	9611855-23			
		ID FROM REPORT -->	039GGB1148	039HGB1148	039GGB1248			
		SAMPLE DATE ----->	11/26/96	11/26/96	11/26/96			
		DATE ANALYZED ---->	12/09/96	12/09/96	12/09/96			
		MATRIX ----->	Water	Water	Water			
		UNITS ----->	ug/L	ug/L	ug/L			
CAS #	Parameter	9611855	VAL	9611855	VAL	9611855	VAL	
67-64-1	Acetone	100.	U	100.	U	100.	U	
107-02-8	Acrolein	50.	U	50.	U	50.	U	
107-13-1	Acrylonitrile	50.	U	50.	U	50.	U	
71-43-2	Benzene	5.	U	5.	U	5.	U	
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	
75-25-2	Bromoform	5.	U	5.	U	5.	U	
74-83-9	Bromomethane	5.	U	5.	U	5.	U	
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	
75-00-3	Chloroethane	5.	U	5.	U	5.	U	
110-75-8	2-Chloroethylvinylether	50.	U	50.	U	50.	U	
67-66-3	Chloroform	5.	U	5.	U	5.	U	
74-87-3	Chloromethane	10.	U	10.	U	10.	U	
74-95-3	Dibromomethane	5.	U	5.	U	5.	U	
764-41-0	1,4-Dichloro-2-butene	10.	U	10.	U	10.	U	
73-71-8	Dichlorodifluoromethane	5.	U	5.	U	5.	U	
95-50-1	1,2-Dichlorobenzene	5.	U	5.	U	5.	U	
541-73-1	1,3-Dichlorobenzene	5.	U	5.	U	5.	U	
106-46-7	1,4-Dichlorobenzene	5.	U	5.	U	5.	U	
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	
75-35-4	1,1-Dichloroethene	5.	U	5.	U	5.	U	
156-60-5	trans-1,2-Dichloroethene	5.	U	5.	U	5.	U	
78-87-3	1,2-Dichloropropane	5.	U	5.	U	5.	U	
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	
97-63-2	Ethyl methacrylate	50.	U	50.	U	50.	U	
591-78-6	2-Hexanone	50.	U	50.	U	50.	U	
74-88-4	Methyl iodide	20.	U	20.	U	20.	U	
108-10-1	4-Methyl-2-Pentanone (MIBK)	50.	U	50.	U	50.	U	
78-93-3	2-Butanone (MEK)	50.	U	50.	U	50.	U	
75-09-2	Methylene chloride	50.	U	50.	U	50.	U	
1634-04-4	Methyl tert-butyl ether	10.	U	10.	U	10.	U	
100-42-5	Styrene	5.	U	5.	U	5.	U	