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FINAL RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION
REPORT ZONE H VOLUME VII APPENDICES K THROUGH Q CNC CHARLESTON SC
7/5/1996
ENSAFE

**FINAL RCRA
FACILITY INVESTIGATION REPORT
FOR ZONE H
NAVAL BASE CHARLESTON**

**VOLUME VII
APPENDICES K-Q**

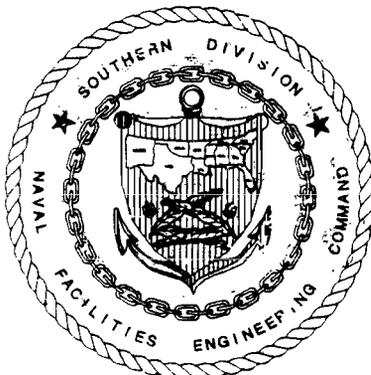
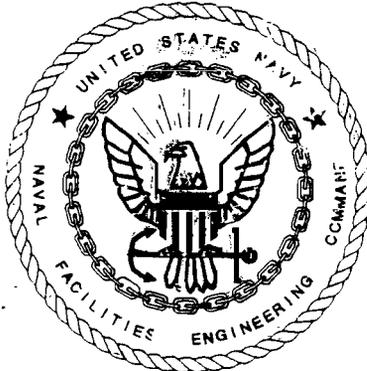
**CONTRACT N62467-89-D-0318
CTO-029**

Prepared for:

**Comprehensive Long-Term Environmental Action Navy
(CLEAN)
Charleston Naval Shipyard
Charleston, South Carolina**

Prepared by:

**EnSafe/Allen & Hoshall
5720 Summer Trees Drive, Suite 8
Memphis, Tennessee 38134
(901)383-9115**



July 5, 1996

Appendix K
Data Validation Reports

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE Inc.
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement, Laboratory Statements
SAMPLE MATRIX: Water
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: APX17

SAMPLES:

Client	Lab		PCDD/ PCDF
Sample #:	Sample #:	Matrix	
017HW00501	IL0711-1	Water	X
009HW01601	IL0725-1	Water	X
	LCS-APX17	Water	X
	LCSD-APX17	Water	X

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE:



DATA QUALIFICATION SUMMARY

PACE Inc. - APX17 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 017HW00501, 009HW01601, LCS-APX17, LCSD-APX17

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance Check:

According to EPA method 8290, a column performance check must be run before the beginning routine calibration run.

The laboratory ran a column performance check after the beginning routine calibration run, which invalidated the beginning routine calibration results. Since the effects of this sequence deviation cannot be verified, all associated positive sample results are recommended to be flagged as estimated (J).

Mass Resolution Check:

The data and time for the end of sequence Mass Resolution Check run on 5/2/95 was printed as "2-MAY-1995:17:48" on page 145 and was in a different format from the beginning of sequence Mass Resolution Check on page 144. No Resolving power was calculated by the lab for the End of sequence resolution check.

The data and time for the end of sequence Mass Resolution Check run on 5/3/95 was printed as "3-MAY-1995:17:59" on page 236 and was in a different format from the beginning of sequence Mass resolution check on page 144. No Resolving power was calculated by the lab for the end of sequence resolution check.

The resolving powers for the above two end of sequence Mass Resolution Checks were estimated as greater than 10,000 by the validator, so no action was taken.

Mass Verification Check:

Mass Verification was checked at the beginning of each analytical sequence. All criteria were met, so no action was taken.

Data Acquisition:

There were no Signal-to-Noise Ratios calculated. See Section VIII for data validation action.

III.) Calibration:

Calibration Range:

All criteria were met, so no action was required.

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

All criteria were met, so no action was taken.

IV.) Blanks:

According to EPA method 8290, a method blank must be analyzed immediately after a beginning calibration run to demonstrate freedom from contamination and freedom from carryover from the calibration run. Also according to EPA method 8000, the performance of the entire analytical system must be checked daily, using data gathered from analyses of blanks, standards, and replicated samples.

The laboratory ran a method blank after the beginning calibration run, a column performance check and a nonane blank. The addition of the nonane blank (pure solvent, no internal standards added) invalidated use of the method blanks in determining instrument carryover levels.

The laboratory did not submit nonane blank quantitation results, therefore, no blank results could be used to assess instrument carryover levels.

Two positive results reported for this batch are recommended to be designated as EMPC (Estimated Maximum Possible Concentration) due to their QC problems and there were no other positive results for this batch, so no further action was taken.

Method Blanks:

Method blank MB-APX17 was analyzed. There were no PCDD's/PCDF's detected, so no action was taken.

Field Blanks:

No field blank was analyzed for this batch.

V.) Internal Standards Performance:

All criteria were met, so no action was taken.

VI.) Spike/Spike Duplicates:

No matrix spike/spike duplicates were analyzed for this batch.

One set of LCS/LCSD was analyzed. All criteria were met, so no action was taken.

The recovery of OCDF for LCS-APX17 was 79%, which was below the lab QC limits (80-120%) but was within the validation QC limits (60-140%), so no action was taken.

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identification:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

Signal-to-Noise (S/N) Ratio:

There was no evidence in the raw data that the S/N was checked by the laboratory for all reported positive sample results. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that all reported positive sample results met method S/N criteria (greater than or equal to 2.5), so no action was taken (see Section X).

Polychlorinated Diphenyl Ether (PCDPE) Interferences:

There was no evidence in the raw data that PCDPE interferences were checked by the lab. The S/N ratios were not printed on the quantitation report. However, the laboratory certified that there were no signals detected having a S/N ratio greater than or equal to 2.5 at same retention time (+/- 2 seconds), in the corresponding PCDPE channel for all reported positive sample results, so no action was taken (see Section X).

There was a peak at same retention time in the corresponding DCDPE channel (page 86) for the positive OCDD sample result (page 87) for sample IL0725-1. This results is recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Second Column Confirmation:

Second column confirmation was not run for all reported positive 2378-TCDF results. Since the laboratory cannot resolve the 2378-TCDF isomer from the 2347-TCDF isomer, the reported positive 2378-TCDF sample result for sample IL0725-1 is recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

IX.) Overall Assessment of Data/General:

The laboratory did not follow the 12-hour analysis sequence and quality control (QC) procedures specified in EPA Method 8290 (Revision 0, November 1990).

Two reported positive sample results are recommended to be flagged according to individual QC problems.

All total positive PCDD/PCDF sample results are recommended to be flagged as estimated (J).

X.) Laboratory Certifications Concerning Data Validation Deliverables:

In the validation of the PCDD/PCDF data, several important informational items were not verifiable from the data packages. Pace, Inc. provided certifications concerning the procedures used in the laboratory and in data reporting which address these issues.

The following certifications were made by Pace, Inc.:

- 1.) Nonane blanks were run before method blanks in the analytical sequence to document instrument condition and integrity.
- 2.) Nonane blank quantitation reports were not generated because of software limitations.
- 3.) In the event data for an analysis are unacceptable due to instrumental problems or other unpredictable factors, the analyst will reanalyze the particular extract and include only information from the reanalysis in the data package. The original analysis data is removed and the reanalysis data is inserted in the position in the raw data that would normally be occupied by the original analysis. This causes the data to appear to be out of order chronologically. This procedure was used by Pace, Inc. to report SDG APX01 method blank raw data and LCSD-AQ-IK1409/IK1054 data in the analytical sequence beginning 09/13/94. This procedure is common laboratory practice within Pace's dioxin laboratory.
- 4.) All positive reported results met all S/N method criteria.
- 5.) For all positive reported results, there were no S/N ratios greater than 2.5 in the corresponding ether channel.
- 6.) Pace, Inc. did not perform any analyses, checks or instrument adjustments between the end of sequence Calibration Checks and Mass Resolution Checks in the cases where more than one hour separated the Calibration and Mass Resolution Checks.

Validata Chemical Services, Inc. has incorporated these certifications into its data review as fact, and they have formed the basis for data validation of the unverifiable items. Validata Chemical Services, Inc. takes no responsibility for the validity of these certifications.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

(770) 923-3890

(770) 923-8769 (Fax)

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base, Zone H
PROJECT NUMBER: 8500.014
CONTRACTED LAB: Pace Environmental Laboratories
QA/QC LEVEL: Level IV
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRICES: Soil and Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides PCB's (PEST), Organophosphorus Pesticides (OPPEST), Chlorinated Herbicides (HERB), Total Metals (MET), Cyanide (CN), Hexavalent Chromium (HEX)
SDG NUMBER: APX18

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>OPPEST</u>	<u>HERB</u>
159CB00101	XWE002	Soil	X	X	X	X	X
159CB00101RE	XWE002RE	Soil			X		
159CB01101	XWE001	Soil	X	X	X	X	X
159CB01101RE	XWE001RE	Soil			X		
159TB01101	YWE003	Water	X				

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>MET</u>	<u>CN</u>	<u>HEX</u>
159CB00101	44425002	Soil	X	X	X
159CB01101	44425001	Soil	X	X	X

RE = REANALYSIS, T = TRIP BLANK

DATA REVIEWER(S): Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE: 

Data Qualifier Definitions

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Organics

SAMPLES: 159CB00101, 159CB00101RE, 159CB01101, 159CB01101RE, 159TB01101

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Average Relative Response Factors (RRFs) for the following compounds were below the 0.050 QC limit for the initial calibration run on 4/12/95 on instrument D:

isobutyl alcohol	0.003
1,4-dioxane	0.003

The results for these compounds in the associated samples (all samples in this SDG), which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration run on 4/12/95 on instrument D:

methylene chloride	63%
acrolein	41%
acetonitrile	68%
isobutyl alcohol	42%
1,4-dioxane	32%

Positive results for methylene chloride and acetone in sample 159TB01101 were flagged as estimated (J). There were no positive detections of the other compounds in the associated sample, so no further action was taken.

Continuing Calibration:

The Relative Response Factors (RRF's) for the following compounds were below the 0.050 QC limit for the continuing calibration run on 6/27/95 at 14:01 on instrument D:

isobutyl alcohol	0.001
1,4-dioxane	0.003
acetonitrile	0.022

The result for acetonitrile in sample 159TB01101 was rejected (R). The results for the other compounds were previously rejected using the associated initial calibration.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 6/27/95 at 14:01 on instrument D:

methylene chloride	32%
acrylonitrile	30%
vinyl acetate	52%
dichlorodifluoromethane	75%
acetonitrile	44%
isobutyl alcohol	80%

No further action was taken in sample 159TB01101, since this was a trip blank.

The Relative Response Factors (RRF's) for the following compounds were below the 0.050 QC limit for the continuing calibration run on 6/29/95 at 13:42 on instrument D:

isobutyl alcohol	0.022
1,4-dioxane	0.008

The results for these compounds in the associated samples were previously rejected based on the associated initial calibration. No further action was required.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 6/29/95 at 13:42 on instrument D:

chloromethane	39%
chloroethane	33%
methylene chloride	83%
fluorotrichloromethane	32%
acrylonitrile	28%
vinyl acetate	90%
dichlorodifluoromethane	88%
acetonitrile	63%
isobutyl alcohol	487%

The results for isobutyl alcohol in associated samples 159CB00101 and 159CB01101 were previously rejected (R) based on the associated initial calibration. The results for the remaining compounds in

associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 3.6 ug/kg and 29.9 ug/kg, respectively, in soil blank VBLKS1. This blank was associated with samples 159CB00101 and 159CB01101. All positive results for acetone and methylene chloride in the associated samples less than 10X the blank amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and acetone were detected at 8.6 ug/L and 1.2 ug/L, respectively, in water method blank VBLKW1. The only sample associated with this blank was a trip blank. No action was taken.

Trip Blanks:

Methylene chloride and acetone were detected in trip blank 159TB01101 at 8.2 ug/L and 36.5 ug/L, respectively. The associated sample results for these compounds were previously flagged as undetected (U) based on method blank results. No further action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no MS or MSD analyses performed on any sample in this SDG. No action was necessary.

VII.) Field Duplicates:

The field duplicates for the samples in this SDG were not submitted in this SDG. No action was taken.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria were met. No action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All System Performance criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All non-detect results for isobutyl alcohol and 1,4-dioxane were rejected due to low RRF's. The acetonitrile result in sample 159TB01101 was also rejected due to a low RRF. All other laboratory data were acceptable with qualification.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Organics

SAMPLES: 159CB00101, 159CB01101

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) for the following compounds exceeded the 25% QC limit for the continuing calibration run on 6/28/95 at 12:34 on instrument H:

pyridine	42%
n-nitrosodimethylamine	35%
2,4-dimethylphenol	40%
hexachlorocyclopentadiene	66%
2,4-dinitrophenol	53%
4-nitrophenol	32%
4,6-dinitro-2-methylphenol	39%
pentachlorophenol	29%

The results for these compounds which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected in soil method blank SBLK1 at 74.9 ug/kg. All associated sample results less than 10X the blank amount were flagged as undetected (U) with the analytical results less than CRQL being replaced with the CRQL.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses performed on any sample in this SDG. No action was necessary.

VII.) Field Duplicates:

There were no samples with which to associated the field duplicates in this SDG. No action was taken.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria were met. No action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All System Performance criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Pesticides / PCB's

SAMPLES: 159CB00101, 159CB00101RE, 159CB01101, 159CB01101RE

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria were met for the original analyses of the samples in this SDG. The re-extractions were performed 21 days after sampling, which was 7 days outside the 14 day holding time limit. All results for samples 159CB01101RE and 159CB00101RE were flagged as estimated (J) and (UJ).

II.) Instrument Performance:

All Instrument Performance criteria were met, so no action was necessary.

III.) Calibration:

All Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

The following compounds were detected in the soil method blank PBLKS01:

<u>Compounds</u>	<u>Blank Conc. (ug/kg)</u>
4,4'-DDT	13.3
4,4'-DDE	2.1

Detections of these compounds in associated samples 159CB00101 and 159CB01101 below 5X the blank amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

The following compounds were detected in the soil method blank PBLKS05:

<u>Compounds</u>	<u>Blank Conc. (ug/kg)</u>
4,4'-DDT	2.4
4,4'-DDE	3.2

Detections of these compounds in associated samples 159CB00101RE and 159CB01101RE below 5X the blank amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses performed on any sample in this SDG. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All Column Percent Difference criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no corresponding samples submitted with the field duplicates in this SDG. No action was taken.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

No Florisil Cartridge Check data were present in this SDG. No action was taken.

Gel Permeation Chromatography (GPC):

No Gel Permeation Chromatography (GPC) was performed in this SDG.

X.) Overall Assessment of Data/General:

The samples in this SDG were re-extracted due to carryover of high levels of pesticides from samples run prior to this SDG. The original sample data were of preferable data quality since the re-extractions were performed outside the holding time limit. Both sets of results should be considered. All laboratory data were acceptable with qualification.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Organophosphorus Pesticides

SAMPLES: 159CB00101, 159CB01101

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blank associated with this SDG, so no action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria was met. No action was required.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses performed on the samples in this SDG. No action was taken.

VII.) TCL Compound Identification:

All criteria were met, so no action was required.

VIII.) Field Duplicates:

There were no samples submitted with which to associated the field duplicates in this SDG. No action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Chlorinated Herbicides

SAMPLES: 159CB00101, 159CB01101

CHLORINATED HERBICIDES

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blank associated with this SDG. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria was met. No action was required.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses performed on any sample in this SDG. No action was taken.

VII.) TCL Compound Identification:

All criteria were met, so no action was required.

VIII.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was required.

IX) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Inorganics

SAMPLES: 159CB00101, 150CB01101

TOTAL METALS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met, so no action was necessary.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>		<u>Action Level</u>
		<u>ug/L</u>	<u>mg/kg</u>	<u>mg/kg</u>
CCB1	antimony	15.9		15.9
	tin	13.5		13.5
CCB2	barium		8.20	41.0
	cadmium		1.80	9.00
	cobalt		3.80	19.0
PBS1	lead		0.23	1.15
	selenium		0.25	1.25

CCB = Continuing Calibration Blank, PBS = Preparation Blank (Soil)

All results greater than the IDL but less than 5X the blank amount Action Level, mg/kg for soil samples for which the contaminated blank was an associated calibration or soil preparation blank were flagged as undetected (U).

Negative results in the soil preparation blank were reported for thallium (-0.48 mg/kg) and vanadium (-0.33 ug/kg) with absolute values greater than the IDL. There were no associated positive sample results less than 5X the absolute value of the negative results. All non-detect results for these analytes in the associated samples were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria were met, so no action was taken.

V.) ICP Serial Dilution Analysis:

All ICP Serial Dilution criteria were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

There were no Duplicate Sample Analyses performed for samples in this SDG. No action was taken.

VIII.) Matrix Spike Recoveries:

There were no Matrix Spike Analysis performed for samples in this SDG. No action was required.

IX.) Field Duplicates:

There were no samples submitted with which to associate the field duplicates. No action was taken.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

GFAA analysis was not performed for any of the samples associated with this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Inorganics

SAMPLES: 159CB00101, 159CB01101

CYANIDE

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met, so no action was necessary.

III.) Blanks:

There were no positive detections in the method blanks and field blanks, so no action was taken.

IV.) Laboratory Control Samples (LCS):

All LCS Percent Recovery criteria were met, so no action was taken.

V.) Duplicate Sample Analysis:

There was no Duplicate Sample Analysis performed in this SDG. No action was required.

VI.) Matrix Spike Recoveries:

There was no Matrix Spike Analysis performed in this SDG. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was taken.

VIII.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

IX.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

X) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

DATA QUALIFICATION SUMMARY

Pace Environmental Laboratories - APX18 Hexavalent Chromium

SAMPLES: 159CB00101, 159CB01101

HEXA VALENT CHROMIUM

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met, so no action was necessary.

III.) Blanks:

There were no positive detections in the method blanks and field blanks, so no action was taken.

IV.) Laboratory Control Samples (LCS):

The Blank Spike Percent Recovery criteria were met, so no action was taken.

V.) Matrix Spike Recoveries:

There was no Matrix Spike Analysis performed in this SDG. No action was required.

VI.) Field Duplicates:

There was no field duplicate pair associated with this SDG. No action was taken.

VII.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

(770) 923-3890

(770) 923-8769 (Fax)

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base, Zone H
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE Inc.
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement, Laboratory Statements
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: APX18

SAMPLES:

Client	Lab		PCDD/ PCDF
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	
159CB01101	IL1114-1	Soil	X
159CB00101	IL1114-2	Soil	X
159CB00101 MS	IL1114-2MS	Soil	X
159CB00101 MSD	IL1114-2MSD	Soil	X

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE:



DATA QUALIFICATION SUMMARY

PACE Inc. - APX18 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 159CB01101, 159CB00101, 159CB00101 MS, 159CB00101 MSD

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance Check:

According to EPA method 8290, a column performance check must be run before the beginning routine calibration run. The laboratory ran a column performance check after the beginning routine calibration run, which invalidated the beginning routine calibration results. Since the effects of this sequence deviation cannot be verified, all associated positive sample results are recommended to be flagged as estimated (J).

Mass Resolution Check:

All criteria were met, so no action was taken.

Mass Verification Check:

Mass Verification was checked at the beginning of each analytical sequence. All criteria were met, so no action was taken.

Data Acquisition:

The were no Signal-to-Noise Ratios calculated. See Section VIII for data validation action.

III.) Calibration:

Calibration Range:

According to EPA method 8290, if the concentration in the final extract of any of the fifteen PCDD's/PCDF's exceeds the upper MCL (Method Calibration Limit), a second analysis of the sample (using a one tenth aliquot) should be undertaken.

The upper MCL was 2000 pg/g for OCDD for a 10 g soil sample. The OCDD result was 3623 pg/g for sample 159CB00101, which was over the upper MCL. The laboratory did not perform the second

analysis. This OCDD sample result is recommended to be flagged as estimated (J).

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

All criteria were met, so no action was taken.

IV.) Blanks:

According to EPA method 8290, a method blank must be analyzed immediately after a beginning calibration run to demonstrate freedom from contamination and freedom from carryover from the calibration run. Also according to EPA method 8000, the performance of the entire analytical system must be checked daily, using data gathered from analyses of blanks, standards, and replicated samples.

The laboratory ran a method blank after the beginning calibration run, a column performance check and a nonane blank. The addition of the nonane blank (pure solvent, no internal standards added) invalidated use of the method blanks in determining instrument carryover levels.

The laboratory did not submit nonane blank quantitation results, therefore, no blank results could be used to assess instrument carryover levels.

No method blank was analyzed for the sequence run on 7/7/95.

All associated low level (see Section IX) positive sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Method Blanks:

Several PCDD's/PCDF's were detected in method blanks at the following concentrations:

<u>Blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Action Level</u>
MB-APX18 (Soil)	12378-PeCDD	pg/g 0.29	pg/g 2.9
	1234678-HpCDD	0.38	3.8
	OCDD	0.81	8.1

Because nonane blanks were run immediately before method blanks in the analytical sequence, it is believed that the method blank detections are biased low. For this reason, a 10X blank rule was used to qualify the data.

Detections of the above compound in all associated samples below 10X the blank amounts (Action Level, pg/g for soil samples before percent solids correction) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Field Blanks:

No field blank was analyzed for this batch.

V.) Internal Standards Performance:

All criteria were met, so no action was taken.

VI.) Spike/Spike Duplicates:

One set of MS/MSD was analyzed. No percent recoveries were calculated for the MSD in the data package. These results were calculated by the validator.

The Percent Recoveries (%R's) and Relative Percent Differences (RPD's) exceeded the QC limits for the following compounds:

<u>Compound</u>	<u>MS</u> <u>%R</u>	<u>MSD</u> <u>%R</u>	<u>QC Limits</u> <u>%R</u>	<u>RPD</u>	<u>QC Limit</u> <u>RPD</u>
159CB00101 MS / 1234678-HpCDD	*-181	*-217	50-150	16	20
159CB00101 MSD OCDD	*-1852	*-2351	50-150	49	20
1234678-HpCDF	*47	*44	50-150	2.4	20
OCDF	*-24	*-44	50-150	12	20

* = outside the QC limits.

All results for these compounds in the associated samples are recommended to be flagged as estimated (J) and (UJ).

OCDD was detected at 3623 pg/g for unspiked sample 159CB00101 (IL1114-2). However, the OCDD results for the spiked samples were 1470 pg/g and 889 pg/g, respectively, which were about 3X below the unspiked result. This OCDD result is recommended to be estimated at 2000 pg/g (see attached MS/MSD calculation form).

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identification:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

Signal-to-Noise (S/N) Ratio:

There was no evidence in the raw data that the S/N was checked by the laboratory for all reported positive sample results. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that all reported positive sample results met method S/N criteria (greater than or equal to 2.5), so no action was taken (see Section X).

Polychlorinated Diphenyl Ether (PCDPE) Interferences:

There was no evidence in the raw data that PCDPE interferences were checked by the lab. The S/N ratios were not printed on the quantitation report. However, the laboratory certified that there were no signals detected having a S/N ratio greater than or equal to 2.5 at same retention time (+/- 2 seconds), in the corresponding PCDPE channel for all reported positive sample results, so no action was taken (see Section X).

Second Column Confirmation:

Second column confirmation was not run for all reported positive 2378-TCDF results. Since the laboratory cannot resolve the 2378-TCDF isomer from the 2347-TCDF isomer, the reported positive 2378-TCDF sample result for sample 159CB00101 (IL1114-2) is recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

IX.) Overall Assessment of Data/General:

The laboratory did not follow the 12-hour analysis sequence and quality control (QC) procedures specified in EPA Method 8290 (Revision 0, November 1990).

The reported OCDD result for sample 159CB00101 is recommended to be estimated at 2000 pg/g according to it's MS/MSD results.

Some reported positive and non-detect sample results are recommended to be flagged according to individual QC problems.

For purposes of blank assessment, all unflagged positive sample results below low level (average PQL) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

<u>Level</u>	<u>Matrix</u>	<u>TCDD</u>	<u>PeCDD/PeCDF</u> <u>HxCDD/HxCDF</u> <u>HpCDD/HpCDF</u>	<u>OCDD/OCDF</u>
Low	Soil	< 10 pg/g	< 10 pg/g	< 50 pg/g
High	Soil	> 10 pg/g	> 10 pg/g	> 50 pg/g

All unflagged high level sample results are recommended to be flagged as estimated (J). All positive sample results may be biased high due to carry-over contamination.

All total positive PCDD/PCDF sample results are recommended to be flagged as estimated (J).

X.) Laboratory Certifications Concerning Data Validation Deliverables:

In the validation of the PCDD/PCDF data, several important informational items were not verifiable from the data packages. Pace, Inc. provided certifications concerning the procedures used in the laboratory and in data reporting which address these issues.

The following certifications were made by Pace, Inc.:

- 1.) Nonane blanks were run before method blanks in the analytical sequence to document instrument condition and integrity.
- 2.) Nonane blank quantitation reports were not generated because of software limitations.
- 3.) In the event data for an analysis are unacceptable due to instrumental problems or other unpredictable factors, the analyst will reanalyze the particular extract and include only information from the reanalysis in the data package. The original analysis data is removed and the reanalysis data is inserted in the position in the raw data that would normally be occupied by the original analysis. This causes the data to appear to be out of order chronologically. This procedure was used by Pace, Inc. to report SDG APX01 method blank raw data and LCSD-AQ-IK1409/IK1054 data in the analytical sequence beginning 09/13/94. This procedure is common laboratory practice within Pace's dioxin laboratory.
- 4.) All positive reported results met all S/N method criteria.
- 5.) For all positive reported results, there were no S/N ratios greater than 2.5 in the corresponding ether channel.
- 6.) Pace, Inc. did not perform any analyses, checks or instrument adjustments between the end of sequence Calibration Checks and Mass Resolution Checks in the cases where more than one hour separated the Calibration and Mass Resolution Checks.

Validata Chemical Services, Inc. has incorporated these certifications into its data review as fact, and they have formed the basis for data validation of the unverifiable items. Validata Chemical Services, Inc. takes no responsibility for the validity of these certifications.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE Inc.
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement, Laboratory Statements
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: CHS35
SAMPLES:

Client Sample #:	Lab Sample #:	Matrix	PCDD/ PCDF
019SB01601	IL0500-1	Soil	X
019SB01601 MS	IL0500-2 (MS)	Soil	X
019SB01601 MSD	IL0500-3 (MSD)	Soil	X
019SB01701	IL0500-4	Soil	X
019SB01801	IL0500-5	Soil	X
121SB01701	IL0500-6	Soil	X
121SB01601	IL0500-7	Soil	X
121SB01401	IL0500-8	Soil	X
121SB01301	IL0500-9	Soil	X
017SB03301	IL0522-1	Soil	X
017SB03302	IL0522-2	Soil	X
017SB03201	IL0522-3	Soil	X
017SB03202	IL0522-4	Soil	X
017SB03101	IL0522-5	Soil	X
017SB03102	IL0522-6	Soil	X
017SB02701	IL0522-7	Soil	X
017CB02701	IL0522-8	Soil	X
017SB02702	IL0522-9	Soil	X
017SB02801	IL0522-10	Soil	X
017SB02802	IL0522-11	Soil	X
	LCS / (IL0500)	Soil	X
	LCSD / (IL0500)	Soil	X
	LCS / (IL0522)	Soil	X
	LCSD / (IL0522)	Soil	X

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

EnSafe/Allen & Hoshall
5720 Summer Trees Drive, Suite 8
Memphis, TN 38134
Attn: Tina Cantwell

5/31/95

Dear Ms. Cantwell:

Please find enclosed the data validation narrative for SDG APX17 dioxins. That completes the rush SDGs we had in house. More NWIRP metals will be coming soon as well as 28 Zone I SDGs.

We are pleased to be of service to you. Please call me at (404) 923-3890 if you have any questions.

Sincerely,



Kevin C. Harmon
Client Services Director

MEMORANDUM

TO : Britton Dotson

FROM : Charlie Vernoy

SUBJECT : Zone H Validation Reports

DATE : May 30, 1995

Enclosed you will find the Validation Reports for CHS35, 37 and 40 for dioxin and CHS40 and 45 for non-dioxin analyses. Also, you will find a copy of the sulfur results taken on the wells for the engineering parameters. Validation Report APX17 should be coming in this week. When I receive it I will send you a copy for the report.

If you have any questions, please do not hesitate to call me.

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE: 

DATA QUALIFICATION SUMMARY

PACE Inc. - CHS35 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 019SB01601, 019SB01601 MS, 019SB01601 MSD, 019SB01701, 019SB01801, 121SB01701, 121SB01601, 121SB01401, 121SB01301, 017SB03301, 017SB03302, 017SB03201, 017SB03202, 017SB03101, 017SB03102, 017SB02701, 017CB02701, 017SB02702, 017SB02801, 017SB02802, LCS / (IL0500), LCSD / (IL0500), LCS / (IL0522), LCSD / (IL0522)

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance Check:

According to EPA method 8290, a column performance check must be run before the beginning routine calibration run.

The laboratory ran a column performance check after the beginning routine calibration run, which invalidated the beginning routine calibration results. Since the effects of this sequence deviation cannot be verified, all associated positive sample results are recommended to be flagged as estimated (J).

Mass Resolution Check:

The following end of sequence Mass Resolution Checks were run outside the 12-hour QC limit:

<u>I.D.</u>	<u>Date and Time</u>	<u>Total Time</u>
End Mass Res. Check	4/3/95 22:27	13:04
End Mass Res. Check	4/5/95 22:24	12:41

The laboratory did not reanalyze the affected samples; all associated positive sample results are recommended to be flagged as estimated (J).

There was a time "gap" (about 3 hours) between the end of sequence Calibration (4/4/95 5:39) and Mass Resolution Check (4/4/95 8:37) runs. The laboratory certified that there were no instrument adjustments or Resolution Checks in the time "gap", so no action was taken (see Section X).

Mass Verification Check:

Mass Verification was checked at the beginning of each analytical sequence.

Data Acquisition:

There were no Signal-to-Noise Ratios calculated. See Section VIII for data validation action.

III.) Calibration:

Calibration Range:

According to EPA method 8290, if the concentration in the final extract of any of the fifteen PCDD's/PCDF's exceeds the upper MCL (Method Calibration Limit), a second analysis of the sample (using a one tenth aliquot) should be undertaken.

The upper MCL was 2000 pg/g for OCDD for a 10 g soil sample. Several OCDD sample results in this SDG were over the upper MCL and the laboratory did not perform the second analyses. It is believed that the OCDD results are potentially biased low. All positive OCDD sample results higher than 2000 pg/g are recommended to be flagged as estimated (J).

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

All criteria were met, so no action was required.

IV.) Blanks:

According to EPA method 8290, a method blank must be analyzed immediately after a beginning calibration run to demonstrate freedom from contamination and freedom from carryover from the calibration run. Also according to EPA method 8000, the performance of the entire analytical system must be checked daily, using data gathered from analyses of blanks, standards, and replicated samples.

The laboratory ran a method blank after the beginning calibration run, a column performance check and a nonane blank. The addition of the nonane blank (pure solvent, no internal standards added) invalidated use of the method blanks in determining instrument carryover levels.

The laboratory did not submit nonane blank quantitation results, therefore, no blank results could be used to assess instrument carryover levels.

No method blanks were analyzed for the sequences starting on 4/3/95 at 22:32 and on 4/5/95 at 9:43.

All associated low level (see Section IX) positive sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Method Blanks:

Two method blanks were analyzed. There were no positive PCDD's/PCDF's detected, so no action was taken.

Field Blanks:

No field blanks were analyzed for this batch.

V.) Internal Standards Performance:

The Percent Recoveries (%R's) of the following internal standards exceeded the 40-135% QC limits for the samples listed:

<u>Sample</u>	<u>Compound</u>	<u>%R</u>
IL0500-6	13C-1234678-HpCDD	23.74
	13C-OCDD	12.69
	13C-1234678-HpCDF	32.66

All positive and non-detect sample results associated with these internal standards are recommended to be flagged as estimated (J) and (UJ).

VI.) Spike/Spike Duplicates:

Matrix spike/spike duplicates IL0500-2MS and IL0500-3MSD were analyzed. The Percent Recoveries (%R's) and Relative Percent Differences (RPD's) exceeded the QC limits for the following compounds:

<u>Compound</u>	<u>MS</u> <u>%R</u>	<u>MSD</u> <u>%R</u>	<u>QC Limits</u> <u>%R</u>	<u>RPD</u>	<u>QC Limit</u> <u>RPD</u>
IL0500-2MS / IL0500-3MSD	23478-PeCDF 95.5	145.3	50-150	*41.0	20

* = outside the QC limits.

All results for 23478-PeCDF in the associated samples are recommended to be flagged as estimated (J) and (UJ).

Two sets of LCS/LCSD's were analyzed. All recoveries were within the QC limits, so no action was taken.

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identification:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

Signal-to-Noise (S/N) Ratio:

There was no evidence in the raw data that the S/N was checked by the laboratory for all reported positive sample results. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that all reported positive sample results met method S/N criteria (greater than or equal to 2.5), so no action was taken (see Section X).

Polychlorinated Diphenyl Ether (PCDPE) Interferences:

There was no evidence in the raw data that PCDPE interferences were checked by the lab. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that there were no signals detected having a S/N ratio greater than or equal to 2.5 at same retention time (+/- 2 seconds), in the corresponding PCDPE channel for all reported positive sample results, so no action was taken (see Section X).

Second Column Confirmation:

Second column confirmation was not run for all reported positive 2378-TCDF results. Since the laboratory cannot resolve the 2378-TCDF isomer from the 2347-TCDF isomer, all reported positive 2378-TCDF sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

IX.) Overall Assessment of Data/General:

The laboratory did not follow the 12-hour analysis sequence and quality control (QC) procedures specified in EPA Method 8290 (Revision 0, November 1990).

Some reported positive and non-detect sample results are recommended to be flagged according to individual QC problems.

For purposes of blank assessment, all unflagged positive sample results below low level (average PQL) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

<u>Level</u>	<u>Matrix</u>	<u>TCDD</u>	<u>PeCDD/PeCDF</u> <u>HxCDD/HxCDF</u> <u>HpCDD/HpCDF</u>	<u>OCDD/OCDF</u>
Low	Soil	< 10 pg/g	< 10 pg/g	< 50 pg/g
High	Soil	> 10 pg/g	> 10 pg/g	> 50 pg/g

All unflagged high level sample results are recommended to be flagged as estimated (J). All positive sample results may be biased high.

All total positive PCDD/PCDF sample results are recommended to be flagged as estimated (J).

X.) Laboratory Certifications Concerning Data Validation Deliverables:

In the validation of the PCDD/PCDF data, several important informational items were not verifiable from the data packages. Pace, Inc. provided certifications concerning the procedures used in the laboratory and in data reporting which address these issues.

The following certifications were made by Pace, Inc.:

- 1.) Nonane blanks were run before method blanks in the analytical sequence to document instrument condition and integrity.
- 2.) Nonane blank quantitation reports were not generated because of software limitations.
- 3.) In the event data for an analysis are unacceptable due to instrumental problems or other unpredictable factors, the analyst will reanalyze the particular extract and include only information from the reanalysis in the data package. The original analysis data is removed and the reanalysis data is inserted in the position in the raw data that would normally be occupied by the original analysis. This causes the data to appear to be out of order chronologically. This procedure was used by Pace, Inc. to report SDG APX01 method blank raw data and LCSD-AQ-IK1409/IK1054 data in the analytical sequence beginning 09/13/94. This procedure is common laboratory practice within Pace's dioxin laboratory.
- 4.) All positive reported results met all S/N method criteria.
- 5.) For all positive reported results, there were no S/N ratios greater than 2.5 in the corresponding ether channel.
- 6.) Pace, Inc. did not perform any analyses, checks or instrument adjustments between the end of sequence Calibration Checks and Mass Resolution Checks in the cases where more than one hour separated the Calibration and Mass Resolution Checks.

Validata Chemical Services, Inc. has incorporated these certifications into its data review as fact, and they have formed the basis for data validation of the unverifiable items. Validata Chemical Services, Inc. takes no responsibility for the validity of these certifications.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE Inc.
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement, Laboratory Statements
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: CHS37

SAMPLES:

<u>Client</u> <u>Sample #:</u>	<u>Lab</u> <u>Sample #:</u>	<u>Matrix</u>	<u>PCDD/</u> <u>PCDF</u>
017SB02901	IL0523-1	Soil	X
017SB02902	IL0523-2	Soil	X
017SB03001	IL0523-3	Soil	X
017SB03002	IL0523-4	Soil	X
013SB02501	IL0523-5	Soil	X
013CB02501	IL0523-6	Soil	X
013SB02502	IL0523-7	Soil	X
013SB02801	IL0523-8	Soil	X
013SB02802	IL0523-9	Soil	X
013SB02701	IL0523-10	Soil	X
013SB02601	IL0523-11	Soil	X
013SB02602	IL0523-12	Soil	X
020CB00101	IL0535-1	Soil	X
020SB00101	IL0535-2	Soil	X
020SB01101	IL0552-1	Soil	X
020SB01101 MS	IL0552-2MS	Soil	X
020SB01101 MSD	IL0552-3MSD	Soil	X
020CB01101	IL0552-4	Soil	X
	LCS-IL0523/535	Soil	X
	LCSD-IL0523/535	Soil	X
	LCS-IL0552	Soil	X
	LCSD-IL0552	Soil	X

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE: 

DATA QUALIFICATION SUMMARY

PACE Inc. - CHS37 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 017SB02901, 017SB02902, 017SB03001, 017SB03002, 013SB02501, 013CB02501, 013SB02502, 013SB02801, 013SB02802, 013SB02701, 013SB02601, 013SB02602, 020CB00101, 020SB00101, 020SB01101, 020SB01101 MS, 020SB01101 MSD, 020CB01101, LCS-IL0523/535, LCSD-IL0523/535, LCS-IL0552, LCSD-IL0552

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance Check:

According to EPA method 8290, a column performance check must be run before the beginning routine calibration run.

The laboratory ran a column performance check after the beginning routine calibration run, which invalidated the beginning routine calibration results. Since the effects of this sequence deviation cannot be verified, all associated positive sample results are recommended to be flagged as estimated (J).

Mass Resolution Check:

The following end of sequence Mass Resolution Checks were run outside the 12-hour QC limit:

<u>I.D.</u>	<u>Date and Time</u>	<u>Total Time</u>
End Mass Res. Check	04/09/95 08:49	14:03
End Mass Res. Check	04/11/95 22:32	13:22
End Mass Res. Check	04/12/95 21:51	13:22

The laboratory did not reanalyze the affected samples; all associated positive sample results are recommended to be flagged as estimated (J).

There were time "gaps" (more than one hour) between the End of the Calibration and the End of the Mass Resolution Check runs. The laboratory certified that there were no instrument adjustments or Resolution Check runs in the time "gaps", so no action was taken (see Section X).

Mass Verification Check:

Mass Verification was checked at the beginning of each analytical sequence.

Data Acquisition:

There were no Signal-to-Noise Ratios calculated. See Section VIII for data validation action.

III.) Calibration:

Calibration Range:

According to EPA method 8290, if the concentration in the final extract of any of the fifteen PCDD's/PCDF's exceeds the upper MCL (Method Calibration Limit), a second analysis of the sample (using a one tenth aliquot) should be undertaken.

The upper MCL was 2000 pg/g for OCDD for a 10 g soil sample. Several OCDD sample results in this SDG were over the upper MCL and the laboratory did not perform the second analyses. It is believed that the OCDD results are potentially biased low. All positive OCDD sample results higher than 2000 pg/g are recommended to be flagged as estimated (J).

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

All criteria were met, so no action was required.

IV.) Blanks:

According to EPA method 8290, a method blank must be analyzed immediately after a beginning calibration run to demonstrate freedom from contamination and freedom from carryover from the calibration run. Also according to EPA method 8000, the performance of the entire analytical system must be checked daily, using data gathered from analyses of blanks, standards, and replicated samples.

The laboratory ran a method blank after the beginning calibration run, a column performance check and a nonane blank. The addition of the nonane blank (pure solvent, no internal standards added) invalidated use of the method blanks in determining instrument carryover levels.

The laboratory did not submit nonane blank quantitation results, therefore, no blank results could be used to assess instrument carryover levels.

No method blank was analyzed for the sequence starting on 4/10/94 at 8:50.

All associated low level (see Section IX) positive sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Method Blanks:

1234678-HpCDD was detected in the method blank for the analytical sequence beginning at 09:10 on 4/11/95 at the following concentration:

<u>Blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Action Level</u>
MB-IL0552	1234678-HpCDD	pg/g 0.37	pg/g 3.7

Because nonane blanks were run immediately before method blanks in the analytical sequence, it is believed that the method blank detections are biased low. For this reason, a 10X blank rule was used to qualify the data.

Detections of the above compound in all associated samples (all samples in the same analytical sequence) below 10X the blank amounts (Action Level, pg/g for soil samples before percent solids correction) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Field Blanks:

No field blank was analyzed for this batch.

V.) Internal Standards Performance:

The Percent Recovery (%R) of the following internal standard exceeded the 40-135% QC limits for the sample listed:

<u>Sample</u>	<u>Compound</u>	<u>%R</u>
LCS-IL0523	13C-2378-TCDD	38.44

No data qualification action was taken for this QC sample.

VI.) Spike/Spike Duplicates:

Matrix spike/spike duplicates IL0552-2MS and IL0552-3MSD were analyzed. All recoveries were within the QC limits, so no action was taken.

Two sets of LCS/LCSD's were analyzed. All recoveries were within the QC limits, so no action was taken.

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identification:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

Signal-to-Noise (S/N) Ratio:

There was no evidence in the raw data that the S/N was checked by the laboratory for all reported positive sample results. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that all reported positive sample results met method S/N criteria (greater than or equal to 2.5), so no action was taken (see Section X).

Polychlorinated Diphenyl Ether (PCDPE) Interferences:

There was no evidence in the raw data that PCDPE interferences were checked by the lab. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that there were no signals detected having a S/N ratio greater than or equal to 2.5 at same retention time (+/- 2 seconds), in the corresponding PCDPE channel for all reported positive sample results, so no action was taken (see Section X).

Second Column Confirmation:

Second column confirmation was not run for all reported positive 2378-TCDF results. Since the laboratory cannot resolve the 2378-TCDF isomer from the 2347-TCDF isomer, all reported positive 2378-TCDF sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

IX.) Overall Assessment of Data/General:

The laboratory did not follow the 12-hour analysis sequence and quality control (QC) procedures specified in EPA Method 8290 (Revision 0, November 1990).

Some reported positive and non-detect sample results are recommended to be flagged according to individual QC problems.

For purposes of blank assessment, all unflagged positive sample results below low level (average PQL) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

<u>Level</u>	<u>Matrix</u>	<u>TCDD</u>	<u>PeCDD/PeCDF</u> <u>HxCDD/HxCDF</u> <u>HpCDD/HpCDF</u>	<u>OCDD/OCDF</u>
Low	Soil	< 10 pg/g	< 10 pg/g	< 50 pg/g
High	Soil	> 10 pg/g	> 10 pg/g	> 50 pg/g

All unflagged high level sample results are recommended to be flagged as estimated (J). All positive sample results may be biased high.

All total positive PCDD/PCDF sample results are recommended to be flagged as estimated (J).

X.) Laboratory Certifications Concerning Data Validation Deliverables:

In the validation of the PCDD/PCDF data, several important informational items were not verifiable from the data packages. Pace, Inc. provided certifications concerning the procedures used in the laboratory and in data reporting which address these issues.

The following certifications were made by Pace, Inc.:

- 1.) Nonane blanks were run before method blanks in the analytical sequence to document instrument condition and integrity.
- 2.) Nonane blank quantitation reports were not generated because of software limitations.
- 3.) In the event data for an analysis are unacceptable due to instrumental problems or other unpredictable factors, the analyst will reanalyze the particular extract and include only information from the reanalysis in the data package. The original analysis data is removed and the reanalysis data is inserted in the position in the raw data that would normally be occupied by the original analysis. This causes the data to appear to be out of order chronologically. This procedure was used by Pace, Inc. to report SDG APX01 method blank raw data and LCSD-AQ-IK1409/IK1054 data in the analytical sequence beginning 09/13/94. This procedure is common laboratory practice within Pace's dioxin laboratory.
- 4.) All positive reported results met all S/N method criteria.
- 5.) For all positive reported results, there were no S/N ratios greater than 2.5 in the corresponding ether channel.
- 6.) Pace, Inc. did not perform any analyses, checks or instrument adjustments between the end of sequence Calibration Checks and Mass Resolution Checks in the cases where more than one hour separated the Calibration and Mass Resolution Checks.

Validata Chemical Services, Inc. has incorporated these certifications into its data review as fact, and they have formed the basis for data validation of the unverifiable items. Validata Chemical Services, Inc. takes no responsibility for the validity of these certifications.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE Inc.
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement, Laboratory Statements
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: CHS37

SAMPLES:

Client Sample #:	Lab Sample #:	Matrix	PCDD/ PCDF
017SB02901	IL0523-1	Soil	X
017SB02902	IL0523-2	Soil	X
017SB03001	IL0523-3	Soil	X
017SB03002	IL0523-4	Soil	X
013SB02501	IL0523-5	Soil	X
013CB02501	IL0523-6	Soil	X
013SB02502	IL0523-7	Soil	X
013SB02801	IL0523-8	Soil	X
013SB02802	IL0523-9	Soil	X
013SB02701	IL0523-10	Soil	X
013SB02601	IL0523-11	Soil	X
013SB02602	IL0523-12	Soil	X
020CB00101	IL0535-1	Soil	X
020SB00101	IL0535-2	Soil	X
020SB01101	IL0552-1	Soil	X
020SB01101 MS	IL0552-2MS	Soil	X
020SB01101 MSD	IL0552-3MSD	Soil	X
020CB01101	IL0552-4	Soil	X
	LCS-IL0523/535	Soil	X
	LCSD-IL0523/535	Soil	X
	LCS-IL0552	Soil	X
	LCSD-IL0552	Soil	X

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE: Handwritten signature of Kevin C. Harmon in cursive script.

DATA QUALIFICATION SUMMARY

PACE Inc. - CHS37 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 017SB02901, 017SB02902, 017SB03001, 017SB03002, 013SB02501, 013CB02501, 013SB02502, 013SB02801, 013SB02802, 013SB02701, 013SB02601, 013SB02602, 020CB00101, 020SB00101, 020SB01101, 020SB01101 MS, 020SB01101 MSD, 020CB01101, LCS-IL0523/535, LCSD-IL0523/535, LCS-IL0552, LCSD-IL0552

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance Check:

According to EPA method 8290, a column performance check must be run before the beginning routine calibration run.

The laboratory ran a column performance check after the beginning routine calibration run, which invalidated the beginning routine calibration results. Since the effects of this sequence deviation cannot be verified, all associated positive sample results are recommended to be flagged as estimated (J).

Mass Resolution Check:

The following end of sequence Mass Resolution Checks were run outside the 12-hour QC limit:

<u>I.D.</u>	<u>Date and Time</u>	<u>Total Time</u>
End Mass Res. Check	04/09/95 08:49	14:03
End Mass Res. Check	04/11/95 22:32	13:22
End Mass Res. Check	04/12/95 21:51	13:22

The laboratory did not reanalyze the affected samples; all associated positive sample results are recommended to be flagged as estimated (J).

There were time "gaps" (more than one hour) between the End of the Calibration and the End of the Mass Resolution Check runs. The laboratory certified that there were no instrument adjustments or Resolution Check runs in the time "gaps", so no action was taken (see Section X).

Mass Verification Check:

Mass Verification was checked at the beginning of each analytical sequence.

Data Acquisition:

There were no Signal-to-Noise Ratios calculated. See Section VIII for data validation action.

III.) Calibration:

Calibration Range:

According to EPA method 8290, if the concentration in the final extract of any of the fifteen PCDD's/PCDF's exceeds the upper MCL (Method Calibration Limit), a second analysis of the sample (using a one tenth aliquot) should be undertaken.

The upper MCL was 2000 pg/g for OCDD for a 10 g soil sample. Several OCDD sample results in this SDG were over the upper MCL and the laboratory did not perform the second analyses. It is believed that the OCDD results are potentially biased low. All positive OCDD sample results higher than 2000 pg/g are recommended to be flagged as estimated (J).

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

All criteria were met, so no action was required.

IV.) Blanks:

According to EPA method 8290, a method blank must be analyzed immediately after a beginning calibration run to demonstrate freedom from contamination and freedom from carryover from the calibration run. Also according to EPA method 8000, the performance of the entire analytical system must be checked daily, using data gathered from analyses of blanks, standards, and replicated samples.

The laboratory ran a method blank after the beginning calibration run, a column performance check and a nonane blank. The addition of the nonane blank (pure solvent, no internal standards added) invalidated use of the method blanks in determining instrument carryover levels.

The laboratory did not submit nonane blank quantitation results, therefore, no blank results could be used to assess instrument carryover levels.

No method blank was analyzed for the sequence starting on 4/10/94 at 8:50.

All associated low level (see Section IX) positive sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Method Blanks:

1234678-HpCDD was detected in the method blank for the analytical sequence beginning at 09:10 on 4/11/95 at the following concentration:

<u>Blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Action Level</u>
MB-IL0552	1234678-HpCDD	pg/g 0.37	pg/g 3.7

Because nonane blanks were run immediately before method blanks in the analytical sequence, it is believed that the method blank detections are biased low. For this reason, a 10X blank rule was used to qualify the data.

Detections of the above compound in all associated samples (all samples in the same analytical sequence) below 10X the blank amounts (Action Level, pg/g for soil samples before percent solids correction) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Field Blanks:

No field blank was analyzed for this batch.

V.) Internal Standards Performance:

The Percent Recovery (%R) of the following internal standard exceeded the 40-135% QC limits for the sample listed:

<u>Sample</u>	<u>Compound</u>	<u>%R</u>
LCS-IL0523	13C-2378-TCDD	38.44

No data qualification action was taken for this QC sample.

VI.) Spike/Spike Duplicates:

Matrix spike/spike duplicates IL0552-2MS and IL0552-3MSD were analyzed. All recoveries were within the QC limits, so no action was taken.

Two sets of LCS/LCSD's were analyzed. All recoveries were within the QC limits, so no action was taken.

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identification:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

Signal-to-Noise (S/N) Ratio:

There was no evidence in the raw data that the S/N was checked by the laboratory for all reported positive sample results. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that all reported positive sample results met method S/N criteria (greater than or equal to 2.5), so no action was taken (see Section X).

Polychlorinated Diphenyl Ether (PCDPE) Interferences:

There was no evidence in the raw data that PCDPE interferences were checked by the lab. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that there were no signals detected having a S/N ratio greater than or equal to 2.5 at same retention time (+/- 2 seconds), in the corresponding PCDPE channel for all reported positive sample results, so no action was taken (see Section X).

Second Column Confirmation:

Second column confirmation was not run for all reported positive 2378-TCDF results. Since the laboratory cannot resolve the 2378-TCDF isomer from the 2347-TCDF isomer, all reported positive 2378-TCDF sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

IX.) Overall Assessment of Data/General:

The laboratory did not follow the 12-hour analysis sequence and quality control (QC) procedures specified in EPA Method 8290 (Revision 0, November 1990).

Some reported positive and non-detect sample results are recommended to be flagged according to individual QC problems.

For purposes of blank assessment, all unflagged positive sample results below low level (average PQL) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

<u>Level</u>	<u>Matrix</u>	<u>TCDD</u>	<u>PeCDD/PeCDF</u> <u>HxCDD/HxCDF</u> <u>HpCDD/HpCDF</u>	<u>OCDD/OCDF</u>
Low	Soil	< 10 pg/g	< 10 pg/g	< 50 pg/g
High	Soil	> 10 pg/g	> 10 pg/g	> 50 pg/g

All unflagged high level sample results are recommended to be flagged as estimated (J). All positive sample results may be biased high.

All total positive PCDD/PCDF sample results are recommended to be flagged as estimated (J).

X.) Laboratory Certifications Concerning Data Validation Deliverables:

In the validation of the PCDD/PCDF data, several important informational items were not verifiable from the data packages. Pace, Inc. provided certifications concerning the procedures used in the laboratory and in data reporting which address these issues.

The following certifications were made by Pace, Inc.:

- 1.) Nonane blanks were run before method blanks in the analytical sequence to document instrument condition and integrity.
- 2.) Nonane blank quantitation reports were not generated because of software limitations.
- 3.) In the event data for an analysis are unacceptable due to instrumental problems or other unpredictable factors, the analyst will reanalyze the particular extract and include only information from the reanalysis in the data package. The original analysis data is removed and the reanalysis data is inserted in the position in the raw data that would normally be occupied by the original analysis. This causes the data to appear to be out of order chronologically. This procedure was used by Pace, Inc. to report SDG APX01 method blank raw data and LCSD-AQ-IK1409/IK1054 data in the analytical sequence beginning 09/13/94. This procedure is common laboratory practice within Pace's dioxin laboratory.
- 4.) All positive reported results met all S/N method criteria.
- 5.) For all positive reported results, there were no S/N ratios greater than 2.5 in the corresponding ether channel.
- 6.) Pace, Inc. did not perform any analyses, checks or instrument adjustments between the end of sequence Calibration Checks and Mass Resolution Checks in the cases where more than one hour separated the Calibration and Mass Resolution Checks.

Validata Chemical Services, Inc. has incorporated these certifications into its data review as fact, and they have formed the basis for data validation of the unverifiable items. Validata Chemical Services, Inc. takes no responsibility for the validity of these certifications.

TO : Britton Dotson
FROM : Charlie Vernoy
SUBJECT : Zone H Validation Summary Report
DATE : May 25, 1995

Enclosed you will find the diskette containing the Validation Summary Report for the Zone H Investigation. The directory is NAVCHARL.VALH. Also enclosed are the Data Validation reports by Validata. We are still short two reports (SDGs: APX17 & CHS45) which should be completed soon.

If you have any questions, please do not hesitate to telephone me.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.14
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW/SW846
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides (PEST), Total Metals, Chloride (CL), Sulfates (SULF), Total Dissolved Solids (TDS)

SDG NUMBER: CHS38

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>Metals</u>
<u>Sample #:</u>	<u>Sample #:</u>					
013G131321	43389-7/14	Water		X	X	X
013G131322	43389-5/12	Water		X	X	X
013GW00102	43377-2/5	Water		X	X	X
013GW00202	43377-3/6	Water		X	X	X
013GW00302	43389-2/9	Water		X	X	X
013FW00302	43389-1/8	Water		X	X	X
013GW00402	43389-3/10	Water		X	X	X
013GW00502	43389-6/13	Water		X	X	X
013GW00602	43389-4/11	Water		X	X	X
013GW00702	43377-1/4	Water		X	X	X
017GW00102	43423-9/1/5	Water	X	X		X
017GW00202	43423-12/3/7	Water	X	X		X
017GW00302	43423-10/2/6	Water	X	X		X
017GW00402	43423-13/4/8	Water	X	X		X
017TW00102	43423-11	Water	X			

<u>Client</u>	<u>Lab</u>		<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>Metals</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>				
GDHGW00302	43412-7/3	Water		X		X
GDHGW03D02	43412-8/4	Water		X		X
GDHGW00602	43412-6/2	Water		X		X
GDHGW06D02	43412-5/1	Water		X		X
013GW00702MS	43377-1/4MS	Water		X	X	X
013GW00702MSD	43377-1MSD	Water		X	X	X
013GW00702DUP	43377-4D	Water				X

D = FIELD DUPLICATE, FW = FIELD BLANK, TW = TRIP BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, DUP = MATRIX DUPLICATE

<u>Client</u>	<u>Lab</u>		<u>CL</u>	<u>SULF</u>	<u>TDS</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>			
GDHGW00302	43412-11	Water	X	X	X
GDHGW03D02	43412-12	Water	X	X	X
GDHGW00602	43412-10	Water	X	X	X
GDHGW06D02	43412-9	Water	X	X	X
GDHGW00602DUP	43412-10D	Water	X	X	
GDHGW00602MS	43412-10S	Water	X	X	

MS = MATRIX SPIKE, DUP = MATRIX DUPLICATE, D = FIELD DUPLICATE

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS38, SW846 Organics and Inorganics

SAMPLES: 013G131321, 013G131322, 013GW00102, 013GW00202, 013GW00302, 013FW00302, 013GW00402, 013GW00502, 013GW00602, 013GW00702, 017GW00102, 017TW00102, 017GW00202, 017GW00302, 017GW00402, GDHGW00302, GDHGW03D02, GDHGW00602, GDHGW06D02, 013GW00702MS, 013GW00702MSD, 013GW00702DUP

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for methylene chloride was 33.9% for the standards run on 4/10/95, which exceeded the 30% QC limit. Since there were no positive detections of this compound in the associated samples, no action was required.

Continuing Calibration:

All Continuing Calibration criteria were met, so no action was taken.

IV.) Blanks:

Method Blanks:

Methylene chloride, acetone and toluene were detected at 9 ug/L, 15 ug/L and 2 ug/L, respectively, in water method blank BG041095A. Detections of methylene chloride and acetone in all samples associated with this SDG below 10X the amount of blank contaminations were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. There were no positive detections of toluene in the associated samples, so no further action was necessary.

Trip Blanks:

Methylene chloride and acetone were detected at 6 ug/L and 9 ug/L, respectively, in trip blank 017TW00102. Methylene chloride and acetone were qualified using the method blank, so no further action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD samples analyzed for VOA's with this SDG. No action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was taken.

IX.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC Identification criteria were met, so no action was required.

XIII.) System Performance:

All System Performance criteria were met, so no action was required.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 31.4% for benzo(k)fluoranthene for the standards run on 2/17/95 on instrument FMS, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

The Percent Relative Standard Deviation (%RSD) was 40.7% for benzo(k)fluoranthene for the standards run on 2/17/95 on instrument HMS, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 3/31/95 at 08:12 on instrument FMS for the following compounds:

4,6-dinitro-2-methylphenol	32.7 %
benzidine	40.0 %
benzo(a)anthracene	26.6 %
bis(2-ethylhexyl)phthalate	51.8 %

There were no positive detections of these compounds in the associated samples. The non-detect results in samples 013GW00102, 013GW00202, 013GW00702 and 017GW00102 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/7/95 at 13:52 on instrument HMS for the following compounds:

benzo(k)fluoranthene	37.3 %
benzidine	29.3 %

There were no positive detections of these compounds in the associated samples. The non-detect results in samples 013G131321, 013GW00302, 013FW00302, 013GW00402, 013GW00502 and 013GW00602 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/10/95 at 09:29 on instrument FMS for the following compounds:

benzidine	51.7 %
benzoic acid	39.1 %

There were no positive detections of these compounds in the associated samples. The non-detect results in samples 017GW00202, 017GW00402, GDHGW00302, GDHGW03D02 and GDHGW00602 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/11/95 at 10:22 on instrument FMS for the following compounds:

benzidine	77.8 %
benzoic acid	56.5 %
hexachlorobutadiene	25.5 %

There were no positive detections of these compounds in the associated samples. The non-detect results in samples 013G131322, 017GW00302 and GDHFW06D02 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 24 ug/L in the method blank run on 3/31/95. Detections of this compound in samples 013GW00102 and 013GW00702 below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Bis(2-ethylhexyl)phthalate was detected at 30 ug/L in the method blank run on 4/7/95. Detections of this compound in samples 013G131321, 013GW00302, 013GW00402, 013GW00502 and 013GW00602 below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Bis(2-ethylhexyl)phthalate was detected at 2.8 ug/L in the method blank run on 4/10/95. Detections of this compound in samples 013G131322, 017GW00102, 017GW00302, 017GW00402, GDHGW00302 and GDHGW00602 below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Field Blanks:

There were no positive detections in the field blank. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no calculable RPD's in the two sets of field duplicate samples associated with this SDG. No action was required.

IX.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOCHLORINE PESTICIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. No action was required.

Field Blanks:

There were no positive detections in the method blanks. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries of decachlorobiphenyl (DCB) were below the 30-150% QC limits for the following samples:

<u>Samples</u>	<u>DCB %R</u>
013FW00302	19
013GW00302	25
013G131321	20
013GW00202	15
013GW00702	24

All results in these samples, which consisted entirely on non-detects, were flagged as estimated (UJ).

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met, so no action was necessary.

VIII.) TCL Compound Identification:

Pesticide / PCB Identification Summary:

All PIS criteria were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicate samples associated with the pesticides fraction of this SDG. No action was necessary.

X.) Pesticide Cleanup Check:

Florisol Cartridge Check:

Florisol data were not included with this SDG. No action was taken.

Gel Permeation Chromatography (GPC):

GPC was not performed for this SDG. No action was required.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All Initial and Continuing Calibration criteria were met, so no action was taken.

III.) Blanks:

Laboratory and Field Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type</u>	<u>Metal</u>	<u>Max. Conc.</u> <u>ug/L</u>	<u>Action Level</u> <u>ug/L</u>
FB	calcium	80.0	400
PBW	chromium	2.0	10.0
FB	iron	30.0	150
FB	lead	10.0	50.0
FB	sodium	30.0	150
PBW	zinc	5.9	29.5

PBW = Water Preparation Blank, FB = Field Blank 013FW00302

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank was an associated calibration or field blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

All ICP Interference Check Sample criteria were met, so no action was taken

V.) ICP Serial Dilution Analysis:

Serial Dilution Analysis data was not present for this SDG. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria were met, so no action was necessary.

VIII.) Matrix Spike Recoveries:

All Percent Recovery criteria were met, so no action was required.

IX.) Field Duplicates:

The RPD for arsenic in field duplicate pair GDHGW00302 / GDHGW03D02 was 0% which met the 30% QC limit for water samples. No action was required.

The RPD for manganese was 108% in field duplicate pair GDHGW00602 / GDHGW06D02, which was greater than the 30% QC limit for water samples. The positive results for manganese in these two samples were flagged as estimated (J).

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

CHLORIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

All criteria were met, so no action was taken.

VI.) Laboratory Spike Recovery:

All Percent Recovery criteria were met. No action was taken.

VII.) Field Duplicates:

The Relative Percent Differences (RPD's) for chloride were 180% and 199%, respectively, for the two sets of duplicate samples (GDHGW00302 / GDHGW03D02 and GDHGW00602 / GDHGW06D02), which exceeded the 30% QC limit for water samples. The positive results for chloride in these two duplicate pairs were flagged as estimated (J).

VIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

Chloride data were not present on the spreadsheets. Copies of the analytical results form from the data package are included.

SULFATES

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria was met. No action was required.

V.) Laboratory Duplicates:

All criteria were met, so no action was taken.

VI.) Laboratory Spike Recovery:

All Percent Recovery criteria were met. No action was taken.

VII.) Field Duplicates:

The Relative Percent Differences (RPD's) for sulfate were 180% and 200%, respectively, for the two sets of duplicate samples (GDHGW00302 / GDHGW03D02 and GDHGW00602 / GDHGW06D02), which exceeded the 30% QC limit for water samples. The positive results for sulfate in these two duplicate pairs were flagged as estimated (J).

VIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

The data reported on the spreadsheets were not correct. The results were corrected during the validation process and copies of the analyses report forms from the data package are included with this report.

TOTAL DISSOLVED SOLIDS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

No Calibration was involved in performing this analysis. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

Laboratory data from a different SDG was used to verify this parameter. All criteria were met, so no action was taken.

VI.) Laboratory Spike Recovery:

The analysis was neither required nor performed. No action was required.

VII.) Field Duplicates:

The Relative Percent Differences (RPD's) for total dissolved solids (TDS) were 170% and 167%, respectively, for the two sets of duplicate samples GDHGW00302 / GDHGW03D02 and GDHGW00602 / GDHGW06D02, which exceeded the 30% QC limit for water samples. The positive results for TDS in these two duplicate pairs were flagged as estimated (J).

VIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

Total Dissolved Solids data were not present on the spreadsheets. Copies of the analytical results form from the data package are included with this report.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.14
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level IV
EPA SOW/METHOD: EPA 1990 SOW/SW846
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides (PEST), Total Metals, Chloride (CL), Sulfates (SULF), Total Dissolved Solids (TDS)

SDG NUMBER: CHS39

SAMPLES:

<u>Client</u>	<u>Lab</u>		<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>Metals</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>				
013HW00702	43378-1/2	Water		X	X	X
017HW00102	43453-5/2	Water		X		X
017HW00202	43424-2/1/4	Water	X	X		X
178HW00202	43453-4/1	Water		X		X
655HW00202	43509-4/7/1	Water		X	X	X
656HW00102	43509-8/2	Water	X			X
660HW00202	43453-6/3	Water			X	X
666HW00202	43519-10/3/8	Water	X	X		X
667HW00102	43519-11/8	Water	X			X
GDHHW04D02	43473-13/1/4	Water	X	X		X
GDHHW00702	43473-10/3/6	Water	X	X		X
GDHGW00802	43519-6/1	Water		X		X
GDHHW08D02	43519-7/2	Water		X		X
017TW00202	43424-3	Water	X			
136TW00102	43453-8	Water	X			

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>Metals</u>
656TW00302	43509-9	Water	X			
667TW00102	43519-12	Water	X			
GDHTW00702	43473-11	Water	X			
013EW00702	43390-1/2	Water		X	X	X
655EW00102	43509-5/6/3	Water		X	X	X
GDHEW00302	43413-1/3	Water		X		X
GDHFW07D02	43473-12/2/5	Water	X	X		X
GDHGW00802MS	43519-1MS	Water		X		
GDHGW00802MSD	43519-1MSD	Water		X		
178HW00202MS	43453-4/1MS	Water		X		X
178HW00202MSD	43453-4	Water		X		
178HW00202DUP	43453-1D	Water				X

EW = EQUIPMENT BLANK, FW = FIELD BLANK, TW = TRIP BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, DUP = MATRIX DUPLICATE

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>CL</u>	<u>SULF</u>	<u>TDS</u>
GDHHW04D02	43473-7	Water	X	X	X
GDHHW00702	43473-9	Water	X	X	X
GDHGW00802	43519-4	Water	X	X	X
GDHHW08D02	43519-5	Water	X	X	X
GDHEW00302	43414-2	Water	X	X	X
GDHFW07D02	43473-8	Water	X	X	X
GDHGW00802DUP	43519-4D	Water	X		
GDHGW00802MS	43519-4MS	Water	X		

MS = MATRIX SPIKE, DUP = MATRIX DUPLICATE, EW = EQUIPMENT BLANK, FW = FIELD BLANK

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS39, SW846 Organics and Inorganics

SAMPLES: 013HW00702, 017HW00102, 017HW00202, 178HW00202, 655HW00202, 656HW00102, 660HW00202, 666HW00202, 667HW00102, GDHHW04D02, GDHHW00702, GDHGW00802, GDHHW08D02, 017TW00202, 136TW00102, 656TW00302, 667TW00102, GDHTW00702, 013EW00702, 655EW00102, GDHEW00302, GDHFW07D02, GDHGW00802MS, GDHGW00802MSD, 178HW00202MS, 178HW00202MSD, 178HW00202DUP, GDHGW00802DUP

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GCMS Tuning:

All GCMS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for methylene chloride was 33.9% for the standards run on 4/10/95 on instrument GMS, which exceeded the 30% QC limit. Since there were no positive detections of this compound in the associated samples, no action was required.

The Percent Relative Standard Deviation (%RSD) for carbon disulfide was 33.9% for the standards run on 11/28/94 on instrument CMS, which exceeded the 30% QC limit. Since there were no positive detections of this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Difference (%D) for chloromethane was 29.9% for the standard run on instrument CMS at 10:50 on 4/11/95, which exceeded the 25% QC limit. The non-detect result for chloromethane in sample GDHFW07D02 was flagged as estimated (UJ).

The Percent Differences (%D's) for chloromethane and carbon disulfide were 36.8% and 40.8%, respectively, for the standard run on instrument CMS at 11:22 on 4/12/95, which exceeded the 25% QC limit. All results for these compounds in samples 136HW00102 and 136TW00102, which consisted entirely on non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for chloromethane and tetrahydrofuran were 41.0% and 26.6% for the standard run on instrument CMS at 11:07 on 4/13/95, which exceeded the 25% QC limit. The results for these compounds in sample GDHHTW04D02, which consisted entirely on non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for chloromethane was 38.3% for the standard run on instrument CMS at 10:46 on 4/14/95, which exceeded the 25% QC limit. The non-detect result for chloromethane in samples 656HW00102 and 656TW00302 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride, acetone and toluene were detected in the following laboratory method blanks at the indicated concentrations:

<u>Method Blank</u>	<u>Methylene Chloride</u>	<u>Acetone</u>	<u>Toluene</u>
4/10/95	9 ug/L	15 ug/L	0.2 ug/L
4/12/95	7 ug/L		
4/13/95	10 ug/L		
4/14/95	7 ug/L		

Since the trip blanks were used for blank qualification, no action was taken.

Field Blanks:

Acetone and methylene chloride were detected at 9 ug/L and 8 ug/L, respectively, in field blank GDHFW07D02. Since the trip blanks were used for data qualification, no action was required.

Trip Blanks:

Methylene chloride, acetone and toluene were detected at 8 ug/L, 13 ug/L and 0.2 ug/L, respectively, in trip blank 017TW00202. There were no positive detections of toluene in the samples. The detections of methylene chloride and acetone in all samples in this SDG, which were below 10X the blank amount, were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was also detected at 7 ug/L and 9 ug/L, respectively, in trip blanks 656TW00302 and 136TW00102. Since another trip blank was used for data qualification, no action was taken. Acetone was also detected at 8 ug/L in trip blank GDHTW00702. Since another trip blank was used for data qualification, no action was necessary. Chloroform was detected at 6 ug/L in trip blank 136TW00102. Since there were no positive detections of chloroform in the samples of this SDG, no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD samples analyzed for VOA's with this SDG. No action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was taken.

IX.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC Identification criteria were met, so no action was required.

XIII.) System Performance:

All System Performance criteria were met, so no action was required.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification

Six compounds were listed as undetected (U) but with 0 concentrations on the data spreadsheet. The 0 was replaced with the appropriate CRQL during the validation process.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 31.4% for benzo(k)fluoranthene for the standards run on 2/17/95 on instrument FMS, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

The Percent Relative Standard Deviation (%RSD) was 40.7% for benzo(k)fluoranthene for the standards run on 2/17/95 on instrument HMS, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 3/31/95 at 08:12 on instrument FMS for the following compounds:

4,6-dinitro-2-methylphenol	32.7 %
benzidine	40.0 %
benzo(a)anthracene	26.6 %
bis(2-ethylhexyl)phthalate	51.8 %

There were no positive detections of these compounds in the associated sample. The non-detect results in sample 013HW00702 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/7/95 at 13:52 on instrument HMS for the following compounds:

benzo(k)fluoranthene	37.3 %
benzidine	29.3 %

There were no positive detections of these compounds in the associated sample. The non-detect results in sample 013EW00702 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/10/95 at 09:29 on instrument FMS for the following compounds:

benzidine	51.7 %
benzoic acid	39.1 %

There were no positive detections of these compounds in the associated samples. The non-detect results in samples 017HW00102, 178HW00202 and GDHEW00302 were flagged as estimated (UJ).

instrument FMS for the following compounds:

benzidine	77.8 %
benzoic acid	56.5 %
hexachlorobutadiene	25.5 %

There were no positive detections of these compounds in the associated samples. The non-detect results in samples 017HW00202, 655EW00102, 655HW00202, GDHHW00702, GDHHW04D02 and GDHHW07D02 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/17/95 at 09:59 on instrument FMS for the following compounds:

benzidine	42.1 %
benzoic acid	51.4 %

There were no positive detections of these compounds in the associated samples. The non-detect results in samples 666HW00202, GDHHW00802 and GDHHW08D02 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 24 ug/L, 30 ug/L, 2.8 ug/L and 320 ug/L, respectively, in the method blanks run on 3/31/95, 4/7/95, 4/10/95 and 4/11/95. Since the equipment blanks were used for blank qualification, no action was taken.

Equipment Blanks:

Bis(2-ethylhexyl)phthalate was detected at 30 ug/L in equipment blank 013EW00702. The positive detections of this compound in all samples in this SDG, which were below 10X the blank amount, were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. Bis(2-ethylhexyl)phthalate was also detected in equipment blank 655EW00102 at 17 ug/L. Since another equipment blank was used for data qualification, no action was necessary.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of terphenyl-d14 in sample 013HW00702 was 28%, which was below the 33-141% QC limits. Since only one surrogate was outside QC limits in the sample, no action was required.

The Percent Recovery (%R) of phenol-d5 in sample 017HW00202 was 155%, which was above the 10-110% QC limits. Since only one surrogate in the sample was outside QC limit, no action was required.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No action was required.

IX.) Internal Standards Performance:

All Internal Standards Performance criteria were met, so action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOCHLORINE PESTICIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) for 4,4'-DDT were 35.2% and 46.2%, respectively, on the primary and confirmation columns for 4,4'-DDT for the standard run on 4/6/95 at 03:39 on the primary column, which exceeded the 25% QC limit. The non-detect result for 4,4'-DDT in associated sample 013EW00702 was flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. No action was required.

Equipment Blanks:

There were no positive detections in the equipment blanks. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries of decachlorobiphenyl (DCB) were below the 30-150% QC limits for the following samples:

<u>Sample</u>	<u>DCB %R</u>
013HW00702	26
013EW00702	23
660HW00202	22
655EW00102	24

All results in these samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses performed for this SDG. No action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All PIS criteria were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicate samples associated with the pesticides fraction of this SDG. No action was necessary.

X.) Pesticide Cleanup Check:

Florisol Cartridge Check:

All criteria were met, so no action was taken.

Gel Permeation Chromatography (GPC):

GPC was not performed for this SDG. No action was required.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All Initial and Continuing Calibration criteria were met, so no action was taken.

III.) Blanks:

Laboratory and Field Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u>		<u>Max. Conc.</u>	<u>Action Level</u>
<u>Type</u>	<u>Metal</u>	<u>ug/L</u>	<u>ug/L</u>
CCB	barium	5.40	27.0
CCB	beryllium	0.20	1.00
PBW	calcium	156	780
CCB	iron	30.2	151
EB1	lead	2.9	14.5
PBW	magnesium	32.9	165
CCB	manganese	1.20	6.00
EB2	selenium	6.00	30.0
PBW	sodium	105	525
CCB	zinc	7.00	35.0

PBW = Water Preparation Blank, CCB = Continuing Calibration Blank, EB1 = Equipment Blank 013EW00701, EB2 = Equipment Blank GDHEW00302

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank is an associated calibration or preparation blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

Negative results at absolute concentrations greater than the IDL for the following metals:

antimony	-15 ug/L	nickel	-14 ug/L
barium	-16 ug/L	potassium	-852 ug/L
chromium	-7 ug/L	vanadium	-3 ug/L
cobalt	-4 ug/L	silver	-11 ug/L
copper	-8 ug/L		

Since aluminum, calcium, iron and magnesium were not present, or present at concentrations less than 1 percent that of solution A, no action was required.

V.) ICP Serial Dilution Analysis:

The Serial Dilution Percent Differences (%D's) were 14.1% and 13.7%, respectively, for magnesium and sodium for serial dilution sample 178HW00202L. All positive results for these two metals in all samples in this SDG were flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria were met, so no action was necessary.

VIII.) Matrix Spike Recoveries:

All Percent Recovery criteria were met, so no action was required.

IX.) Field Duplicates:

The RPD for manganese in field duplicate pair GDHGW00802 / GDHGW0D02 was 72%, which exceeded the 30% QC limit for water samples. The positive results for manganese in these two samples were flagged as estimated (J).

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

CHLORIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

Field and Equipment Blanks:

Chloride was detected at 2 mg/L in both equipment blank GDHEW00302 and field blank GDHFW07D02. Since the concentrations in all associated samples exceeded 5X this amount, no action was taken.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

There were no Laboratory Duplicates associated with this SDG. No action was necessary.

VI.) Laboratory Spike Recovery:

There were no Laboratory Spike sample associated with this SDG. No action was required.

VII.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was necessary.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

Not all data reported on the spreadsheets were correct. The results were corrected during the validation process and copies of the analysis report forms from the data package are included.

SULFATES

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment and Field Blanks:

There were no positive detections in the equipment and field blanks, so data qualification was not required.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria was met. No action was required.

V.) Laboratory Duplicates:

There were no Laboratory Duplicates associated with this SDG. No action was necessary.

VI.) Laboratory Spike Recovery:

There were no Laboratory Spike sample associated with this SDG. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was taken.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

Not all data reported on the spreadsheets were correct. The results were corrected during the validation process and copies of the analysis report forms from the data package are included.

TOTAL DISSOLVED SOLIDS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

No Calibration was involved in performing this analysis. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment and Field Blanks:

There were no positive detections in the equipment and field blanks, so data qualification was not required.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

Laboratory data from a different CHS SDG was used to verify this parameter. All criteria were met, so no action was taken.

VI.) Laboratory Spike Recovery:

The analysis was not required, nor performed. No action was required.

VII.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was necessary.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

Total Dissolved Solids data were not present on the appropriate spreadsheet. Data was transferred to a blank spreadsheet allocated to 0-cresol. Also, copies of the analytical results form from the data package are included with this report.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.14
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW/SW846
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides (PEST), Herbicides (HERB), Total Metals, Chloride (CL), Sulfates (SULF), Total Dissolved Solids (TDS)

SDG NUMBER: CHS41

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>HERB</u>
Sample #:	Sample #:					
136GW00102	43452-18/4	Water	X	X		
178GW00202	43452-3	Water		X		
656GW00102	43508-13	Water	X			
656GW00202	43508-14	Water	X			
656GW00303	43508-15	Water	X			
655GW00102	43508-8/11	Water		X	X	
655GW00202	43508-7/10	Water		X	X	
655GW00303	43508-9/12	Water		X	X	
660GW00102	43452-13	Water			X	
660GW00202	43452-14	Water			X	
662GW00102	43472-21/2	Water	X	X		
662GW00202	43472-22/3	Water	X	X		
663GW00102	43542-16/2/12	Water	X	X		X
663GW00202	43542-15/1/11	Water	X	X		X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>HERB</u>
666GW00102	43518-10/2	Water	X	X		
666GW00202	43518-11/3	Water	X	X		
667GW00102	43518-12	Water	X			
667GW00202	43518-13	Water	X			
GDHGW00402	43472-20/6	Water	X	X		
GDHGW04D02	43472-19/5	Water	X	X		
GDHGW00702	43472-17/4	Water	X	X		
GDHGW07D02	43472-18/1	Water	X	X		
663TW00202	43452-17	Water	X			
GDWHG08D02	43518-1	Water		X		
666GW00102MS	43518-10MS	Water	X			
666GW00102MSD	43518-10MSD	Water	X			
GDHGW08D02MS	43518-1MS	Water		X		
GDHGW08D02MSD	43518-1MSD	Water			X	

D02 = FIELD DUPLICATE, TW = TRIP BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Metals</u>	<u>CL</u>	<u>SULF</u>	<u>TDS</u>
136GW00102	43452-8	Water	X			
178GW00202	43452-7	Water	X			
655GW00102	43508-5	Water	X			
655GW00202	43508-1	Water	X			
655GW00302	43508-6	Water	X			
656GW00102	43508-2	Water	X			
656GW00202	43508-3	Water	X			
656GW00302	43508-4	Water	X			
660GW00102	43452-9	Water	X			
660GW00202	43452-10	Water	X			
662GW00102	43472-8	Water	X			
662GW00202	43472-9	Water	X			
663GW00102	43452-6	Water	X			
663GW00202	43452-5	Water	X			
666GW00102	43518-5	Water	X			
666GW00202	43518-6	Water	X			
667GW00102	43518-7	Water	X			
667GW00202	43518-8	Water	X			
GDHGW00402	43472-12	Water	X	X	X	X
GDHGW04D02	43472-11	Water	X	X	X	X
GDHGW00702	43472-10	Water	X	X	X	X
GDHGW07D02	43472-7	Water	X	X	X	X
GDHGW08D02	43518-4	Water	X			
GDHGW08D02DUP	43518-4D	Water	X			
GDHGW08D02MS	43518-4MS	Water	X			

MS = MATRIX SPIKE, DUP = MATRIX DUPLICATE, D02 = FIELD DUPLICATE

DATA REVIEWER(S):

Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:

A handwritten signature in cursive script, appearing to read "Kevin C. Harmon". The signature is written in black ink and is positioned to the right of the "RELEASE SIGNATURE:" label.

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS41, SW846 Organics and Inorganics

SAMPLES: 136GW00102, 178GW00202, 655GW00102, 655GW00202, 655GW00303, 656GW00102, 656GW00202, 656GW00303, 660GW00102, 660GW00202, 662GW00102, 662GW00202, 663GW00102, 663GW00202, 666GW00102, 666GW00202, 667GW102, 667GW00202, GDHGW00402, GDHGW04D02, GDHGW00702, GDHGW07D02, 663TW00202, GDHGW08D02, 666GW00102MS, 666GW00102MSD, GDHGW08D02MS, GDHGW08D02MSD, GDHGW08D02DUP

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for carbon disulfide was 33.9% for the standards run on 11/28/94 on instrument CMS, which exceeded the 30% QC limit. Since there were no positive detections of this compound in the associated samples, no action was required.

The Percent Relative Standard Deviation (%RSD) for methylene chloride was 33.9% for the standards run on 4/10/95 on instrument GMS, which exceeded the 30% QC limit. Since there were no positive detections of this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Difference (%D) for chloromethane was 29.9% for the standard run on instrument CMS at 10:50 on 4/11/95, which exceeded the 25% QC limit. All results for chloromethane in samples 136GW00102, 663GW00102, 663GW00202 and 663TW00202, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for chloromethane was 38.3% for the standard run on instrument CMS at 10:46 on 4/14/95, which exceeded the 25% QC limit. All results for chloromethane in samples GDHGW00402, GDHGW00702, GDHGW04D02 and GDHGW07D02, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for chloromethane was 34.7% for the standard run on instrument GMS at 14:21 on 4/14/95, which exceeded the 25% QC limit. All results for chloromethane in samples 656GW00102, 656GW00202, 662GW00102 and 666GW00202, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/17/95 at 11:22 on instrument CMS for the following compounds:

chloromethane	36.8 %
carbon disulfide	40.8 %
carbon tetrachloride	71.0 %

All results for these compounds in samples 656GW00303, 666GW00102, 666GW0202 667GW00102 and 667GW00202, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 7 ug/L, 7 ug/L, 9 ug/L and 2.9 ug/L in the four method blanks analyzed from 4/11/95 through 4/14/95. Since the trip blank was used for blank qualifications, no action was necessary.

Trip Blanks:

Methylene chloride and chloroform were detected at 10 ug/L and 6 ug/L, respectively, in trip blank 663TW00202. Detections of methylene chloride in the associated samples (all samples in this SDG) below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. There were no associated positive detections of chloroform, so no further action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria were met, so no action was required.

VIII.) Field Duplicates:

There were no calculable RPD's for the two field duplicate pairs associated with this SDG. No action was taken.

IX.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC Identification criteria were met, so no action was required.

XIII.) System Performance:

All System Performance criteria were met, so no action was required.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 31.4% for benzo(k)fluoranthene for the standards run on 2/17/95, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/11/95 at 10:22 for the following compounds:

benzoic acid	56.5 %
benzidine	77.8 %
hexachlorobutadiene	25.5 %

There were no positive detections of these compounds in the associated samples. The non-detect results for these compounds in samples 662GW00102, 662GW00202, GDWHG00402, GDWHG04D02, GDWHG00702 and GDWHG07D02 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/12/95 at 10:26 on for the following compounds:

benzidine	66.0 %
benzoic acid	56.2 %

There were no positive detections of these compounds in the associated samples. The non-detect results for these compounds in samples 136GW00102, 178GW00202, 655GW00202, 655GW00302, 663GW00102, 663GW00202, 666GW00102, 666GW00202 and GDWHG08D02 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/13/95 at 11:53 for the following compounds:

benzidine	59.7 %
benzoic acid	48.4 %
hexachlorocyclopentadiene	40.3 %

There were no positive detections of these compounds in the associated samples. The non-detect results for these compounds in sample 655GW00102 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 2.4 ug/L and 320 ug/L , respectively, in the method blanks run on 4/10/95 and 4/11/95. All positive detections of this compound in the associated samples (all samples in this SDG) below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no calculable RPD's in the two sets of field duplicate samples associated with this SDG. No action was required.

IX.) Internal Standards Performance:

The Percent Recovery of the Internal Standard area counts for perylene-d12 were 46% and 45%, respectively in samples GDWHG00402 and GDHGW04D02. All results, which consisted entirely of non-detects, associated with this Internal Standard in the two samples were flagged as estimated (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOCHLORINE PESTICIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) were 35.2% and 25.7%, respectively, for 4,4'-DDT and methoxychlor for the standard run on 4/6/95 at 03:39 on the primary column, which exceeded the 25% QC limit. The non-detect results for these two compounds in associated samples 660GW00102 and 660GW00202 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. No action was required.

V.) Surrogate Recoveries:

The Percent Recoveries of decachlorobiphenyl (DCB) were below the 30-150% QC limits for the following samples:

<u>Sample</u>	<u>DCB %R</u>
655GW00302	29
660GW00102	21
660GW00202	23

All results in these samples, which consisted entirely on non-detects, were flagged as estimated (UJ).

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses associated with the pesticides fraction of this SDG. No action was required.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All PIS criteria were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicate samples associated with the pesticides fraction of this SDG. No action was necessary.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil data were not included with this SDG. No action was taken.

Gel Permeation Chromatography (GPC):

GPC was not performed for this SDG. No action was required.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

All Method Blank criteria were met. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses requested for herbicides in this SDG. No action was required.

VII.) LCS Recoveries:

All LCS Recovery criteria were met, so no action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicate samples associated with herbicides in this SDG. No action was necessary.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All Initial and Continuing Calibration criteria were met, so no action was taken.

III.) Blanks:

Laboratory and Field Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type</u>	<u>Metal</u>	<u>Max. Conc., ug/L</u>	<u>Action Level ug/L</u>
PBW1	arsenic	2.10	10.5
PBW2	iron	21.4	107
PBW1	lead	2.30	11.5
PBW1	magnesium	54.7	274
PBW1	manganese	0.80	4.00
PBW2	selenium	4.80	24.0
PBW1	sodium	205	1025

PBW = Water Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank is an associated calibration or preparation blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

All ICP Interference Check Sample criteria were met, so no action was taken

V.) ICP Serial Dilution Analysis:

Serial Dilution Analysis data was not present for this SDG. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria were met, so no action was necessary.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) were 17.5% and 73.0%, respectively, for mercury and thallium in spiked sample GDHW08D02MS, which were below the 75-125% QC limits. All positive and non-detect results (all samples in this SDG) for thallium were flagged as estimated (J) and (UJ). Since the %R for mercury was less than 30%, the results for mercury, which consisted entirely of non-detects, were rejected (R) in all samples in this SDG.

IX.) Field Duplicates:

The RPD for manganese in field duplicate pair GDHGW00702 / GDHGW07D02 was 25%, which met the 30% QC limit for water samples. No action was required. The RPD for manganese was 57% in field duplicate pair GDHGW00402 / GDHGW04D02, which exceeded 30% QC limit for water samples. The positive results for manganese in these two samples were flagged as estimated (J).

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

CHLORIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification not was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

No Laboratory Duplicates were analyzed for this SDG. No action was taken.

VI.) Laboratory Spike Recovery:

Laboratory Spike analysis was not performed for samples in this SDG. No action was necessary.

VII.) Field Duplicates:

The Relative Percent Differences (RPD's) for chloride were both 199% for the two sets of duplicate samples (GDHGW00402 / GDHGW04D02 and GDHGW00702 / GDHGW07D02), which exceeded the 30% QC limit for water samples. The positive results for chloride in these two duplicate pairs were flagged as estimated (J).

VIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

The data reported on the spreadsheets were not correct. The results were corrected during the validation process and copies of the analysis report forms from the data package are included.

SULFATES

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria was met. No action was required.

V.) Laboratory Duplicates:

No Laboratory Duplicates were analyzed for this SDG. No action was taken.

VI.) Laboratory Spike Recovery:

Laboratory Spike analysis was not performed for samples in this SDG. No action was necessary.

VII.) Field Duplicates:

The Relative Percent Differences (RPD's) for sulfate were 200% and 130%, respectively, for the two sets of duplicate samples (GDHGW00402 / GDHGW04D02 and GDHGW00702 / GDHGW07D02), which exceeded the 30% QC limit for water samples. The positive results for sulfate in these two duplicate pairs were flagged as estimated (J).

VIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

The data reported on the spreadsheets was not correct. The results were corrected during the validation process and copies of the analyses report forms from the data package are included with this report.

TOTAL DISSOLVED SOLIDS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

No Calibration was involved in performing this analysis. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

Laboratory data from a different CHS SDG was used to verify this parameter. All criteria were met, so no action was taken.

VI.) Laboratory Spike Recovery:

The Laboratory Spike Analysis was neither required nor performed. No action was required.

VII.) Field Duplicates:

The Relative Percent Differences (RPD's) for total dissolved solids (TDS) were 189% and 195%, respectively, for the two sets of duplicate samples (GDHGW00402 / GDHGW04D02 and GDHGW00702 / GDHGW07D02), which exceeded the 30% QC limit for water samples. The positive results for TDS in these two duplicate pairs were flagged as estimated (J).

VIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

Total Dissolved Solids data were not present on the spreadsheets. Copies of the analytical results form from the data package are included with this report.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.14
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW/SW846
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides (PEST), Chlorinated Herbicides (HERB), Total Metals, Chloride (CL), Sulfates (SULF), Total Dissolved Solids (TDS)
SDG NUMBER: CHS42

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>HERB</u>
014GW00402	43601-013/001/004	Water	X		X	X
014GW00102	43531-001/005/011	Water	X		X	X
014GW00202	43531-004/007/013	Water	X		X	X
014GW00302	43553-004/001/002	Water	X		X	X
014GW00502	43564-007/001/003	Water	X		X	X
014GW01D02	43531-002/006/012	Water	X		X	X
014GW02D02	43531-003/008/014	Water	X		X	X
014GW03D02	43564-008/002/004	Water	X		X	X
014GW04D02	43601-014/002/005	Water	X		X	X
014GW05D02	43601-012/002/006	Water	X		X	X
121GW00102	43656-004/005	Water	X	X	X	
653GW00102	43531-021/009	Water		X	X	
653GW00202	43531-022/010	Water		X	X	
GDHGW00902	43632-017/001/004	Water	X	X	X	

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>PEST</u>	<u>HERB</u>
GDHGW00902MS	43632-017/001MS	Water	X	X		
	43632-004/006MS	Water			X	X
GDHGW00902MSD	43632-017/001MSD	Water	X	X		
	43632-004/006MSD	Water			X	X
GDHGW01102	43632-003	Water		X		
GDHGW09D02	43632-002	Water		X		
GDHGW10D02	43670-001	Water		X		
GDHGW00202	43606-001	Water			X	
GDHGW02D02	43632-005	Water			X	

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Metals</u>	<u>CL</u>	<u>SULF</u>	<u>TDS</u>
014GW00402	43601-007	Water	X			
014GW00102	43531-007	Water	X			
014GW00202	43531-015	Water	X			
014GW00302	43553-003	Water	X			
014GW00502	43564-005	Water	X			
014GW00502MS	43564-005S	Water	X			
014GW01D02	43531-018	Water	X			
014GW02D02	43531-016	Water	X			
014GW03D02	43564-006	Water	X			
014GW04D02	43601-008	Water	X			
014GW05D02	43601-010	Water	X			
121GW00102	43656-001	Water	X			
121GW00102MS	43656-001S	Water	X			
653GW00102	43531-009	Water	X			
653GW00202	43531-020	Water	X			
GDHGW00102	43601-009/011	Water	X	X	X	X
GDHGW00202	43606-007/004	Water	X	X	X	X
GDHGW00502	43606-005/002	Water	X	X	X	X
GDHGW00502DUP	43606-002D	Water				X
GDHGW00502MD	43606-002MD	Water				X
GDHGW00502MSD	43606-002MSD	Water				X
GDHGW00902	43632-012/007	Water	X	X	X	X
GDHGW00902DUP	43632-012/007D	Water	X	X	X	
GDHGW00902MS	43632-012S	Water	X			
GDHGW00902MS	43652-007MS	Water		X	X	
GDHGW00902MSD	43653-007MSD	Water		X	X	
GDHGW01002	43656-002/003	Water	X	X	X	X
GDHGW01102	43632-016/011	Water	X	X	X	X
GDHGW01102DUP	43632-016D	Water	X			
GDHGW01102MS	43632-016S	Water	X			
GDHGW01D02	43606-006/003	Water	X	X	X	X
GDHGW02D02	43632-015/010	Water	X	X	X	X
GDHGW05D02	43632-014/009	Water	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Metals</u>	<u>CL</u>	<u>SULF</u>	<u>TDS</u>
GDHGW09D02	43632-013/008	Water	X	X	X	X
GDHGW10D02	43670-008/013	Water	X	X	X	X
GDHGW10D02DUP	43670-013DUP	Water				X
GDHGW10D02MS	43670-013MS	Water				X
GDHGW10D02MSD	43670-013MSD	Water				X
GDHGW11D02	43670-009/014	Water	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, DUP = MATRIX DUPLICATE

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS42, SW846 Organics and Inorganics

SAMPLES: 014GW00402, 014GW00102, 014GW00202, 014GW00302, 014GW00502,
014GW01D02, 014GW02D02, 014GW03D02, 014GW04D02, 014GW05D02,
121GW00102, GDHGW00902, GDHGW00902MS, GDHGW00902MSD,
653GW00102, 653GW00202, GDHGW01102, GDHGW09D02, GDHGW10D02,
GDHGW10D02DUP, GDHGW10D02MS, GDHGW10D02MS, GDHGW02D02,
014GW00502MS, 121GW00102MS, GDHGW00902DUP, GDHGW00102,
GDHGW00202, GDHGW00502, GDHGW00502DUP, GDHGW00502MD,
GDHGW00502MSD, GDHGW1002, GDHGW01102DUP, GDHGW01102MS,
GDHGW01D02, GDHGW05D02, GDHGW11D02

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/19/95 at 10:37 for the following compounds:

bromomethane	33.2 %
acetone	31.2 %
4-methyl-2-pentanone	27.0 %
tetrachloroethene	31.9 %

There were no positive detections of these compounds in the associated samples. All non-detect results in associated samples 014GW00202, 014GW00302 and 014GW02D02 were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/21/95 at 09:15 for the following compounds:

bromomethane	32.7 %
acetone	29.6 %
2-butanone	26.5 %
4-methyl-2-pentanone	32.1 %
2-hexanone	35.8 %

All results for these compounds in samples 014GW00402, 014GW04D02 and 014GW05D02, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/24/95 at 01:05 for the following compounds:

bromomethane	51.8 %
4-methyl-2-pentanone	28.3 %
2-hexanone	31.0 %

The positive detection of 2-hexanone in sample GDHGW00902 was flagged as estimated (J). There were no other positive results for these compounds in associated samples 121GW00102 and GDHGW00902, and the non-detect results were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 1.4 ug/L in water method blank BI042195A. Detections of methylene chloride in associated samples 014GW00402, 014GW04D02 and 014GW05D02 below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was required.

Trip Blanks:

There were no trip blanks associated with this SDG. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria were met, so no action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was taken.

IX.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC Identification criteria were met, so no action was required.

XIII.) System Performance:

All System Performance criteria were met, so no action was required.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 31.4% for benzo(k)fluoranthene for the standards

run on 4/17/95, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/17/95 at 09:59 for the following compounds:

benzoic acid	42.1 %
benzidine	51.4 %

The results for these compounds in samples 653GW00102 and 653GW00202, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. Data qualification was not required.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was required.

IX.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOCHLORINE PESTICIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. No action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recovery of decachlorobiphenyl (DCB) was 15% and 18%, respectively, in samples 014GW00202 and 653GW00202, which were below the 30-150% QC limits. All results for these two samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met, so no action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All PIS criteria were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was necessary.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil data were not included with this SDG. No action was taken.

Gel Permeation Chromatography (GPC):

GPC was not performed for this SDG. No action was required.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

CHLORINATED HERBICIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Instrument Performance criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was required.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria were met, so no action was necessary.

VIII.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met, so no action was taken.

Continuing Calibration:

A total of 51 continuing calibrations were included in this data package. There were 31 Percent Recoveries (%R's) above the 90-110% QC limits within a range of 111% to 116%. The metals included antimony, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, manganese, nickel, silver, vanadium and zinc. Dates of the calibrations, which would permit association with the samples involved, were not provided. Qualification for calibration exceedances was therefore not possible.

III.) Blanks:

Laboratory Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type</u>	<u>Metal</u>	<u>Max. Conc.</u> <u>ug/L</u>	<u>Action Level</u>
CCB	aluminum	25.7	129
CCB	antimony	18.9	94.5
CCB	arsenic	3.80	19.0
CCB	barium	8.50	42.5
PBW	beryllium	0.30	1.50
PBW	calcium	120	600
PBW	chromium	4.12	20.6
CCB	cobalt	6.40	32.0
CCB	copper	10.0	50.0
PBW	iron	57.8	289
PBW	magnesium	49.6	248
CCB	manganese	1.80	9.00
PBW	mercury	0.10	0.50
CCB	nickel	25.8	129
PBW	potassium	706	3530
CCB	silver	13.4	67.0
CCB	sodium	211	1050
CCB	thallium	5.70	28.5
CCB	vanadium	5.90	29.5
PBW	zinc	14.7	73.5

CCB = Continuing Calibration Blanks, PBW = Preparation Blank (Water)

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank was an associated calibration or preparation blank were

flagged as undetected (U).

Negative results were observed for the following metals in the initial calibration blanks (ICB) and continuing calibration blanks (CCB):

<u>Blank Type</u>	<u>Metal</u>	<u>Max. Conc.</u> <u>ug/L</u>	<u>Action Level</u> <u>ug/L</u>
CCB	arsenic	-3.60	18.0
ICB	barium	-3.60	18.0
CCB	calcium	-51.1	256
ICB	copper	-6.80	34.0
CCB	iron	-12.2	61.0
CCB	nickel	-7.30	36.5
CCB	silver	-10.4	52.0
CCB	sodium	-163	815

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all associated non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

The following metals were present in ICS Solution A at concentrations greater than 2X IDL:

antimony	32 ug/L	copper	6 ug/L
barium	34 ug/L	manganese	2 ug/L
beryllium	1 ug/L	sodium	224 ug/L
cadmium	3 ug/L	vanadium	6 ug/L
cobalt	9 ug/L	zinc	16 ug/L

These analytes should not be present. Magnesium and iron were present at concentrations greater than the amount in Solution A in samples 014GW01D02, 014GW02D02, 01WGW03D02, 014GW05D02, GDHFW00202, GDHGW00902, GDHGW902DUP, GDHGW05D02, GDHGW09D02 and GDHGW10D02. All positive detections of these metals in the associated samples were flagged as estimated (J).

Negative results with an absolute value greater than the IDL were observed in ICS Solution A for the following metals:

antimony	-26 ug/L	manganese	-2 ug/L
arsenic	-3 ug/L	potassium	-983 ug/L
barium	-18 ug/L	sodium	-141 ug/L
cobalt	-3 ug/L	selenium	-3 ug/L
copper	-10 ug/L	thallium	-6 ug/L
lead	-2 ug/L	vanadium	-10 ug/L

Magnesium and iron were present at concentrations greater than the amount in Solution A in associated samples 014GW01D02, 014GW02D02, 01WGW03D02, 014GW05D02, GDHFW00202, GDHGW00902,

GDHGW902DUP, GDHGW05D02, GDHGW09D02 and GDHGW10D02. All associated positive sample results less than 5X the absolute value of the ICS result and all non-detects were flagged as estimated (J) and (UJ).

V.) ICP Serial Dilution Analysis:

Serial Dilution Analysis was not performed for this SDG. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria were met, so no action was necessary.

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) was 282% for mercury in spiked sample GDHGW00902, which exceeded the 75-125% QC limits. Since mercury was not detected in the associated sample, no action was required.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was taken.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

CHLORIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification not was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

All criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was necessary.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

SULFATES

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria was met. No action was required.

V.) Laboratory Duplicates:

All criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was required.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL DISSOLVED SOLIDS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Laboratory Duplicates:

All criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was required.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

Total Dissolved Solids (TDS) were mislabeled on the spreadsheets as Methylphenol (Total Cresol). The correct analysis, (i.e., Total Dissolved Solids), was entered and Total Cresol was crossed out.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

(770) 923-3890

(770) 923-8769 (Fax)

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base, Zone H
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level IV
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Pesticides (Pest), Herbicides (Herb), Total Metals, Total Phosphorus (Phos), Sulfide, Sulfite, Chloride (Cl), Sulfate, Bicarbonate/Carbonate Alkalinity (BCA), Nitrate, Nitrite
SDG NUMBER: CHS43

SAMPLES:

Client	Lab						
Sample #:	Sample #:	Matrix	VOA	SVOA	Pest	Metals	Herb
014TW00202	43532-001	Water	X				
014FW00202	43532-002/8	Water	X		X	X	X
653HW00102	43532-004/7	Water		X	X	X	
014TW00302	43554-001	Water	X				
014HW03D02	43563-001/4	Water	X		X	X	X
014TW03D02	43563-005	Water	X				
014FW05D02	43602-001/8	Water	X		X	X	X
014EW05D02	43602-002/9	Water	X		X	X	X
014TW05D02	43602-003	Water	X				
GDHTW00902	43631-001	Water	X				
121TW00102	43657-001	Water	X				
009TW00902	43671-001	Water	X				
009EW00202	43697-001/24	Water	X	X	X	X	
009HW00102	43697-002/25	Water	X	X	X	X	
009FW00202	43697-003/22	Water	X	X	X	X	

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>Pest</u>	<u>Metals</u>
009TW00202	43697-023	Water	X			
009TW00402	43707-001	Water	X			
009TW00502	43732-001	Water	X			
009TW06D02	43742-001	Water	X			
009TW07D02	43778-001	Water	X			
009HW00702	43778-002/9	Water	X	X	X	X
009HW01002	43794-001/23	Water	X	X	X	X
009EW08D02	43794-002/25	Water	X	X	X	X
009FW08D02	43794-003/24	Water	X	X	X	X
009TW00802	43794-004	Water	X			
178HW00102	43813-001/2	Water		X		X
009HW01002MS	43794-001MS	Water	X	X	X	X
009HW01002MSD	43794-001MSD	Water	X	X	X	
009HW01002MD	43794-001MD	Water				X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Sulfide</u>	<u>Sulfite</u>	<u>Cl</u>	<u>Sulfate</u>	<u>BCA</u>
009EW00202	43697-001/10	Water	X	X	X	X	X
009HW00102	43697-002/11	Water	X	X	X	X	X
009FW00202	43697-003/12	Water	X	X	X	X	X
009HW00702	43778-006/9	Water	X	X	X	X	X
009HW01002	43794-017/23	Water	X	X	X	X	X
009EW08D02	43794-016/25	Water	X	X	X	X	X
009FW08D02	43794-018-24	Water	X	X	X	X	X
009HW01002MS	43794-017MS	Water	X	X	X	X	X
009HW01002MSD	43794-017MSD	Water	X	X	X	X	X

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Nitrate</u>	<u>Nitrite</u>	<u>Phos</u>
009EW00202	43697-001/7	Water	X	X	X
009HW00102	43697-002/8	Water	X	X	X
009FW00202	43697-003/9	Water	X	X	X
009HW00702	43778-006/9	Water	X	X	X
009HW01002	43794-014/23	Water	X	X	X
009EW08D02	43794-016/25	Water	X	X	X
009FW08D02	43794-015/24	Water	X	X	X
009EW00202MS	43697-001/7MS	Water	X	X	X
009EW00202MSD	43697-001/7MSD	Water	X	X	X
009HW01002MS	43794-014MS	Water	X	X	X
009HW01002MSD	43794-014MSD	Water	X	X	X

Note: The following notations apply to all fractions of this SDG.

E = EQUIPMENT BLANK, F = FIELD BLANK, H = FIELD DUPLICATE, MD = MATRIX DUPLICATE, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, T = TRIP BLANK

DATA REVIEWER(S):

Amy L. Hogan, Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:

A handwritten signature in cursive script, appearing to read "Marvin L. Smith".

Data Qualifier Definitions

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS43 Organics and Inorganics

SAMPLES: 014TW00202, 014FW00202, 653HW00102, 014TW00302, 014HW03D02,
014TW03D02, 014FW05D02, 014EW05D02, 014TW05D02, GDHTW0902,
121TW00102, 009TW00902, 009EW00202, 009EW00202MS, 009EW00202MSD,
009HW00102, 009FW00202, 009TW00202, 009TW00402, 009TW00502,
009TW06D02, 009TW07D02, 009HW00702, 009HW01002, 009HW01002MS,
009HW01002MSD, 009EW08D02, 009FW08D02, 009TW00802, 178HW00102

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of chloromethane (33.2%) and methylene chloride (41.5%) exceeded the 30% QC limit for the standards run on 5/03/95 on instrument CMS. All positive results for methylene chloride in associated samples 009TW07D02, 009HW00702, 009HW01002, 009EW08D02, 009FW08D02 and 009TW00802 were flagged as estimated (J). There were no associated positive sample results for chloromethane, so no further action was required.

The Percent Relative Standard Deviation (%RSD) of methylene chloride (33.9%) exceeded the 30% QC limit for the standards run on 4/10/95 on instrument GMS. All positive results for this compound in associated samples 009TW00402 and 009TW06D02 were flagged as estimated (J).

Continuing Calibration:

The Percent Difference (%D) of acetone (30.5%) exceeded the 25% QC limit for the standard run on 5/05/95 at 10:59 on instrument CMS. The positive and non-detect results for this compound in associated samples 009HW00702 and 009HW01002 were flagged as estimated (J) and (UJ). The other associated samples were field blanks, so no further action was taken.

The Percent Difference (%D) of chloromethane (29.1%) exceeded the 25% QC limit for the standard run on 5/02/95 at 13:36 on instrument CMS. The associated samples 009TW00402 and 009TW06D02 were field blanks. No action was necessary.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 4/19/95 at 10:37 on instrument GMS:

bromomethane	33.2%
acetone	31.2%
2-chloroethyl vinyl ether	35.5%
4-methyl-2-pentanone	27.0%
2-hexanone	31.9%

No action was taken, since the associated sample was a field blank.

The Percent Difference (%D) of 2-chloroethyl vinyl ether (26.8%) exceeded the 25% QC limit for the standards run on 4/20/95 at 10:48 on instrument IMS. No action was taken, since associated sample 014TW03D02 was a field blank.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the standards run on 4/21/95 at 09:15 on instrument IMS:

bromomethane	32.7%
acetone	29.6%
2-butanone	26.5%
2-chloroethyl vinyl ether	41.1%
4-methyl-2-pentanone	32.1%
2-hexanone	35.8%

The results for these compounds in associated sample 014HW03D02, which consisted entirely of non-detects, were flagged as estimated (UJ). The other associated samples were field blanks, so no further action was required.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 5/01/95 at 09:29 on instrument IMS:

chloromethane	31.1%
bromomethane	49.3%
2-chloroethyl vinyl ether	33.9%

The associated sample 009TW00502 was a field blank, so no action was necessary.

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 10.0 ug/L in water method blank BC050595A. All positive results for this compound in associated samples 009HW00702 and 009HW01002 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 1.8 ug/L in water method blank BG050295B. All associated samples were field blanks, so no action was necessary.

Methylene chloride was detected at 6.3 ug/L in water blank BI042095B. All with samples associated this method blank were field blanks, so no action was required.

Methylene chloride was detected at 2.2 ug/L in water method blank BI042595A. The positive result for this compound in associated sample 009HW00102 less than 10X the blank amount was flagged as undetected (U) with the detection limit being raised to the level of contamination in the sample. All other associated samples were field blanks, so no further action was necessary.

Trip, Field, and Equipment Blanks:

Acetone and methylene chloride were detected at 14.0 ug/L and 9.0 ug/L, respectively, in trip blank 009TW00202. The positive results for these compounds in associated sample 009HW00102 less than 10X the blank amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in the sample.

Chloroform was detected at 3.2 ug/L in field blank 009FW00202. There were no positive results for this compound in the associated samples, so no action was required.

Methylene chloride and chloroform were detected at 5.0 ug/L and 2.2 ug/L, respectively, in equipment blank 009EW00202. The results for methylene chloride in the associated samples were previously flagged based on the trip blank. There were no positive results for chloroform, so no further action was necessary.

Acetone and methylene chloride were detected at 17.0 ug/L and 4.3 ug/L, respectively, in trip blank 009TW07D02. All positive results for these compounds in associated sample 009HW00702 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in the sample.

Methylene chloride and chloroform were detected at 3.9 ug/L and 8.0 ug/L, respectively, in trip blank 009TW00802. The positive results for these compounds in associated sample 009HW01002 less than 10X the blank amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in the sample.

Methylene chloride and chlorobenzene were detected at 4.0 ug/L and 2.7 ug/L, respectively, in equipment blank 009EW008D02. The results for methylene chloride in the associated samples were previously flagged based on the trip blank. There were no positive results for the other compound in the associated sample, so no further action was necessary.

Methylene chloride was detected at 4.1 ug/L in field blank 009FW08D02. The results for methylene chloride in the associated sample were previously flagged based on the trip blank. No further action was required.

TICs:

There were no TICs reported in the blanks for this SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS/MSD):

The Relative Percent Difference (RPD) for chlorobenzene (28%) exceeded the 21% QC limit for samples 009HW01002MS and 009HW01002MSD. The positive result for this compound in associated sample 009HW01002 was flagged as estimated (J).

The Percent Recovery (%R) of chlorobenzene for spiked samples 009HW01002MS (198%) and 009HW01002MSD (262%) exceeded the 60-133% QC limits. The result for this compound in the associated sample was previously flagged as estimated (J). No further action was required.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 009GW00702 (analyzed in SDG CHS44) and 009HW00702:

<u>Compound</u>	<u>RPD</u>
vinyl chloride	27%
trichlorofluoromethane	42%
1,2-dichloroethene	0.0%
1,2-dichloroethane	6.9%
trichloroethene	0.0%
benzene	9.5%
toluene	15%
chlorobenzene	10%
ethylbenzene	30%
xylene	21%

The results for trichlorofluoromethane, which exceeded the 30% QC limit for water samples, were flagged as estimated (J) in both samples.

The following RPD's were calculated for field duplicate samples 009GW01002 (analyzed in SDG CHS44) and 009HW01002:

<u>Compound</u>	<u>RPD</u>
benzene	19%
chlorobenzene	15%
ethylbenzene	24%

All RPD's were below the 30% QC limit, so no action was necessary.

The following RPD's were calculated for field duplicate samples 009GW00102 (analyzed in SDG CHS44) and 009HW00102:

<u>Compound</u>	<u>RPD</u>
toluene	57%
ethylbenzene	82%
xylene	34%

The results for these compounds in both samples were flagged as estimated (J) since their RPD's exceeded the 30% QC limit for water field duplicates.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria were met. No action was required.

IX.) TCL Compound Identification:

All criteria were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene was 31.4%, which exceeded the 30% QC limit for the standards run on 2/17/95 on instrument FMS. There were no positive results for this compound in the associated samples. No action was required.

Continuing Calibration:

The Percent Differences (%D's) for benzoic acid (42.1%) and benzidine (51.4%) exceeded the 25% QC limit for the standard run on 4/17/95 at 09:59. All results for these compounds in associated sample 653HW00102, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for benzidine (39.9%) exceeded the 25% QC limit for the standards run on 4/25/95 at 10:01. The non-detect result for this compound in associated sample 009HW00102 was flagged as estimated (J). The other associated samples were field blanks. No further action was necessary.

The Percent Differences (%D's) for benzoic acid (44.5%) and hexachlorocyclopentadiene (39.1%) exceeded the 25% QC limit for the standards run on 5/04/95 at 12:11. The non-detect results for these compounds in associated sample 009HW01002 were flagged as estimated (UJ). The other associated samples were field blanks. No further action was required.

The Percent Differences (%D's) for the following compounds exceeded the 25% QC limit for the standards run on 5/05/95 at 09:56:

benzoic acid	56.2%
hexachlorocyclopentadiene	30.8%
pentachlorophenol	26.0%

The results for these compounds in associated sample 009HW00702, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for the following compounds exceeded the 25% QC limit for the standards run on 5/10/95 at 10:11:

benzoic acid	55.9%
2,4-dinitrophenol	25.5%
2,4-dinitrotoluene	26.4%

The results for these compounds in associated samples 178HW00102, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 24.0 ug/L in water blank B-A2299. The result for this compound in associated sample 653HW00102 was a non-detect, so no action was necessary.

Di-n-butylphthalate and bis(2-ethylhexyl)phthalate were detected at 2.4 ug/L and 2.6 ug/L, respectively, in water blank B-A2309. The results for these compounds in associated sample 009HW00102 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. The other associated samples were field blanks, so no further action was necessary.

Bis(2-ethylhexyl)phthalate was detected at 24.0 ug/L in water blank B-A2312. All positive results for this compound in associated samples 009HW00702 and 009HW01002 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. All other associated samples were field blanks, so no further action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Matrix Spike / Matrix Spike Duplicate:

All MS/ MSD criteria were met. No action was necessary.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

The following Relative Percent Differences were calculated for field duplicate samples 009GW00702 (analyzed in SDG CHS44) and 009HW00702:

<u>Compound</u>	<u>RPD</u>
bis(2-chloroethyl)ether	115%
2-methylphenol	138%

The results for these compounds in the two samples were flagged as estimated (J) since their RPD's exceeded the 30% QC limit for water field duplicate samples.

The following RPD's were calculated for field duplicate samples 009GW01002 (analyzed in SDG CHS44) and 009HW01002:

<u>Compound</u>	<u>RPD</u>
2-chlorophenol	23%
1,4-dichlorobenzene	17%
1,2-dichlorobenzene	20%
<u>Compound</u>	<u>RPD</u>
2-methylnaphthalene	9.8%
acenaphthene	17%

The RPD's for these compounds were within the 30% QC limit. No action was required.

The RPD's for 2-methylphenol (18%) and naphthalene (2.3%) were within the 30% QC limit for field duplicate samples 009GW00102 (analyzed in SDG CHS44) and 009HW00102. No action was required.

The RPD for bis(2-ethylhexyl)phthalate was 84%, which exceeded the 30% QC limit for field duplicate samples 178GW00102 (analyzed in SDG CHS44) and 178HW00102. The results for this compound in these two samples were flagged as estimated (J).

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria were met. No action was required.

IX.) TCL Compound Identification:

All criteria were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was required.

III.) Calibration:

All Calibration criteria were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of decachlorobiphenyl (DCB) were below the 30-150% QC limits for the following samples:

014FW00202	16%
653HW00102	21%
009EW00202	20%
009HW00102	26%
009FW00202	25%

All positive and non-detect results in these samples were flagged as estimated (J) and (UJ).

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria were met. No action was required.

VIII.) Field Duplicates:

There were no duplicate samples found in SDG's CHS43 and CHS44 for field duplicate samples 653HW00102 and 014HW03D02. No action was required.

There were no calculable Relative Percent Differences for field duplicate samples 009GW00702 (analyzed in SDG CHS44) and 009HW00702. No action was required.

There were no calculable RPD's for field duplicate samples 009GW01002 (analyzed in SDG CHS44) and 009HW01002. No action was required.

There were no calculable RPD's for field duplicate samples 009GW00102 (analyzed in SDG CHS44) and 009HW00102. No action was necessary.

IX.) Pesticide Cleanup Check:

Florisol Cartridge Check:

All criteria were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was required.

III.) Calibration:

All Calibration criteria were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was necessary.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was required.

VII.) TCL Compound Identification:

All TCL criteria were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicate samples associated with this fraction. No action was required.

IX.) Laboratory Control Samples (LCS):

The Percent Recoveries (%R's) of 2,4-D (48%) and silvex (74%) in LCS LSE-0038 were below the 75-125% QC limits. The Percent Recovery (%R) of 2,4-D (71%) in LCS LSE-0039 was below the 75-125% QC limits. Since validation is not required for LCS samples, no action was taken.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>ug/L</u>
CCB11	aluminum	533 ug/L	2660
CCB11	antimony	14.7 ug/L	73.5
CCB5	barium	7.0 ug/L	35.0
CCB1	beryllium	0.40 ug/L	2.00
PBW	calcium	156 ug/L	780
CCB8	chromium	3.60 ug/L	18.0
CCB11	iron	22.2 ug/L	111
CCB4	magnesium	2230 ug/L	11100

CCB1	manganese	1.70 ug/L	8.50
CCB5	nickel	8.60 ug/L	43.0
CCB5	potassium	592 ug/L	2960
PBW	selenium	3.38 ug/L	16.9
PBW	sodium	11050 ug/L	55200
CCB5	thallium	4.40 ug/L	22.0
CCB1	vanadium	3.30 ug/L	16.5
PBW	zinc	17.4 ug/L	87.0

CCB = Continuing Calibration Blank, PBW = Preparation Blank Water

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank was an associated calibration or field blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL:

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (ug/L)</u>
CCB3	cadmium	-1.30 ug/L	6.50
PBW1	copper	-4.65 ug/L	23.3

CCB = Continuing Calibration Blank, PBW = Preparation Blank Water

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria were met. No action was required.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for zinc in duplicate water sample 009HW01002MD was 101%, which exceeded the 20% QC limit. The positive results for this analyte in all samples in this SDG were flagged as estimated (J).

VIII.) Matrix Spike Recoveries (MS):

All Matrix Spike Recovery criteria were met. No action was required.

IX) Field Duplicates:

There were no duplicate samples found in SDG's CHS43 and CHS44 for field duplicate samples 653HW00102 and 014HW03D02. No action was required.

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 009GW00102 (analyzed in SDG CHS44) and 009HW00102:

<u>Analyte</u>	<u>RPD</u>
aluminum	70%
barium	180%
calcium	140%
iron	190%
magnesium	160%
manganese	190%
potassium	43%

The positive results in both samples for these analytes were flagged as estimated (J) since the RPD's exceeded the 30% QC limit for water field duplicates.

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 009GW000702 (analyzed in SDG CHS44) and 009HW00702:

<u>Analyte</u>	<u>RPD</u>
barium	35%
calcium	44%
chromium	50%
iron	62%
magnesium	38%
manganese	57%
potassium	34%
sodium	16%
vanadium	100%

The positive results in both samples for these analytes (except sodium) were flagged as estimated (J) since the RPD's exceeded the 30% QC limit for water field duplicates.

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 009GW01002 (analyzed in SDG CHS44) and 009HW01002:

<u>Analyte</u>	<u>RPD</u>
barium	166%
calcium	132%
magnesium	176%
potassium	27%
sodium	34%

The positive results in both samples for these analytes (except potassium) were flagged as estimated (J) since the RPD's exceeded the 30% QC limit for water field duplicates.

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 178GW00102 (analyzed in SDG CHS44) and 178HW00102:

<u>Analyte</u>	<u>RPD</u>
calcium	3.2%
magnesium	11%
<u>Analyte</u>	<u>RPD</u>
potassium	4.4%
sodium	1.8%

The RPD's for these compounds were all within the 30% QC limit. No action was required.

X.) Furnace Atomic Absorption QC:

GFAA analysis was not required for the samples associated with this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SULFIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

SULFITES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

CHLORIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

The Relative Percent Difference (RPD) of 2.4% was within the 30% QC limit for field duplicate samples 009GW00102 (analyzed in SDG CHS44) and 009HW00102. No action was required.

The RPD of 4.5% was within the 30% QC limit for the field duplicate samples 009GW00702 (analyzed in SDG CHS44) and 009HW00702. No action was required.

The RPD of 2.4% was within the 30% QC limit for field duplicate samples 009GW01002 (analyzed in SDG CHS44) and 009HW00102. No action was necessary.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

SULFATES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

There were no duplicate samples found in SDG's CHS43 and CHS44 for field duplicate samples 653HW00102 and 014HW03D02. No action was required.

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL PHOSPHORUS

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

The percent Recovery for sample 009GW04D02 (67.2%) was below the 75-125% QC limits. All positive and non-detect results for total phosphorus in the samples in this SDG were flagged as estimated (J) and (UJ).

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

The Relative Percent Difference (RPD) of 18% was within the 30% QC limit for field duplicate samples 009GW00102 (analyzed in SDG CHS44) and 009HW00102. No action was required.

The RPD of 14% was within the 30% QC limit for field duplicate samples 009GW00702 (analyzed in SDG CHS44) and 009HW00702. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

BICARBONATE / CARBONATE ALKALINITY

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

There were no corresponding samples found in SDG's CHS43 and CHS44 for field duplicate samples 653HW00102 and 014HW03D02. No action was required.

The Relative Percent Difference (RPD) of 0.0% was within the 30% QC limit for field duplicate samples 009GW00102 (analyzed in SDG CHS44) and 009HW00102. No action was required.

The RPD of 8.7% was within the 30% QC limit for field duplicate samples 009GW00702 (analyzed in SDG CHS44) and 009HW00702. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

NITRATE

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

NITRITE

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The corresponding samples for field duplicate samples 653HW00102 and 014HW03D02 were not found in SDG's CHS43 and CHS44. No action was required.

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

(770) 923-3890

(770) 923-8769 (Fax)

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base, Zone H
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Pesticides (Pest), Total Metals, Total Phosphorus (Phos), Sulfide, Sulfite, Chloride, Sulfate, Bicarbonate/Carbonate Alkalinity (BCA), Nitrate, Nitrite
SDG NUMBER: CHS44

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>Pest</u>	<u>Metals</u>	<u>Phos</u>
<u>Sample #:</u>	<u>Sample #:</u>						
009GW00902	43680-027/02/05/10/21	Water	X	X	X	X	X
FMWGW00402	43680-028/03/06/11/22	Water	X	X	X	X	X
009GW01102	43680-029/04/07/12/23	Water	X	X	X	X	X
009GW02D02	43698-037/26/31/21/11	Water	X	X	X	X	X
009GW00102	43698-038/27/32/22/12	Water	X	X	X	X	X
009GW01302	43698-039/28/33/23/13	Water	X	X	X	X	X
009GW01402	43698-040/29/34/24/14	Water	X	X	X	X	X
009GW00202	43698-036/30/35/25/15	Water	X	X	X	X	X
009GW00302	43706-023/01/05/17/13	Water	X	X	X	X	X
009GW00402	43706-024/02/06/18/14	Water	X	X	X	X	X
009GW04D02	43728-001/06/11/26/36	Water	X	X	X	X	X
009GW00502	43728-002/07/12/27/37	Water	X	X	X	X	X
009GW05D02	43728-003/08/13/28/38	Water	X	X	X	X	X
009GW03D02	43728-004/09/14/29/39	Water	X	X	X	X	X
009GW01502	43728-005/10/15/30/40	Water	X	X	X	X	X
009GW00602	43741-001/06/10/14/18	Water	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>Pest</u>	<u>Metals</u>	<u>Phos</u>
009GW06D02	43741-002/07/11/15/19	Water	X	X	X	X	X
009GW01202	43777-001/09/05/13/17	Water	X	X	X	X	X
009GW12D02	43777-002/10/06/14/18	Water	X	X	X	X	X
009GW07D02	43777-003/12/08/16/20	Water	X	X	X	X	X
009GW00702	43777-004/11/07/15/19	Water	X	X	X	X	X
009GW00802	43793-001/05/08/11/14	Water	X	X	X	X	X
009GW08D02	43793-002/06/09/12/15	Water	X	X	X	X	X
009GW01002	43793-003/04/07/10/13	Water	X	X	X	X	X
178GW00102	43812-004/5	Water		X		X	
009GW00602MS	43741-001/14MS	Water	X	X	X	X	
009GW00602MSD	43741-001/06MSD	Water	X	X	X		
009GW00602MD	43741-014MD	Water				X	
009GW04D02MS	43728-36MS	Water					X
009GW04D020MSD	43728-36MSD	Water					X
009GW05D02MD	43728-028D	Water				X	
009GW05D02MS	43728-028S	Water				X	

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Sulfide</u>	<u>Sulfite</u>	<u>Chloride</u>	<u>Sulfate</u>	<u>BCA</u>
009GW00902	43680-018/24	Water	X		X	X	X
009GW00902	43812-001	Water		X			
FMWGW00402	43680-019/25	Water	X		X	X	X
FMWGW00402	43812-003	Water		X			
009GW01102	43680-020/26	Water	X		X	X	X
009GW01102	43812-002	Water		X			
009GW02D02	43698-016/06/01	Water	X	X	X	X	X
009GW00102	43698-017/07/02	Water	X	X	X	X	X
009GW01302	43698-018/08/03	Water	X	X	X	X	X
009GW01402	43698-019/09/04	Water	X	X	X	X	X
009GW00202	43698-020/10/05	Water	X	X	X	X	X
009GW00302	43706-015/11/09	Water	X	X	X	X	X
009GW00402	43706-016/12/10	Water	X	X	X	X	X
009GW04D02	43728-031/21/16	Water	X	X	X	X	X
009GW00502	43728-032/22/17	Water	X	X	X	X	X
009GW05D02	43728-033/23/18	Water	X	X	X	X	X
009GW03D02	43728-034/24/19	Water	X	X	X	X	X
009GW01502	43728-035/25/20	Water	X	X	X	X	X
009GW00602	43741-022/24/20	Water	X	X	X	X	X
009GW06D02	43741-023/25/21	Water	X	X	X	X	X
009GW01202	43777-021/25/29	Water	X	X	X	X	X
009GW12D02	43777-022/26/30	Water	X	X	X	X	X
009GW07D02	43777-024/28/32	Water	X	X	X	X	X
009GW00702	43777-023/27/31	Water	X	X	X	X	X
009GW00802	43793-020/17/23	Water	X	X	X	X	X*
009GW08D02	43793-021/18/24	Water	X	X	X	X	X*
009GW01002	43793-019/16/22	Water	X	X	X	X	X*
009GW00602MS	43741-001MS	Water	X	X	X	X	X
009GW00602MSD	43741-001MSD	Water	X	X	X	X	X

<u>Client</u>	<u>Lab</u>			
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Nitrate</u>	<u>Nitrite</u>
009GW02D02	43698-001	Water	X	X
009GW00102	43698-002	Water	X	X
009GW01302	43698-003	Water	X	X
009GW01402	43698-004	Water	X	X
009GW00202	43698-005	Water	X	X
009GW00302	43706-009	Water	X	X
009GW00402	43706-010	Water	X	X
009GW04D02	43728-016	Water	X	X
009GW00502	43728-017	Water	X	X
009GW05D02	43728-018	Water	X	X
009GW03D02	43728-019	Water	X	X
009GW01502	43728-020	Water	X	X
009GW00602	43741-020	Water	X	X
009GW06D02	43741-021	Water	X	X
009GW01202	43777-029	Water	X	X
009GW12D02	43777-030	Water	X	X
009GW07D02	43777-032	Water	X	X
009GW00702	43777-031	Water	X	X
009GW00802	43793-023	Water	X	X*
009GW08D02	43793-024	Water	X	X*
009GW01002	43793-022	Water	X	X*
009GW00902	43812-001	Water	X	X
009GW01102	43812-002	Water	X	X
FMWGW00402	43812-003	Water	X	X
009GW00602MS	43741-020MS	Water	X	X
009GW00602MSD	43741-020MSD	Water	X	X

NOTE: The following notations apply to all fractions of this SDG.

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE

X* = The sample was listed for this analysis on the Chain of Custody form and on the Sample Table in the data package as having been analyzed. This fraction of this sample was not reported on the spreadsheets and no Form I was available to flag. The laboratory sample number was obtained from the Sample Table listing.

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:



Data Qualifier Definitions

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS44 Organics and Inorganics

SAMPLES: 009GW00902, FMWGW00402, 009GW01102, 009GW02D02, 009GW00102,
009GW01302, 009GW01402, 009GW00202, 009GW00302, 009GW00402,
009GW04D02, 009GW04D02MS, 009GW04D02MSD, 009GW00502, 009GW05D02,
009GW03D02, 009GW01502, 009GW00602, 009GW00602MS, 009GW00602MSD,
009GW00602MD, 009GW06D02, 009GW01202, 009GW12D02, 009GW07D02,
009GW00702, 009GW00802, 009GW08D02, 009GW01002, 178GW00102

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of tetrahydrofuran was 37.3%, which exceeded the 30% QC limit for the standards run on 4/25/95 on instrument CMS. There were no positive results for this compound in the associated samples, so no action was required.

The Percent Relative Standard Deviations (%RSD's) of chloromethane (33.2%) and methylene chloride (41.4%) exceeded the 30% QC limit for the standards run on 5/03/95 on instrument CMS. There were no positive results for these compounds in the associated samples. No action was necessary.

The Percent Relative Standard Deviation (%RSD) of methylene chloride (33.9%) exceeded the 30% QC limit for the standards run on 4/10/95 on instrument GMS. There were no positive results for this compound in the associated samples. No action was required.

Continuing Calibration:

The Percent Differences (%D's) of acetone (34.0%) and tetrahydrofuran (33.5%) exceeded the 25% QC limit for the standard run on 4/25/95 at 12:47 on instrument CMS. The positive and non-detect results for these compounds in associated samples 009GW00202, 009GW02D02, 009GW00102, 009GW01302 and 009GW01402 were flagged as estimated (J) and (UJ).

The Percent Difference (%D) of acetone was 30.5%, which exceeded the 25% QC limit for the standard run on 5/05/95 at 10:59 on instrument CMS. The positive and non-detect results for this compound in associated samples 009GW01202, 009GW12D02, 009GW07D02, 009GW00802, 009GW08D02 and 009GW01002 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) of methylene chloride (30.4%) and acetone (25.3%) exceeded the 25% QC limit for the continuing calibration run on 5/06/95 at 13:50 on instrument CMS. The positive result for acetone in associated sample 009GW00702 was flagged as estimated (J), and the non-detect result for methylene chloride was flagged as estimated (UJ).

The Percent Difference (%D) of chloromethane (29.1%) exceeded the 25% QC limit for the standards run on 5/02/95 at 13:36 on instrument GMS. The non-detect results for this compound in associated samples 009GW00602 and 009GW06D02 were flagged as estimated (UJ).

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 5/01/95 at 09:29 on instrument IMS:

chloromethane	31.1%
bromomethane	49.3%

The results for these compounds in associated samples 009GW04D02, 009GW00502, 009GW05D02, 009GW03D02 and 009GW01502, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 3.9 ug/L in water blank BC042595B. All positive results for this compound in associated samples 009GW00202, 009GW02D02, 009GW00102, 009GW01302 and 009GW01402 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 10.0 ug/L in water blank BC050595A. All positive results for this compound in associated samples 009GW01202, 009GW12D02, 009GW07D02, 009GW00802, 009GW08D02 and 009GW01002 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 1.4 ug/L in water blank BC050695A. The positive result for this compound in associated sample 009GW00702, which was less than 10X the blank amount, was flagged as undetected (U) with the detection limit being raised to the level of contamination in the sample.

Methylene chloride was detected at 1.8 ug/L in water blank BG050295B. All positive results for this compound in associated samples 009GW00602 and 009GW06D02 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 2.2 ug/L in water blank BI042595A. All positive results for this compound in associated samples 009GW00902, FMWGW00402 and 009GW01102 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks and Equipment Blanks:

Acetone and methylene chloride were detected at 14.0 ug/L and 9.0 ug/L, respectively, in trip blank 009TW00202, analyzed in SDG CHS43. All positive results for acetone in associated samples 009GW00202, 009GW02D02, 009GW00102, 009GW01302 and 009GW01402 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. The results for methylene chloride were previously flagged based on the method blanks.

Chloroform was detected at 3.2 ug/L in field blank 009FW00202, which was analyzed in SDG CHS43. There were no positive results for this compound in the associated samples, so no action was required.

Methylene chloride and chloroform were detected at 5.0 ug/L and 2.2 ug/L, respectively, in equipment blank 009EW00202 analyzed in SDG CHS43. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. There were no positive results for chloroform in the associated samples, so no action was necessary.

The following compounds were detected in trip blank 009TW06D02, which was analyzed in SDG CHS43:

methylene chloride	9.0 ug/L
acetone	15.0 ug/L
chloroform	7.0 ug/L
2-butanone	8.0 ug/L

The positive results for acetone in associated samples 009GW00602 and 009GW06D02 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. There were no associated positive sample results for the other compounds. No action was required.

Acetone and methylene chloride were detected at 17.0 ug/L and 4.3 ug/L, respectively, in trip blank 009TW07D02, which was analyzed in SDG CHS43. All results for acetone in associated samples 009GW01202, 009GW12D02, 009GW07D02 and 009GW00702 less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. No further action was necessary.

Methylene chloride and chloroform were detected at 3.9 ug/L and 8.0 ug/L, respectively, in trip blank 009TW00802, which was analyzed in SDG CHS43. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. There were no positive results for chloroform in the associated samples, so no action was necessary.

Methylene chloride and chlorobenzene were detected at 4.0 ug/L and 2.7 ug/L, respectively, in equipment blank 009EW008D02, analyzed in SDG CHS43. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. There were no associated positive sample results for chlorobenzene, so no action was necessary.

Methylene chloride was detected at 4.1 ug/L in field blank 009FW08D02, analyzed in SDG CHS43. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. No further action was required.

TIC's:

There were no TIC's reported in the method blanks for this SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria were met. No action was required.

VII.) Field Duplicates:

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 009GW00702 and 009HW00702 (analyzed in SDG CHS43):

<u>Compound</u>	<u>RPD</u>
vinyl chloride	27%
trichlorofluoromethane	42%
1,2-dichloroethene	0.0%
1,2-dichloroethane	6.9%
trichloroethene	0.0%
benzene	9.5%
toluene	15%
chlorobenzene	10%
ethylbenzene	30%
xylene	21%

The results for trichlorofluoromethane in both samples were flagged as estimated (J), since the RPD exceeded the 30% QC limit for water samples.

The calculable RPD's for field duplicate samples 009GW01002 and 009HW01002 (analyzed in SDG CHS43) were:

<u>Compound</u>	<u>RPD</u>
benzene	19%
chlorobenzene	15%
ethylbenzene	24%

All RPD's were below the 30% QC limit, so no action was necessary.

The calculable RPD's for field duplicate samples 009GW00102 and 009HW00102 (analyzed in SDG CHS43) were:

<u>Compound</u>	<u>RPD</u>
toluene	57%
ethylbenzene	82%
xylene	34%

The results for these compounds in both samples were flagged as estimated (J) since their RPD's exceeded the 30% QC limit for water field duplicates.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria were met. No action was required.

IX.) TCL Compound Identification:

All criteria were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was necessary.

Continuing Calibration:

The Percent Difference (%D) for benzidine was 39.9%, which exceeded the 25% QC limit for the standard run on 4/25/95 at 10:01. All results for this compound in associated samples 009GW00302, 009GW00402, 009GW02D02, 009GW00102, 009GW01302, 009GW01402 and 009GW00202, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for the following compounds exceeded the 25% QC limit for the standards run on 5/01/95 at 10:58:

benzoic acid	40.8%
pentachlorophenol	26.6%
benzidine	33.8%

The positive and non-detect results for these compounds in associated samples 009GW01502, 009GW03D02, 009GW05D02, 009GW04D02, 009GW06D02 and 009GW00602 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) for benzoic acid (49.9%) and pentachlorophenol (29.9%) exceeded the 25% QC limit for the standards run on 5/02/95 at 12:33. The results for these compounds in associated sample 009GW00502, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for benzoic acid (44.5%) and hexachlorocyclopentadiene (39.1%) exceeded the 25% QC limit for the standards run on 5/04/95 at 12:11. The positive and non-detect results for these compounds in associated samples 009GW00802, 009GW08D02, 009GW01202, 009GW012D02, 009GW07D02 and 009GW01002 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) for the following compounds exceeded the 25% QC limit for the standards run on 5/05/95 at 09:56:

benzoic acid	56.2%
hexachlorocyclopentadiene	30.8%
pentachlorophenol	26.0%

The results for these compounds in associated sample 009GW00702, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for the following compounds exceeded the 25% QC limit for the standards run on 5/10/95 at 10:11:

benzoic acid	55.9%
2,4-dinitrophenol	25.5%
2,4-dinitrotoluene	26.4%

The results for these compounds in associated sample 178GW00102, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Di-n-butylphthalate and bis(2-ethylhexyl)phthalate were detected at 2.4 ug/L and 2.6 ug/L, respectively, in water blank B-A2309. All positive results for these compounds in associated samples 009GW02D02, 009GW00102, 009GW01302, 009GW01402, 009GW00202, 009GW00302 and 009GW00402 less than 10X the blank amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Field Blanks:

Di-n-butylphthalate and bis(2-ethylhexyl)phthalate were detected at 2.6 ug/L and 57.0 ug/L, respectively, in equipment blank 009EW00202, which was analyzed in SDG CHS43. The results for these compounds in the associated samples were previously flagged. No further action was required.

Bis(2-ethylhexyl)phthalate was detected at 8.4 ug/L in field blank 009FW08D02 and at 26.0 ug/L in equipment blank 009EW08D02. All positive results for this compound in the associated samples less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Matrix Spike / Matrix Spike Duplicate:

All MS/ MSD criteria were met. No action was necessary.

VII.) Field Duplicates:

The calculable Relative Percent Differences for field duplicate samples 009GW00702 and 009HW00702 (analyzed in SDG CHS43) were:

<u>Compound</u>	<u>RPD</u>
bis(2-chloroethyl)ether	115%
2-methylphenol	138%

The results for these compounds in the two samples were flagged as estimated (J) since their RPD's exceeded the 30% QC limit for water field duplicate samples.

The calculable RPD's for field duplicate samples 009GW01002 and 009HW01002 (analyzed in SDG CHS43) were:

<u>Compound</u>	<u>RPD</u>
2-chlorophenol	23%
1,4-dichlorobenzene	17%
1,2-dichlorobenzene	20%
2-methylnaphthalene	9.8%
acenaphthene	17%
bis(2-ethylhexyl)phthalate	59%

The results for bis(2-ethylhexyl)phthalate in the two samples were flagged as estimated (J) since the RPD for this compound exceeded the 30% QC limit for water field duplicates. The RPD's for the other compounds were within the 30% QC limit. No further action was required.

The RPD's for 2-methylphenol (18%) and naphthalene (2.3%) were within the 30% QC limit for field duplicate samples 009GW00102 and 009HW00102 (analyzed in SDG CHS43). No action was required.

The RPD for bis(2-ethylhexyl)phthalate was 84%, which exceeded the 30% QC limit for field duplicate samples 178GW00102 and 178HW00102 (analyzed in SDG CHS43). The results for this compound in these two samples were flagged as estimated (J).

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria were met. No action was required.

IX.) TCL Compound Identification:

All criteria were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was required.

III.) Calibration:

All Calibration criteria were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of decachlorobiphenyl (DCB) were below the 30-150% QC limits for the following samples:

009GW00902	26%
FMGW00402	24%
009GW01102	28%
009GW00402	26%

All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria were met. No action was required.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences for field duplicate samples 009GW00702 and 009HW00702 (analyzed in SDG CHS43). No action was required.

There were no calculable RPD's for field duplicate samples 009GW01002 and 009HW01002 (analyzed in SDG CHS43). No action was required.

There were no calculable RPD's for field duplicate samples 009GW00102 and 009HW0012 (analyzed in SDG CHS43). No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>ug/L</u>
CCB10	aluminum	45.5 ug/L	228
CCB2	antimony	24.9 ug/L	125
CCB2	barium	31.4 ug/L	157
CCB2	beryllium	1.10 ug/L	5.50
PBW2	calcium	264 ug/L	1320
CCB6	chromium	5.70 ug/L	28.5
CCB2	cobalt	12.2 ug/L	61.0
PBW1	iron	42.1 ug/L	211
PBW2	lead	2.91 ug/L	14.6
PBW1	magnesium	69.3 ug/L	347
CCB2	manganese	8.60 ug/L	43.0
PBW2	nickel	33.1 ug/L	166
CCB2	potassium	904 ug/L	4520
PBW2	selenium	3.13 ug/L	15.6

<u>Blank</u>			<u>Action Level</u>
<u>Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>ug/L</u>
CCB1	silver	9.40 ug/L	47.0
PBW4	sodium	370 ug/L	1850
CCB2	thallium	4.40 ug/L	22.0
CCB6	vanadium	10.0 ug/L	50.0
PBW2	zinc	75.4 ug/L	377

CCB = Continuing Calibration Blank, PBW = Preparation Blank (Water)

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank was an associated calibration or field blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL:

<u>Blank</u>			
<u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (ug/L)</u>
CCB2	cadmium	-1.30 ug/L	6.50
PBW1	copper	-7.00 ug/L	35.0

CCB = Continuing Calibration Blank, PBW = Preparation Blank (Water)

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria were met. No action was required.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for zinc (109%) exceeded the 20% QC limit for duplicate water sample 009GW006MD. The positive and non-detect results for this analyte in the samples in this SDG were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) of zinc was 63.6% in sample 009GW006MSD, which was below the 75-125% QC limits. The results for this analyte in the samples in this SDG were previously flagged as estimated. No further action was necessary.

IX) Field Duplicates:

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 009GW00102 and 009HW00102 (analyzed in SDG CHS43):

Analyte	RPD
aluminum	70%
barium	180%
calcium	140%
iron	190%
magnesium	160%
manganese	190%
potassium	43%

The results for these analytes in both samples were flagged as estimated (J), since the RPD's exceeded the 30% QC limit for water field duplicates.

The Relative Percent Differences (RPD's) for field duplicate samples 009GW000702 and 009HW00702 (analyzed in SDG CHS43) were:

Analyte	RPD
barium	35%
calcium	44%
chromium	50%
iron	62%
magnesium	38%
manganese	57%
potassium	34%
sodium	16%
vanadium	100%

The results (except sodium) for these analytes in both samples were flagged as estimated (J), since the RPD's exceeded the 30% QC limit for water field duplicates.

The calculable Relative Percent Differences (RPD's) for field duplicate samples 009GW01002 and 009HW01002 (analyzed in SDG CHS43) were:

Analyte	RPD
barium	166%
calcium	132%
magnesium	176%
potassium	27%
sodium	34%

The results for these analytes (except potassium) were flagged as estimated (J) in both samples, since the RPD's exceeded the 30% QC limit for water field duplicates.

The following Relative Percent Differences (RPD's) were calculated for field duplicate samples 178GW00102 and 178HW00102 (analyzed in SDG CHS43):

<u>Analyte</u>	<u>RPD</u>
calcium	3.2%
magnesium	11%
potassium	4.4%
sodium	1.8%

All of the RPD's for these compounds were within the 30% QC limit. No action was required.

X.) Furnace Atomic Absorption QC:

GFAA analysis was not required for the samples associated with this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The detection limits for all non-detect laboratory results (except mercury) were incorrect on the spreadsheets. For all samples except the duplicates and spikes, results for magnesium, manganese and mercury were listed twice on the spreadsheets. These were corrected during validation to match the Form I values.

All laboratory data were acceptable with qualification.

SULFIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

SULFITES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

CHLORIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The Relative Percent Difference (RPD) of 2.4% for field duplicate samples 009GW00102 and 009HW00102 (analyzed in SDG CHS43) was within the 30% QC limit. No action was required.

The RPD of 4.5% for field duplicate samples 009GW00702 and 009HW00702 (analyzed in SDG CHS43) was within the 30% QC limit. No action was necessary.

The RPD of 2.4% for field duplicate samples 009GW01002 and 009HW01002 (analyzed in SDG CHS43) was within the 30% QC limit. No action was necessary.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

SULFATES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL PHOSPHORUS

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

The Percent Recovery (%R) in sample 009GW04D02 was 67.2%, which was below the 75-125% QC limits. All positive and non-detect results for the samples in this SDG were flagged as estimated (J).

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The Relative Percent Difference (RPD) of 18% for field duplicate samples 009GW00102 and 009HW00102 (analyzed in SDG CHS43) was within the 30% QC limit. No action was necessary.

The RPD of 14% for field duplicate samples 009GW00702 and 009HW00702 (analyzed in SDG CHS43) was within the 30% QC limit. No action was required.

The RPD of 18% for field duplicate samples 009GW01002 and 009HW01002 (analyzed in SDG CHS43) was within the 30% QC limit. No action was necessary.

VIII.) Overall Assessment of Data/General:

Data for samples 009GW00902, 009GW01102 and FMWGW00402 were reported twice on the hardcopy data spreadsheets. The second entry for each sample was crossed off during data validation. These analyses were reported only once in the electronic data.

All laboratory data were acceptable with qualification.

BICARBONATE / CARBONATE / ALKALINITY

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

The Relative Percent Difference (RPD) of 0.0% for field duplicate samples 009GW00102 and 009HW00102 (analyzed in SDG CHS43) was within the 30% QC limit. No action was necessary.

The RPD of 8.7% for field duplicate samples 009GW00702 and 009HW00702 (analyzed in SDG CHS43) was within the 30% QC limit. No action was required.

VIII.) Overall Assessment of Data/General:

Data for samples 009GW00802, 009GW08D02 and 009GW01002 were not reported on the spreadsheets, and Form I's were not available in the data package.

The hardcopy spreadsheet page for Carbonate and Bicarbonate listed SW846-TDS as the analysis title. This was corrected during data validation. Data for samples 009GW00902, 009GW01102 and FMWGW00402 were reported twice on the hardcopy data spreadsheets. The second entry for each sample was crossed off during data validation. These analyses were reported only once in the electronic data.

All laboratory data were acceptable without qualification.

NITRATE

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

NITRITE

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was necessary.

VI.) TCL Compound Identification:

All Compound Identification criteria were met. No action was required.

VII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicates associated with this SDG for this analysis. No action was required.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification. Data for samples 009GW00802, 009GW08D02 and 009GW01002 were not reported on the spreadsheets, and Form I's were not available in the data package.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

(770) 923-3890

(770) 923-8769 (Fax)

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base, Zone H
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRICES: Soil and Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Organic Carbon (TOC), Total Gasoline (TGRO), Total Petroleum Hydrocarbons (TPH)
SDG NUMBER: CHS46

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>	<u>Me/CN</u>
159SB00301	44426-001/020	Soil	X	X	X	X
159SB01101	44426-002/021	Soil	X	X	X	X
159SB01102	44426-003/022	Soil	X	X	X	X
159SB01201	44426-004/023	Soil	X	X	X	X
159SB01202	44426-005/024	Soil	X	X	X	X
159SB00801	44426-006/025	Soil	X	X	X	X
159SB00701	44426-007/026	Soil	X	X	X	X
159SB00901	44426-008/027	Soil	X	X	X	X
159SB00501	44426-009/028	Soil	X	X	X	X
159SB00401	44426-010/029	Soil	X	X	X	X
159SB00601	44426-011/030	Soil	X	X	X	X
159SB01001	44426-012/031	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
159SB00101	44426-013/032	Soil	X	X	X	X
159SB00102	44426-014/033	Soil	X	X	X	X
159SB00201	44426-015/034	Soil	X	X	X	X
159SB01601	44426-016/035	Soil	X	X	X	X
159SB01501	44426-017/036	Soil	X	X	X	X
159SB01401	44426-018/037	Soil	X	X	X	X
159SB01301	44426-019/040	Soil	X	X	X	X
159M000101	44438-001/003/005	Soil	X	X	X	X
159M000201	44438-002/004/006	Soil	X	X	X	X
159W000101	44438-011/013/014/015	Water	X	X	X	X
159TM00101	44438-012	Water	X			
159SB01401MS	44426-018/037MS	Soil	X	X	X	X
159SB01401MSD	44426-018/037MSD	Soil	X	X	X	
159SB01401MD	44426-018/037MD	Soil				X

<u>Client</u>	<u>Lab</u>				
<u>Sample ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>TOC</u>	<u>TPH</u>	<u>TGRO</u>
159SB00301	44426-001/020	Soil		X	X
159SB01101	44426-002/021	Soil		X	X
159SB01102	44426-003/022	Soil		X	X
159SB01201	44426-004/023	Soil		X	X
159SB01202	44426-005/024	Soil		X	X
159SB00801	44426-006/025	Soil		X	X
159SB00701	44426-007/026	Soil		X	X
159SB00901	44426-008/027	Soil		X	X
159SB00501	44426-009/028	Soil		X	X
159SB00401	44426-010/029	Soil		X	X
159SB00601	44426-011/030	Soil		X	X
159SB01001	44426-012/031	Soil		X	X
159SB00101	44426-013/032	Soil		X	X
159SB00102	44426-014/033	Soil		X	X
159SB00201	44426-015/034	Soil		X	X
159SB01601	44426-016/035	Soil		X	X
159SB01501	44426-017/036	Soil		X	X
159SB01401	44426-018/037	Soil		X	X
159SB01301	44426-019/040	Soil		X	X
159M000101	44438-001/003/009	Soil	X	X	X
159M0001X1	44438-007	Soil		X	
159M000201	44438-002/004/010	Soil	X	X	X
159M0002X1	44438-008	Soil		X	
159W000101	44438-016RE/017	Water		X	X
159SB01401MS	44426-018/037MS	Soil		X	X
159SB01401MSD	44426-018/037MSD	Soil		X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
T = TRIP BLANK

DATA REVIEWER(S): Kent F. Pan, Ph.D., Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Kent F. Pan". The signature is written in a cursive style with a large initial "K".

Data Qualifier Definitions

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE Inc. - CHS46 CLP Organics and Inorganics

SAMPLES: 159SB00301, 159SB01101, 159SB01102, 159SB01201, 159SB01202, 159SB00801, 159SB00701, 159SB00901, 159SB00501, 159SB00401, 159SB00601, 159SB01001, 159SB00101, 159SB00102, 159SB00201, 159SB01601, 159SB01501, 159SB01401, 159SB01301, 159M000101, 159M0001X1, 159M000201, 159M0002X1, 159W000101, 159TM00101, 159SB01401MS, 159SB01401MSD, 159SB01401MD

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of acetone was 47.2%, which exceeded the 30% QC limit for the initial calibration run on 06/23/95 on instrument CMS-HP. The positive results for this compound in all the samples of this SDG were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 06/27/95 at 14:26 on instrument CMS-HP:

acetone	44.3%
carbon disulfide	38.4%
2-butanone	30.9%
4-methyl-2-pentanone	29.5%

The positive and non-detect results for these compounds in associated samples 159SB00301, 159SB01101, 159SB01201, 159SB01201, 159SB01202, 159SB00801, 159SB00701, 159SB00901, 159SB00501 and 159SB01401 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 06/28/95 at 19:15 on instrument CMS-HP:

acetone	29.1%
carbon disulfide	32.0%
2-butanone	32.2%
4-methyl-2-pentanone	28.8%

The positive and non-detect results for these compounds in associated samples 159SB01102, 159SB00401, 159SB00601, 159SB00101, 159SB00102, 159SB00201, 159SB01601, 159SB01501 and 159SB01301 were flagged as estimated (J) and (UJ).

The Percent Differences (%D) of the following compound exceeded the 25% QC limit for the continuing calibration run on 06/29/95 at 11:04 on instrument CMS-HP:

carbon disulfide	25.8%
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The results for this compound in associated samples 159SB01001, 159M000101 and 159M000201, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 4.2 ug/kg in method blank BC062795A1. Detections of methylene chloride in associated samples 159SB00301, 159SB01101, 159SB01201, 159SB01201, 159SB01202, 159SB00801, 159SB00701, 159SB00901, 159SB00501 and 159SB01401 below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected at 3.7 ug/kg in method blank BC062895B2. Detections of methylene chloride in associated samples 159SB01102, 159SB00401, 159SB00601, 159SB00101, 159SB00102, 159SB00201, 159SB01601, 159SB01501 and 159SB01301 below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected at 3.4 ug/kg in method blank BC062995A1. Detections of methylene chloride in associated samples 159SB01001, 159M000101 and 159M000201 below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Trip Blank:

There were no positive detections in the trip blank. No action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All Matrix Spike / Matrix Spike Duplicate criteria were met, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates designated in this SDG. No action was required.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria were met. No action was taken.

IX.) TCL Compound Identification:

All criteria were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GCMS Tuning:

All GCMS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration run on 04/18/95 on instrument HMS-HP:

4-chlorophenyl-phenylether	34.7%
benzo(k)fluoranthene	46.5%

The positive results for these compounds in all samples of this SDG were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 06/27/95 at 07:51 on instrument HMS-HP:

4,6-dinitro-2-methylphenol	29.6%
benzidine	81.6%

The results for these compounds in associated samples 159SB00301, 159SB01101, 159SB01102, 159SB01201, 159SB01202, 159SB00801, 159SB00701, 159SB00901, 159SB00401, 159SB00601, 159SB01001, 159SB00101, 159SB00102, 159SB00201, 159SB01601, 159SB01501 and 159SB01401, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the following target compounds exceeded the 25% QC limit for the continuing calibration run on 06/28/95 at 12:04 on instrument HMS-HP:

benzoic acid	29.9%
4,6-dinitro-2-methylphenol	31.7%
benzidine	74.4%
benzo(k)fluoranthene	32.9%

The positive and non-detect results for these compounds in associated samples 159SB00501 and 159SB01301 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) of the following compounds exceeded the 30% QC limit for the continuing calibration run on 06/29/95 at 12:28 on instrument HMS-HP:

hexachlorocyclopentadiene	47.9%
2,4-dinitrophenol	40.2%
benzidine	58.7%
benzo(k)fluoranthene	30.5%

The positive and non-detect results for these compounds in associated samples 159W000101, 159M000101 and 159M000201 were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. No action were required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria were met, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates analyzed in this SDG. No action was necessary.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was taken.

IX.) TCL Compound Identification:

All criteria were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria were met, so no action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections of target compounds in the method blanks. No data qualification was required.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of the TCX surrogate (primary column) in sample 159SB00801 was 18% which was below the 30-150% QC limits. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met, so no action was taken.

VII.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates designated in this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check and Gel Permeation Chromatography (GPC) were not performed. No action was taken.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met, so no action was taken.

III.) Blanks:

The following blank results represent the highest detection associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>		<u>Action Level</u>	
		<u>ug/L</u>	<u>mg/kg</u>	<u>ug/L</u>	<u>mg/kg</u>
CCB	aluminum	48.8		244	48.8
CCB	antimony	17.5		87.5	17.5
CCB	barium	11.2		56.0	11.2
CCB	beryllium	0.70		3.5	0.70
PBW	calcium	186		930	186
CCB	cobalt	3.30		16.5	3.30
PBW	copper	4.28		21.4	4.28
CCB	iron	43.1		216	43.1
PBW	lead	1.55		7.75	1.55
CCB	magnesium	76.4		382	76.4
CCB	manganese	2.80		14.0	2.80
ICB	potassium	573		2865	573
CCB	sodium	99.4		497	99.4
CCB	vanadium	5.00		25.0	5.00
CCB	zinc	4.90		24.5	4.90

CCB = Continuing Calibration Blank, ICB = Initial Calibration Blank,
PBW = Preparation Blank (Water)

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples and ug/L for water samples) for which the contaminated blank was an associated calibration or preparation blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>		<u>Action Level</u>	
		<u>ug/L</u>	<u>mg/kg</u>	<u>ug/L</u>	<u>mg/kg</u>
ICB	barium	-7.20		36.0	7.20
ICB	calcium	-21.6		108	21.6
ICB	copper	-4.60		23.0	4.60
ICB	iron	-10.7		53.5	10.7
ICB	manganese	-2.00		10.0	2.00
ICB	sodium	-14.0		70.0	14.0
PBS	thallium		-0.64	0.64	3.20

ICB = Initial Calibration Blank, PBS = Preparation Blank (Soil)

All associated positive sample results less than 5X the absolute value of the negative blank results and all non-detects were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

All ICP Interference Check criteria were met. No action was required.

V.) ICP Serial Dilution Analysis:

The Percent Differences (%D's) of the following analytes in the soil sample 159SB01401L exceeded the 10% QC limit:

aluminum	11.5%
calcium	14.8%
iron	14.4%
magnesium	12.7%
manganese	14.9%
sodium	10.7%
zinc	19.9%

The positive results for these analytes in all associated soil samples were flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

All LCS Percent Recovery (%R) criteria were met. No action was required.

VII.) Duplicate Sample Analysis:

The Relative Percent Differences (RPD's) of the following analytes exceeded the 35% QC limit for soil duplicate samples 159SB01401 and 159SB01401D:

Analyte	RPD
iron	109
zinc	130

All positive and non-detect results for these analytes in the associated soil samples were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of the following analytes were outside the 75-125% QC limits for the soil spiked sample 159SB01401S:

Analyte	%R
antimony	28.8
calcium	-248
iron	1449
zinc	72.4
cyanide	58.5

The non-detect results for antimony in the associated soil samples were rejected (R) due to excessively low spike recovery (<30%). There were no non-detect results for calcium. The positive results for antimony and calcium in the associated soil samples were flagged as estimated (J). All results for cyanide in the associated soil samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The positive and non-detect results for iron and zinc in the associated soil samples were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicates designated in this SDG. No action was taken.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used for samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The non-detect results for antimony in the soil samples were rejected due to an excessively low matrix spike recovery (<30%). All remaining laboratory data were acceptable with qualification.

TOTAL ORGANIC CARBON

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met, so no action was required.

III.) Calibration:

All Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

Organic carbon was detected at 40.0 mg/kg in the method blank. Detections of TOC in associated samples 159M000101 and 159M000201 were above 5X this amount. So no action was taken.

V.) Laboratory Control Samples (LCS):

The LCS Percent Recovery (%R) was within the QC limits, so no action was taken.

VI.) Duplicate Sample Analysis:

There were no Duplicate Sample Analyses performed in this SDG. No action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD analyses were not performed in this SDG. No action was taken.

VIII.) Field Duplicates:

There were no field duplicate samples analyzed in this SDG. No action was taken.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL PETROLEUM HYDROCARBONS (TPH)

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not necessary.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

The MS / MSD Percent Recoveries (%R's) of diesel were 132% and 150%, respectively, for spiked samples 159SB01401MS and 159SB01401MSD, which were above the 80-120% QC limits. The positive result in sample 159SB01401 was flagged as estimated (J).

VII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates designated in this SDG. No action was taken.

IX.) Overall Assessment of Data/General:

Sample ID's 159M000101 and 159M000201 were originally assigned to two samples each. The laboratory deidentified between these samples by changing the ninth digit to "X" for the second occurrence of each.

All laboratory data were acceptable with qualification.

TOTAL GASOLINE (TGRO)

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met, so no action was required.

III.) Calibration:

All Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks associated with this SDG. No action was taken.

V.) Laboratory Control Samples (LCS):

The LCS Percent Recovery (%R) was within the QC limits, so no action was taken.

VI.) Duplicate Sample Analysis:

There were no Duplicate Sample Analyses performed in this SDG. No action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicate samples analyzed in this SDG. No action was taken.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

(770) 923-3890

(770) 923-8769 (Fax)

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base, Zone H
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level IV
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Gasoline (TGRO), Total Petroleum Hydrocarbons (TPH)

SDG NUMBER: CHS47

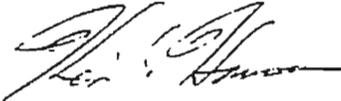
SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>	<u>Me/CN</u>
<u>Sample ID</u>	<u>Sample ID</u>					
159DM00201	44455-001/004/006/008	Water	X	X	X	X
159EM00201	44455-002/005/007/009	Water	X	X	X	X
159TM00201	44455-003	Water	X			

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>TPH</u>	<u>TGRO</u>
<u>Sample ID</u>	<u>Sample ID</u>			
159DM00201	44455-001/010	Water	X	X
159EM00201	44455-002/011	Water	X	X

D = DEIONIZED WATER BLANK, E = EQUIPMENT BLANK, T= TRIP BLANK

DATA REVIEWER(S): Kent F. Pan, Ph.D., Marvin L. Smith

RELEASE SIGNATURE: 

Data Qualifier Definitions

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE Inc. - CHS47 CLP Organics and Inorganics

SAMPLES: 159DM00201, 159EM00201, 159TM00201

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of acetone was 47.2%, which exceeded the 30% QC limit for the initial calibration run on 06/23/95 on instrument CMS-HP. Only blank samples were analyzed in this SDG, so no action was taken.

Continuing Calibration:

The Percent Difference (%D) of acetone was 30.3%, which exceeded the 25% QC limit for the continuing calibration run on 06/29/95 at 16:21 on instrument CMS-HP. Since only blank samples were analyzed in this SDG, no action was taken.

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 7 ug/L in method blank BC062995B1. Since only blank samples were analyzed in this SDG, no action was taken.

Field Blanks

Chloroform was detected at 3.9 ug/L and 6.0 ug/L in the field blanks 159EM00201 and 159DM00201, respectively. Since only blank samples were analyzed in this SDG, no action was taken. There were no positive detections in the trip blank.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no Matrix Spike / Matrix Spike Duplicate analyses performed in this SDG. A Blank Spike (BS) analysis was performed instead. All BS criteria were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates designated in this SDG. No action was required.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria were met. No action was taken.

IX.) TCL Compound Identification:

All criteria were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration run on 04/18/95 on instrument HMS-HP:

4-chlorophenyl-phenylether	34.7%
benzo(k)fluoranthene	46.5%

Since only blank samples were analyzed in this SDG, no action was taken.

Continuing Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 25% QC limit for the continuing calibration run on 06/29/95 at 12:28 on instrument HMS-HP:

benzoic acid	27.5%
hexachlorocyclopentadiene	47.9%
2,4-dinitrophenol	40.2%
benzidine	58.7%
benzo(k)fluoranthene	30.5%

Since only blank samples were analyzed in this SDG, no action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blank. No action were required.

Field Blanks:

There were no positive detections in the field blanks associated with this SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

Laboratory Control Sample (LCS) analysis was performed instead of MS / MSD analyses. All LCS Percent Recovery criteria were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates analyzed in this SDG. No action was necessary.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria were met, so no action was taken.

IX.) TCL Compound Identification:

All criteria were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria were met, so no action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blank. No data qualification was required.

Field Blanks:

There were no positive detections the field blanks associated with this SDG. No data qualification was required.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of decachlorobiphenyl in sample 159EM00101 was 17% on the secondary column, which was below the 30-150% QC limits. Since only blank samples were analyzed in this SDG, no action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

Laboratory Control Sample (LCS) analysis was performed instead of MS / MSD analyses. All LCS Percent Recovery criteria were met. No action was taken.

VII.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates designated in this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check and Gel Permeation Chromatography (GPC) were not performed. No action was taken.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met, so no action was taken.

III.) Blanks:

Since only blank samples were analyzed in this SDG, no action was required.

IV.) ICP Interference Check Sample Results:

All ICP Interference Check criteria were met. No action was required.

V.) ICP Serial Dilution Analysis:

There were no Serial Dilution Analyses performed in this SDG. No action was taken.

VI.) Laboratory Control Samples (LCS):

The LCS Percent Recovery (%R) of zinc was 253%, which exceeded the 80-120% QC limits. Since only blank samples were analyzed in this SDG. No action was required.

The LCS Spike Percent Recovery (%R) of cyanide was 21.5%, which was below the 80-120% QC limits. All cyanide results, which consisted entirely of non-detects, were rejected (R) since the %R was below 30%.

VII.) Duplicate Sample Analysis:

There were no Duplicate Sample Analyses performed in this SDG. No action was taken.

VIII.) Matrix Spike Recoveries:

There was no Matrix Spike analysis performed in this SDG. No action was taken.

IX.) Field Duplicates:

There were no field duplicates designated in this SDG. No action was necessary.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption analyses were not used for samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All non-detect results for cyanide were rejected due to an excessively low LCS recovery (< 30%). All remaining laboratory data were acceptable without qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so data qualification was not required.

Field Blanks:

There were no positive detections in the field blanks. No action was required.

IV.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was taken.

VI.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses performed in this SDG. No action was taken.

VII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was taken.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL GASOLINE

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria were met, so no action was required.

III.) Calibration:

All Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. No action was taken.

Field Blanks:

There were no positive detections in the field blanks. No action was necessary.

V.) Laboratory Control Samples (LCS):

The LCS Percent Recovery (%R) was within QC limits, so no action was taken.

VI.) Duplicate Sample Analysis:

There were no Duplicate Sample Analyses performed in this SDG. No action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses performed in this SDG. No action was required.

VIII.) Field Duplicates:

There were no field duplicate samples analyzed in this SDG. No action was taken.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program
National Functional Guidelines for Organic Data Review, 1994;
Laboratory Data Validation Functional Guidelines for Evaluating
Inorganics Analyses, 1994
SAMPLE MATRIX: Water, Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC),
Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN),
Dissolved Metals, Total Solids (TS), Total Recoverible
Petroleum Hydrocarbons (TRPH)
SDG NUMBER: CHS06

SAMPLES:

Client	Lab					
<u>Sample #:</u>	<u>Sample #</u>	<u>Matrix</u>	<u>VOA</u>	<u>S.V.</u>	<u>P/PCB</u>	<u>Me/CN</u>
178SB00101	41292-006/020/048	Soil	X	X	X	X
178TB00101	41292-058	Water	X			
178SB00102	41292-007/021/049	Soil	X	X	X	X
178SB00201	41292-008/022/050	Soil	X	X	X	X
178SB00202	41292-009/023/051	Soil	X	X	X	X
178SB00202RE	41292-009RE	Soil	X			
178SB00301	41292-010/024/052	Soil	X	X	X	X
178SB00302	41292-011/025/053	Soil	X	X	X	X
178SB00401	41292-012/026/054	Soil	X	X	X	X
178SB00402	41292-013/027/055	Soil	X	X	X	X
178SB00501	41292-014/028/056	Soil	X	X	X	X
178SB00502	41292-015/029/057	Soil	X	X	X	X
660SB00401	41308-001/008/015	Soil	X	X	X	X
660SB00401RE	41308-008RE	Soil		X		
660SB00501	41308-002/009/016	Soil	X	X	X	X
660SB00501RE	41308-009RE	Soil		X		
660SB00601	41308-003/010/017	Soil	X	X	X	X

<u>Client</u> <u>Sample #:</u>	<u>Lab</u> <u>Sample #</u>	<u>Matrix</u>	<u>VOA</u>	<u>S.V.</u>	<u>P/PCB</u>	<u>Me/CN</u>
660SB00601RE	41308-010RE	Soil		X		
660SB00602	41308-004/011/018	Soil	X	X	X	X
660SB00602RE	41308-011RE	Soil		X		
660SB00701	41308-005/012/019	Soil	X	X	X	X
660SB00701RE	41308-012RE	Soil		X		
660SB00702	41308-006/013/020	Soil	X	X	X	X
660SB00702RE	41308-013RE	Soil		X		
660SB00801	41308-007/014/021	Soil	X	X	X	X
660SB00801RE	41308-014RE	Soil		X		
666TB00101	41292-005	Water	X			
666SB00502	41292-001/016/044	Soil	X	X	X	X
666SB00601	41292-002/017/045	Soil	X	X	X	X
666SB00601RE	41292-002RE	Soil	X			
666SB00701	41292-003/018/046	Soil	X	X	X	X
666SB00701RE	41292-003RE	Soil	X			
666SB00701MS	41292-003MS/018MS	Soil	X	X	X	
666SB00701MSD	41292-003MSD/018MSD	Soil	X	X		
666SB00701D*	41292-046D	Soil				X
666SB00701S*	41292-046S	Soil				X
666SB00702	41292-004/019/047	Soil	X	X	X	X
666SB00702RE	41292-004RE	Soil	X			

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D* = MATRIX DUPLICATE, S* = MATRIX SPIKE, RE = RE-EXTRACTIONS / RE-ANALYSES

WEI CHEMISTRY:

<u>Client</u> <u>Sample #</u>	<u>Lab</u> <u>Sample #:</u>	<u>Matrix</u>	<u>TRPH</u>
178SB00101	41292-034	Soil	X
178SB00102	41292-035	Soil	X
178SB00201	41292-036	Soil	X
178SB00202	41292-037	Soil	X
178SB00301	41292-038	Soil	X
178SB00302	41292-039	Soil	X
178SB00401	41292-040	Soil	X
178SB00402	41292-041	Soil	X
178SB00501	41292-042	Soil	X
178SB00502	41292-043	Soil	X
666SB00502	41292-030	Soil	X
666SB00601	41292-031	Soil	X
666SB00701	41292-032	Soil	X
666SB00701MS	41292-018MS	Soil	X
666SB00701MSD	41292-018MSD	Soil	X
666SB00702	41292-033	Soil	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS05 CLP Organics and Inorganics

SAMPLES: 017SB01001, 017SB01002, 017SB01002DL, 017SB01011, 017SB01012, 017TB00701, 650SB00101, 650SB00201, 650SB00301, 649SB00101, 649SB00201, 649SB00301, 649SB00401, 649SB00401D, 649SB00401MS, 649SB00401MSD, 649SB00501, 650SB00401, 650SB00401RE, 666SB00101, 666SB00101RE, 666SB00102, 666SB00102RE, 666SB00201, 666SB00201RE, 666SB00202, 666SB00202RE, 666SB00301, 666SB00302, 666SB00302RE, 666SB00401, 666SB00402, 666SB00402MS, 666SB00402MSD, 666SB00402RE, 666SB00501, 666SB00501RE

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All criteria were met, so no action was necessary.

III.) Calibration: ..

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of methyl ethyl ketone was 40.7%, which exceeded the 30% QC limit for the standards run on 08/29/94 on instrument GCMSB. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Difference (%D) of acetone for the standard run on 08/29/94 on instrument GCMSB was 40.5%, which exceeded the 25% QC limit. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections of target compounds in the associated samples, so no action was taken.

Three Tentatively Identified Compounds (TIC's), isomers of trichlorobenzene, were detected in the method blank VBLK01. Detections of any of these TIC's in the associated samples below 5X the blank

amount were flagged as undetected (U), with the detection limit raised to the level of contamination in each sample.

Trip Blank:

There were no positive detections in the trip blank, so no action was required.

V.) Surrogate Recoveries:

The Surrogate Percent Recovery (%R) of toluene was 122% in associated sample 650SB00401RE, which was above the 81-117% QC limits. All positive sample results were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

BDB631MS/MSD, BDB641MS/MSD and BDD000DLMS/MSD were analyzed. All Matrix Spike/Matrix Spike Duplicate criteria for the method were met, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates designated in this SDG.

VIII.) Internal Standards Performance:

The internal standard area counts were below the 50-200% QC limits for the samples analyzed on the following dates:

<u>Date</u>	<u>QC Limits</u>	<u>BCM</u>	<u>DFB</u>	<u>CBZ</u>
08/25/94	650SB00401	49%	34%	26%
<u>Date</u>	<u>QC Limits</u>	<u>BCM</u>	<u>DFB</u>	<u>CBZ</u>
08/26/94	650SB00401RE	49%	34%	26%
	666SB00201	45%	35%	26%
<u>Date</u>	<u>QC Limits</u>	<u>BCM</u>	<u>DFB</u>	<u>CBZ</u>
08/27/94	666SB00201RE	49%	40%	28%
<u>Date</u>	<u>QC Limits</u>	<u>BCM</u>	<u>DFB</u>	<u>CEZ</u>
08/31/94	666SB00402	-	45%	34%
	666SB00501	-	47%	39%
<u>Date</u>	<u>QC Limits</u>	<u>BCM</u>	<u>DFB</u>	<u>CBZ</u>
09/01/94	666SB00501	-	-	42%

All positive and non-detect sample results associated with these internal standards were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

The initial analysis of sample 650SB00401 is considered to be of preferable data quality to the reanalysis because the reanalysis had one surrogate outside the QC limits and both 650SB00401 and 650SB00401RE had poor percent recoveries for all of the internal standards. Since the initial analysis had a better holding time date and both 650SB00201 and 650SB00201RE had poor percent recoveries for all of the internal standards, the initial analysis is considered to be of preferable data quality. The Form I's for the reanalyses were not present with this SDG. All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Difference (%D) for 2,4-dinitrophenol was 37.9%, which exceeded the 30% QC limit for the standard run on 08/26/94. All associated positive results for this compound were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) below exceeded the 25% QC limit for the standard run on the following dates and time for the following compounds:

<u>CC Date/Time</u>	<u>Compound</u>	<u>%D</u>
09/14/94, 02:18	4-nitrophenol	33.5
	benzidine	78.9
09/14/94, 16:09	2,4,6-tribromophenol	31.5

<u>CC Date/Time</u>	<u>Compound</u>	<u>%D</u>
09/15/94, 16:20	benzidine	41.5
09/16/94, 13:33	benzidine	56.8
08/31/94, 10:25	2,2'-oxybis(1-chloropropane)	26.6
	bis(2-chloroisopropyl)ether	26.6
	2,4-dinitrophenol	40.9
	4,6-dinitro-o-cresol	28.5
08/31/94, 22:45	2,4-dinitrophenol	38.9
	4-nitrophenol	27.1
	p-nitroaniline	29.2
	4-nitroaniline	29.2
	benzidine	29.0
09/01/94, 12:51	2,4-dinitrophenol	50.3
	4-nitrophenol	40.5
	p-nitroaniline	36.9
	4-nitroaniline	36.9
	4,6-dinitro-o-cresol	31.5
	pyrene	26.0
	benzidine	33.6
	3,3'-dichlorobenzidine	25.4
09/02/94, 14:09	pyrene	28.6
	3,3'-dichlorobenzidine	31.7

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections of target compounds in the associated samples, so no action was required.

Two Tentatively Identified Compounds (TIC's), aldol condensate and C₆H₁₀O isomers, were detected in the method blank SBLK01 analyzed on 09/14/94. One Tentatively Identified Compound (TIC) was detected in the method blank SBLK01 analyzed on 08/31/94. Detections of any of these TIC's in the associated samples below 5X the blank amount were flagged as undetected (U), with the detection limit raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

The Surrogate Recoveries (%R's) of the following compounds were outside the QC limits for the soil samples listed below:

	<u>NBZ (%R)</u>	<u>2FP (%R)</u>	<u>TBP (%R)</u>
<u>QC Limits:</u>	<u>23-120</u>	<u>225-121</u>	<u>19-122</u>
650SB00101	16	13	-
649SB00401	22	19	-
649SB00301	21	19	-
666SB00501	-	-	0
666SB00501RE	-	-	0

All positive and non-detect results in the base neutral fraction for associated samples 650SB00101, 650SB00401 and 649SB00301 were flagged as estimated (J) and (UJ). The %R of TBP in samples 666SB00501 and 666SB00501RE were 0%. All positive results in the acid fraction of these samples were flagged as estimated (J) and all non-detects were rejected (R).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recoveries (%R's) for sample 649SB00401MSD were above the QC limits for the following compounds:

<u>Compound</u>	<u>QC Limits</u>	<u>MSD. %R</u>
4-nitrophenol	11-114%	136
2,4-dinitrotoluene	28-89%	95

Since there were no positive detections of these compounds in associated sample 649SB00401, no action was required. The Relative Percent Difference (RPD) of acenaphthene was 28% in spiked samples 649SB00401MS/MSD, which exceeded the 19% QC limit. The non-detect result for this compound in associated sample 649SB00401 was flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates designated in this SDG.

VIII.) Internal Standards Performance:

The internal standard area counts were below the 50-200% QC limits for the following samples analyzed on 09/15/94:

	<u>NPT</u>	<u>ANT</u>	<u>PHN</u>	<u>CRY</u>	<u>PRY</u>
666SB00402	-	-	43%	36%	43%
666SB00501	34%	21%	14%	13%	14%

The internal standard area counts were below the 50-200% QC limits for the following samples analyzed on 09/16/94:

<u>QC Limits</u>	<u>ANT</u>	<u>PHN</u>
666SB00402RE	47%	47%
666SB00501RE	48%	47%

The internal standard area counts were below the 50-200% QC limits for the following samples analyzed on 09/01/94:

<u>QC limits</u>	<u>PHN</u>	<u>CRY</u>	<u>PRY</u>
666SB00101	-	-	43%
666SB00102	49%	49%	41%
666SB00201	-	-	42%
666SB00202	-	45%	31%
666SB00302	-	-	44%

The internal standard area counts were below the 50-200% QC limits for the following samples analyzed on 09/02/94:

<u>QC Limits</u>	<u>CRY</u>	<u>PRY</u>
666SB00101RE	-	42%
666SB00102RE	48%	44%
666SB00201RE	49%	37%
666SB00202RE	44%	25%
666SB00302RE	-	49%

All associated positive and non-detect sample results were flagged as estimated (J) and (UJ).

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All non-detect results for the acid fraction of samples 665SB00501 and 665SB00501RE were rejected due to 0% surrogate recoveries. All remaining laboratory data were acceptable with qualification. The initial analyses of samples 666SB00101, 666SB00202 and 666SB00302 are considered to be of preferable data quality to the reanalyses because they had better holding times with the same number of low percent recoveries of internal standards as the reanalyses. The reanalysis of sample 666SB00102 is considered preferable because the reanalysis had two internal standards with low percent recoveries and the initial analysis had three. The reanalysis of sample 650SB00402 is considered preferable because the reanalysis had two internal standrads with low percent recoveries and the initial analysis had three. The initial analysis of sample 666SB00201 is considered preferable because the initial analysis had one internal standard with low percent recoveries and the reanalysis had two. The Form I's for the reanalyses were not present with this SDG.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was required.

IV.) Blanks:

Method/QC Blanks:

There were no positive detections of target compounds in the method/QC blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) for the following samples were outside the QC limits for the following:

<u>QC limits</u>	<u>DBC (%R)</u> <u>30-150</u>	<u>TCX (%R)</u> <u>30-150</u>
017SB01101	0	
017SB01102		205
666SB00101		0
666SB00102	0	0
666SB00201	0	0
666SB00202	0	0

All positive results for the associated samples were flagged as estimated (J). All non-detect sample results with surrogate recoveries of 0% were rejected (R).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Relative Percent Difference (RPD) for gamma-BHC in spiked samples 649SB00401MS/MSD was 107%, which exceeded the 50% QC limit. The non-detect result for this compound in associated sample 649SB00401 was flagged as estimated (UJ).

The Percent Recovery (%R) of gamma-BHC was 22% for spiked sample 649SB00401MS, which was below the 46-127% QC limits. Since gamma-BHC was previously qualified based on a high RPD, no further action was required.

VII.) TCL Compound Identification:

All TCL compound identification criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates designated in this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check and Gel Permeation Chromatography (GPC) were not performed.

X.) Overall Assessment of Data/General:

All non-detect results in six samples were rejected due to 0% surrogate recoveries. All remaining laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

Only soil samples were analyzed in this SDG. The following blank results represent the highest detections associated with the samples and were used for data qualification:

Blank Type/ID	Analyte	Max. Conc. mg/kg	Action Level mg/kg
PBS1	silver	-0.312	1.56
PBS2	arsenic	-0.224	1.12
PBS3	calcium	12.3	61.5
PBS4	copper	-0.766	3.83
PBS5	sodium	5.92	29.6

PB = Preparation Blank

All associated positive sample results greater than IDL but less than 5X the blank results (Action Level, mg/kg for soil samples before percent solids correction) were flagged as undetected (U), with the detection limits being raised to the level of contamination in each sample.

For metals blank results having negative results with absolute values larger than the IDL's, the associated

positive sample results less than 5X the absolute value of the blank result and all associated non-detect results were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

All criteria were met, so no action was necessary.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution Analysis was not performed in this SDG.

VI.) Laboratory Control Samples (LCS):

The LCS Percent Recovery (%R) of silver was 66%, which was below the 80-120% QC limits. All associated positive and non-detect soil sample results for silver were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD's) for the following analytes with results greater than the CRDL exceeded the 35% QC limit:

<u>analyte</u>	<u>RPD</u>
manganese	47.9
zinc	50.5

All positive and non-detect results for these analytes in the associated sample 649SB00401 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of the following analytes were outside the QC limits (75-125%) for soil spiked sample 649SB00401S:

<u>analyte</u>	<u>%R</u>
antimony	30.6
lead	65.1
manganese	151
silver	68.3
zinc	23.0

The results for manganese and zinc were previously qualified due to high RPD's. The positive and non-detect results for the remaining analytes were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicates designated in this SDG.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used for samples associated with this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met, so no action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All Matrix Spike/Matrix Spike Duplicate criteria for the method was met, so no action was required.

VII.) TCL Compound Identification:

All Compound Identification Criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates designated in this SDG.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*

SAMPLE MATRIX: Soil/Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)

SDG NUMBER: CHS05

SAMPLES:

Client	Lab	Matrix	VOA	SVOC	P/PCB	Me/CN	TPH
Sample ID:	Sample ID:						
017SB01001	BDB620/41233-010/014	Soil	X	X	X	X	X
017SB01002	BDB621/41233-011/015	Soil	X	X	X	X	X
017SB01002DL	BDB621/41233-011DL	Soil		X			
017SB01101	BDB622/41233-012/016	Soil	X	X	X	X	X
017SB01102	BDB623/41233-013/017	Soil	X	X	X	X	X
017IB00701	BDB624 -	Water	X	X			
650SB00101	BDB625/41273-019	Soil	X	X	X	X	
650SB00201	BDB626/41273-020	Soil	X	X	X	X	
650SB00301	BDB627/41273-021	Soil	X	X	X	X	
649SB00101	BDB628/41273-022	Soil	X	X	X	X	
649SB00201	BDB629/41273-023	Soil	X	X	X	X	
649SB00301	BDB630/41273-024	Soil	X	X	X	X	
649SB00401	BDB631/412273-025	Soil	X	X	X	X	
649SB00401MD	BDB631/412273-025MD	Soil				X	

Client Sample ID:	Lab Sample ID:	Matrix	VOA	SVOC	P/PCB	Me/CN	TPH
649SB00401MS	BDB631/412273-025MS	Soil	X	X	X	X	
649SB00401MSD	BDB631/412273-025MSD	Soil	X	X	X	X	
649SB00501	BDB632/41273-026	Soil	X	X	X	X	
650SB00401	BDB633/41273-027	Soil	X	X	X	X	
650SB00401RE	BDB633/41273-027RE	Soil	X	X	X	X	
666SB00101	BDB634/41291-028/019	Soil	X	X	X	X	X
666SB00101RE	BDB634RE	Soil		X			
666SB00102	BDB635/41291-029/020	Soil	X	X	X	X	X
666SB00102RE	BDB635RE	Soil		X			
666SB00201	BDB636/41291-030/021	Soil	X	X	X	X	X
666SB00201RE	BDB636RE	Soil	X	X			
666SB00202	BDB637/41291-031/022	Soil	X	X	X	X	X
666SB00202RE	BDB637RE	Soil		X			
666SB00301	BDB638/41291-032/023	Soil	X	X	X	X	X
666SB00302	BDB639/41291-033/024	Soil	X	X	X	X	X
666SB00302RE	BDB639RE	Soil		X			
666SB00401	BDB640/41291-034/025	Soil	X	X	X	X	X
666SB00402	BDB641/41291-035/026	Soil	X	X	X	X	X
666SB00402MS	BDB641/41291-035/026MS	Soil	X		X	X	
666SB00402MSD	BDB641/41291-035/026MSD	Soil	X		X	X	
666SB00402RE	BDB641/41291-035/026RE	Soil		X			
666SB00501	BDB642/41291-036/027	Soil	X	X	X	X	X
666SB00501RE	BDB642RE	Soil		X			

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE=REANALYSIS, TB = TRIP BLANK, D = DUPLICATE

DATA REVIEWER(S): Kent F. Pan, Ph.D., Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS04 Organics and Inorganics

SAMPLES: 013SB02201, 013SB02202, 013SB02301, 013SB02302, 017SB00101, 017SB00101MS, 017SB00101MSD, 017SB00101MD, 017SB00201, 017SB00301, 017SB00302, 017SB00401, 017SB00402, 017SB00501, 017SB00501MS, 017SB00501MD, 017SB00502, 017SB00601, 017SB00602, 017SB00701, 017SB00702, 017SB00801, 017SB00802, 017SB00901, 017SB00902

VOLATILE ORGANICS

I.) Holding Times:

The 15 days between sample collection and analysis date for sample 017SB00501 exceeded the 14 day QC limit. All positive and non-detect results for this sample were estimated (J) and (UJ).

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

No compounds were detected in the method blanks.

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met. No action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

The data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for 2,4-dinitrophenol (37.9%) exceeded the QC limit of 30% for the initial calibration run on 8/26/94. Since there were no positive results for this compound in the associated samples, no action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 8/29/94 at 11:50 for the following compounds:

hexachlorocyclopentadiene	33.7%
benzidine	68.2%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 8/30/94 at 09:49 for the following compounds:

hexachlorocyclopentadiene	34.5%
2,4-dinitrophenol	30.1%
4-nitroaniline	29.7%
benzidine	67.8%
3,3'-dichlorobenzidine	59.1%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the methods were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria for the method were met. No action was necessary.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Relative Standard Deviations (%RSD's) of alpha-BHC (26.9%), gamma-BHC (21.3%) and delta-BHC (26.1%) exceeded the QC limit of 20% for the initial calibration run on 8/31/94. All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Relative Standard Deviations (%RSD's) of alpha-BHC (25.0%), delta-BHC (23.9%) and endrin ketone (28.9%) exceeded the QC limit of 20% for the initial calibration run on 9/02/94. All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) for the compounds listed below exceeded the 20% QC limit for the continuing calibration run on 8/31/94 at 20:18:

gamma-BHC	26.4%
aldrin	31.4%
heptachlor epoxide	27.6%
gamma-chlordane	27.9%
endosulfan I	30.4%
dieldrin	29.9%
endosulfan II	25.9%
4,4'-DDT	35.2%
endrin aldehyde	32.0%
endrin ketone	26.1%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) for the compounds listed below exceeded the 20% QC limit for the continuing calibration run on 9/01/94 at 18:21:

alpha-BHC	33.3%
methoxychlor	39.5%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ), since their percent recoveries exceeded 30%.

The Percent Differences (%D's) for the compounds listed below exceeded the 20% QC limit for the continuing calibration run on 9/02/94 at 02:07:

alpha-BHC	34.5%
methoxychlor	35.3%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ), since their percent recoveries exceeded 30%.

The Percent Difference (%D) for 4,4'-DDT (30.9%) exceeded the 20% QC limit for the continuing calibration run on 9/7/94 at 16:48. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ), since the percent recovery exceeded 30%.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The samples for this SDG were spiked with the surrogates dibutylchloroendate and tetrachloro-m-xylene. The Percent Recoveries (%R's) of the surrogates for the samples listed below were outside the QC limits (30-150%):

<u>Client</u> <u>Sample#:</u>	<u>DBC</u> <u>(%R)</u>	<u>TCX</u> <u>(%R)</u>
017SB00101	155	
017SB00201	0	
017SB00301	10	
017SB00401	0	
017SB00402	0	
017SB00601	0	
017SB00602	0	0
013SB02201	13	
013SB02202	14	
013SB02301	15	
017SB00501	21	
017SB00502		0
017SB00702	21	
017SB00802	10	
017SB00901	0	

The surrogates for sample 017SB00602 were diluted out. All positive and non-detect results were flagged as estimated (J) and (UJ). The positive results were flagged as estimated (J) and the non-detect results were rejected (R) for undiluted samples with surrogate recoveries less than 10%. All positive and non-detect results for the samples with surrogate recoveries between 10% and 30% were flagged as estimated (J) and (UJ). All positive results for sample 017SB00101 were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD compounds were diluted out for samples 017SB00101MS and 017SB00101MSD. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

The laboratory did not re-analyze samples with Surrogate Recoveries outside QC limits. All non-detect results for samples 017SB00201, 017SB00401, 017SB00402, 017SB00601, 017SB00901 were rejected due to low surrogate recoveries. All other data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u>			<u>Action Level</u>
<u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>mg/kg</u>
CCB3	aluminum	421 ug/L	42
CCB11	potassium	821 ug/L	821
CCB11	copper	25.6 ug/L	25.6

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB2	thallium	-13.8 ug/L	13.8
CCB4	selenium	-29.7 ug/L	29.7

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of cyanide (78.5%) for LCS #1 for batch 449 was below the QC limits of 80-120%. All positive and non-detect results in the associated samples were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample 017SB00101MD for batch 21673. The Relative Percent Differences (RPD's) for the compounds listed below exceeded the 35% QC limit:

aluminum	38.3%
barium	109%
lead	68.9%
manganese	48.7%
nickel	49.1%
sodium	49.4%

All results for these analytes in associated sample 017SB00101 were flagged as estimated (J) and (UJ).

Duplicate Sample Analysis was performed on sample 017SB00501 for batch 21674. The Relative Percent Differences (RPD's) for the compound listed below exceeded the 20% QC limit:

magnesium	50.3%
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All results for these analytes in associated sample 017SB00501 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony (65.2%), copper (63.5%), nickel (74.3%) and zinc (282%) were outside the QC limits of 75-125% for spiked sample 017SB00101MS. All positive and non-detect results for antimony, copper and nickel were flagged as estimated (J) and (UJ) in the associated samples. All positive results for zinc were flagged as estimated (J) in associated sample 017SB00101.

The Percent Recoveries (%R's) of antimony (44.4%) and magnesium (73.1%) were below the QC limits of 75-125% for spiked sample 017SB00501MS. All positive and non-detect results for these analytes in associated sample 017SB00501 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analysis were not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recoveries (%R's) of 170% for sample 017SB00101MS and 180% for sample 017SB00101MSD exceeded the 57-141% QC limits. All positive results in associated sample 017SB00101 were flagged as estimated (J).

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH)
SDG NUMBER: CHS04

SAMPLES:

<u>Client</u> Sample #:	<u>Lab</u> Sample #:	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
013SB02201	081714	Soil	X	X	X	X	X
013SB02202	081715	Soil	X	X	X	X	X
013SB02301	081716	Soil	X	X	X	X	X
013SB02302	081717	Soil	X	X	X	X	X
017SB00101	081705	Soil	X	X	X	X	X
017SB00101MS	081706MS	Soil	X	X	X	X	X
017SB00101MSD	081706MSD	Soil	X	X	X		X
017SB00101MD	081706MD	Soil				X	
017SB00201	081707	Soil	X	X	X	X	X
017SB00301	081708	Soil	X	X	X	X	X
017SB00302	081709	Soil	X	X	X	X	X
017SB00401	081710	Soil	X	X	X	X	X
017SB00402	081711	Soil	X	X	X	X	X
017SB00501	081801	Soil	X	X	X	X	X
017SB00501MS	081801MS	Soil				X	
017SB00501MD	081801MD	Soil				X	
017SB00502	081802	Soil	X	X	X	X	X
017SB00601	081712	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
017SB00602	081713	Soil	X	X	X	X	X
017SB00701	081803	Soil	X	X	X	X	X
017SB00702	081804	Soil	X	X	X	X	X
017SB00801	081805	Soil	X	X	X	X	X
017SB00802	081806	Soil	X	X	X	X	X
017SB00901	081807	Soil	X	X	X	X	X
017SB00902	081808	Soil	X	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE: 

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS03 Organics and Inorganics

SAMPLES: 013SB01602, 013SB01701, 013SB01702, 013SB01801, 013SB01801MS,
013SB01801MSD, 013SB01801MD, 013SB01802, 013SB01901, 013SB02001,
013SB02001RE, 013SB01902, 013SB02002, 013SB02101, 013SB02102, 013TB01401,
662SB00101, 662SB00102, 662SB00102RE, 662SB00201, 662SB00202, 662SB00301,
662SB00302, 662SB00401, 662SB00402

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met. No action was taken.

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 4.7 ug/kg in soil method blank BC082594A. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 7.4 ug/kg in soil method blank BC082694A. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

Methylene chloride was detected at 6.0 ug/L in trip blank 013TB01401. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met. No action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

There were 27 days between sample date and extraction date for samples 013SB02001RE and 662SB00102RE. This period of time exceeded the QC limit of 14 days for semivolatile extractions. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene (40.9%) exceeded the QC limit of 30% for the initial calibration run on 8/30/94. Since all results for this compound consisted entirely of non-detects, no action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/10/94 at 08:25 for the following compounds:

benzyl alcohol	26.5%
hexachloroethane	25.8%
hexachlorocyclopentadiene	43.8%
2,4-dinitrophenol	34.0%
4-nitrophenol	86.5%
4-nitroaniline	34.8%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/12/94 at 13:10 for the following compounds:

benzyl alcohol	37.7%
n-nitroso-di-n-propylamine	32.1%
nitrobenzene	26.1%
2-nitroaniline	32.1%
2,4-dinitrophenol	32.5%
4-nitrophenol	78.4%
4-nitroaniline	40.2%
4,6-dinitro-2-methylphenol	25.5%
pentachlorophenol	33.4%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/09/94 at 10:52 for the following compounds:

benzidine	34.3%
benzo(k)fluoranthene	35.2%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/10/94 at 15:35 for the following compounds:

benzoic acid	30.0%
benzidine	33.0%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/11/94 at 14:26 for the following compounds:

benzyl alcohol	26.5%
benzoic acid	43.5%
2,4-dinitrophenol	30.6%
benzidine	33.9%
benzo(k)fluoranthene	25.9%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All method blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of the surrogates listed below were below their respective QC limits for sample 013SB02001:

<u>Compound:</u>	<u>(%R)</u>	<u>QC limits</u>
nitrobenzene-d5	19%	(23-120%)
2-fluorobiphenyl	22%	(30-115%)
2-fluorophenol	23%	(25-121%)

As a results of these QC exceedances, all base / neutral compound results for this sample were flagged as estimated (J) and (UJ). The sample was re-extracted and re-analyzed.

The Percent Recoveries (%R's) of the surrogates listed below were below their respective QC limits for sample 662SB00102:

<u>Compound:</u>	<u>(%R)</u>	<u>QC limits</u>
nitrobenzene-d5	19%	(23-120%)
2-fluorobiphenyl	23%	(30-115%)
2-fluorophenol	18%	(25-121%)
phenol-d5	20%	(24-113%)

As a results of these exceedances, all acid and base / neutral compound results for this sample were flagged as estimated (J) and (UJ). The sample was re-extracted and re-analyzed.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Relative Percent Difference (RPD) of acenaphthene (20%) exceeded the QC limit of 19% for spiked samples 013SB01801MS and 013SB01801MSD. All positive and non-detect results for this compound in associated sample 013SB001801 were flagged as estimated (J) and (UJ).

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the internal standards listed below exceeded the QC limits of 50-200% for sample 013SB01801:

napthalene-d8.	206%
acenaphthene-d8	234%
phenanthrene-d10	236%
chrysene-d12	209%

All positive results for compounds associated with these internal standards were flagged as estimated (J). In addition, all internal standards for this sample were outside their established retention time windows. No further action was necessary.

The Percent Recoveries (%R's) of the internal standards listed below were below the QC limits of 50-200% for sample 013SB01701:

1,4-dichlorobenzene	40%
napthalene-d8	35%
acenaphthene-d8	29%
phenanthrene-d10	25%
chrysene-d12	22%
perylene-d12	18%

All positive and non-detect results for compounds associated with these internal standards were flagged as estimated (J) and (UJ). In addition, all internal standards for this sample were outside their established retention time windows. No further action was necessary.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification. The original analyses are considered of preferable data quality to the reanalyses because the reanalyses exceeded holding times for samples 013SB02001 and 662SB00102.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Relative Standard Deviation (%RSD) of 4,4'-DDT (32.5%) exceeded the QC limit of 20% for the continuing calibration run on 9/09/94 at 02:54. All results for this compound, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> mg/kg
CCB9	aluminum	55 ug/L	55.0
PB21670	lead	0.58 mg/kg	2.40
CCB9	magnesium	72 ug/L	72.0

CCB = Continuing Calibration Blank, PB = Soil Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank or preparation blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB5	copper	-4.7 ug/L	4.7
CCB4	thallium	-6.9 ug/L	6.9

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The solid LCS Percent Recoveries (%R's) were outside the 80-120% QC limits for beryllium in LCSA (78%) and LCSB (78%). All results for this analyte less than the IDL in the associated samples were flagged as estimated (UJ).

VII.) Duplicate Sample Analysis:

Duplicate sample analysis was performed on sample 013SB01801MD. The Relative Percent Differences (RPD's) for the compounds listed below exceeded the 35% QC limit:

copper	103%
aluminum	40.3%

All results for these analytes in associated sample 0135SB01301 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for antimony (56.8%), cobalt (247%) and magnesium (140%) were outside the QC limits of 75-125%. All positive and non-detect results for antimony were flagged as estimated (J) and (UJ) in associated sample 013SB01801. All positive results for cobalt and magnesium were flagged as estimated (J) in the associated samples.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analysis was not performed for samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

The Relative Percent Difference (RPD) for the MS / MSD was 83%, which exceeded the 30% QC limit. All positive and non-detect results in associated sample 013SB01801 were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) was 34% for spiked sample 013SB01801MSD, which was below the 57-141% QC limits. Data qualification was previously performed based on the RPD. No further action was required.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH)
SDG NUMBER: CHS03

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
013SB01602	081608	Soil	X	X	X	X	X
013SB01701	081609	Soil	X	X	X	X	X
013SB01702	081610	Soil	X	X	X	X	X
013SB01801	081611	Soil	X	X	X	X	X
013SB01801MS	081611MS	Soil	X	X	X	X	X
013SB01801MSD	081611MSD	Soil	X	X	X		X
013SB01801MD	081611MD	Soil				X	
013SB01802	081612	Soil	X	X	X	X	X
013SB01901	081613	Soil	X	X	X	X	X
013SB02001	081614	Soil	X	X	X	X	X
013SB02001RE	081614RE	Soil		X			
013SB01902	081615	Soil	X	X	X	X	X
013SB02002	081616	Soil	X	X	X	X	X
013SB02101	081617	Soil	X	X	X	X	X
013SB02102	081618	Soil	X	X	X	X	X
013TB01401	081619	Water	X				
662SB00101	081620	Soil	X	X	X	X	X
662SB00102	081621	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
662SB00102RE	081621RE	Soil		X			
662SB00201	081622	Soil	X	X	X	X	X
662SB00202	081623	Soil	X	X	X	X	X
662SB00301	081624	Soil	X	X	X	X	X
662SB00302	081625	Soil	X	X	X	X	X
662SB00401	081626	Soil	X	X	X	X	X
662SB00402	081627	Soil	X	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
RE = RE-EXTRACTION, TB = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS02 CLP Organics and Inorganics

SAMPLES: 013SB00401, 013SB00501, 013SB00601, 013SB00701, 013SB00801, 013SB00802,
013SB00901, 013SB01001, 013SB01002, 013SB01101, 013SB01102, 013SB01201,
013SB01202, 013SB01301, 013SB01302, 013TB01101, 013SB01401, 013SB01402,
013SB01501, 013SB01601

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were within QC limits, so no action was required.

Continuing Calibration:

The Percent Difference (%D) for acetone was 35.3%, which exceeded the 25% QC limit for the standard run on 08/26/94 at 14:44. Positive and non-detect results in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride and acetone were detected in method blank BG082494A at 5 ug/kg and 4 ug/kg, respectively. Detections of these compounds below 10X these amounts in the associated samples were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and acetone were detected in method blank BG082594A at 3 ug/kg and 2 ug/kg, respectively. Detections of these compounds below 10X these amounts in the associated samples were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and acetone were detected in method blank BG082694C at 8 ug/kg and 3 ug/kg, respectively. Detections of these compounds below 10X these amounts in the associated samples were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and acetone were both detected in method blank BG082994A at 2 ug/kg. Detections of these compounds below 10X this amount in the associated samples were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Rinsate Blanks:

No rinsate blank was analyzed with the samples in this SDG.

Trip Blanks:

Methylene chloride was detected in trip blank 013TB01101 at 8 ug/L. Detections of methylene chloride in the associated samples below 10X this amount were flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample.

TIC's:

No Tentatively Identified volatile compounds were detected in the blanks. No action was needed.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of toluene-d8 in sample 013SB00401 was 119%, which was above the 81-117% QC limits. Analysis of re-extraction sample 013SB00401RE produced the same results. All positive detections in this sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All Matrix Spike/Matrix Spike Duplicate criteria were met for the method, so no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The area count for chlorobenzene-d5 in sample 013SB00401 was less than the QC limit of 50% of the 12-hour standard. Positive and non-detect results for compounds quantitated using this internal standard were flagged as estimated (J) and (UJ) in this sample. The reanalysis of this sample (013SB00401RE) had all internal standard area counts within QC limits. Reanalysis data were considered superior to data from the initial analysis.

The area counts for all three internal standards in sample 013SB00801 were below the 50% QC limit. Reanalysis of this sample (013SB00801RE) gave similar results. All data for both sample analyses were flagged as estimated (J) and (UJ). The original analysis is considered to be of slightly preferable data

quality due to a better holding time.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken. No blank qualifications were needed in section IV.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

The laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

Re-extraction of sample 013SB00901RE was conducted 31 days after the sample date, which exceeded the 14 day QC limit by more than two times. Data in this sample, which consisted entirely of non-detects were rejected (R). All other Holding Time criteria for the method were met, so no further action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Dates for some of the calibrations were manually changed by the laboratory on the report forms. For instrument HMS-HP, the date was changed from 08/31/94 to 08/30/94. For instrument FMS-HP, the initial calibration was changed from 09/19/94 to 09/02/94, and the continuing calibration date was changed from 09/06/94 to 09/02/94. All manual changes were made on 10/14/94. No explanation was given in the laboratory narrative for any of these changes.

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene was 40.9%. Positive

detections of this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 09/07/94 at 15:34 on instrument HMS-HP for the following compounds:

benzoic acid	46.5%
2,4,6-tribromophenol	25.6%
2,4-dinitrophenol	27.0%
benzidine	29.6%

Positive and non-detect data for these compounds were flagged as estimated (J) or (UJ) in the associated samples.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 09/08/94 at 13:33 on instrument HMS-HP for the following compounds:

bis(2-chloroisopropyl)ether	30.1%
2,4,6-tribromophenol	28.3%
benzo(k)fluoranthene	35.5%

Positive and non-detect data for these compounds were flagged as estimated (J) or (UJ) in the associated samples.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 09/09/94 at 10:52 on instrument HMS-HP for the following compounds:

benzidine	34.3%
benzo(k)fluoranthene	35.2%

Positive and non-detect data for these compounds were flagged as estimated (J) or (UJ) in the associated samples.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 09/12/94 at 16:51 on instrument HMS-HP for the following compounds:

3-nitroaniline	26.5%
benzidine	34.4%
benzo(k)fluoranthene	32.2%

Positive and non-detect data for these compounds were flagged as estimated (J) or (UJ) in the associated samples.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 09/12/94 at 13:10 on instrument FMS-HP for the following compounds:

n-nitrosodimethylamine	41.6%
benzyl alcohol	37.7%
n-nitroso-di-n-propylamine	32.1%
nitrobenzene	26.1%
2,4,6-tribromophenol	72.5%
hexachlorocyclopentadiene	32.1%
2-nitroaniline	42.4%
2,4-dinitrophenol	32.5%
4-nitrophenol	78.4%
4-nitroaniline	40.2%
4,6-dinitro-2-methylphenol	25.5%
pentachlorophenol	33.4%

Positive and non-detect data for these compounds were flagged as estimated (J) and (UJ) in the associated samples.

IV.) Blanks:

Method Blanks:

No target compounds were detected in any of the method blanks, so no action was required.

TICs:

No Tentatively Identified Compounds were reported as detected in the method blanks.

V.) Surrogate Recoveries:

The following surrogate Percent Recoveries (%R's) were below the QC limits in sample 013SB00901:

<u>Surrogate</u>	<u>%R</u>	<u>QC limits</u>
2-fluorophenol	22	25-121%
2-fluorobiphenyl	26	30-115%

Since only one surrogate was outside the QC limits for each fraction, no action was required.

VI.) Matrix Spike / Matrix Spike Duplicate:

All Matrix Spike / Matrix Spike Duplicate criteria were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met, so no action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken. No blank qualifications were required in section IV.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Dates for the calibrations of the mass-spectrometers were manually changed on the report forms. The laboratory should give an explanation of this date change. Tuning criteria and sample analysis criteria depend on accurate dating of calibrations.

In sample 013SB00901, surrogate recoveries were below QC limits but no data qualification was required. Non-detect data for 013SB00901RE were rejected because the holding time was greatly exceeded before re-extraction was performed. The original result was of preferable data quality.

All other laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

The following samples had a holding time of 11 days from sampling date to extraction, which exceeded the 10 day QC limit: 013SB00401, 013SB00501, 013SB00601, 013SB00701, 013SB00801, 013SB00802, 013SB00901, 013SB01001, 013SB01002, 013SB01101, 013SB01102, 013SB01201, 013SB01202, 013SB01301 and 013SB01302. All positive and non-detect data for target analytes in these samples were flagged as estimated (J) and (UJ). All other samples were extracted and analyzed within required holding times, so no further action was taken.

II.) Instrument Performance:

All criteria for the method were met, so no action was required.

III.) Calibration:

All Calibration criteria for the method were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was taken.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recoveries criteria were met, so no action was required.

VI.) Laboratory Control Sample (LCS):

Laboratory Control Sample (LCS) LS-O4022 for soil was analyzed by the laboratory. All of the spike recoveries were less than 100%, but within the soil QC limits.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Matrix Spike recoveries of 4,4'-DDE and 4,4'-DDD were apparently 10X the amount spiked. These were, however, reported by the laboratory as zero recovery. In the narrative, the laboratory attributed this to matrix effect within the sample. The positive results for these compounds in associated sample 013SB00501 were flagged as estimated (J). The Relative Percent Difference for 4,4'-DDT in the MS/MSD set was 79%, which exceeded the 50% QC limit. The positive result for this compound in associated sample 013SB00501 was flagged as estimated (J).

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met, so no action was required.

VIII.) Field Duplicates:

No field duplicates were analyzed by the laboratory for pesticides and PCB's.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Data were not available in the package.

Gel Permeation Chromatography (GPC):

Data were not available in the package.

X.) Overall Assessment of Data/General:

Holding times from sample date to extraction were exceeded for most samples, causing associated data to be flagged as estimated. Possible matrix interferences gave poor results in the Matrix Spike Duplicate analyses for 4,4'-DDE, 4,4'-DDD and 4,4'-DDT.

All remaining data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

The following Continuing Calibration Verifications (CCVs) for arsenic were above the QC limits of 90-110%:

<u>CCV Date</u>	<u>CCV time</u>	<u>% Recovery</u>
09/02/94	11:21	111
09/02/94	13:16	111

Positive detections for arsenic in the associated samples were flagged as estimated (J). Samples associated were: 013SB00901, 013SB01001, 013SB01002, and 013SB01101.

The following Continuing Calibration Verifications (CCVs) for selenium were below the QC limits of 90-110%:

<u>CCV Date</u>	<u>CCV time</u>	<u>% Recovery</u>
08/31/94	14:18	74.5
08/31/94	19:52	87.0
08/31/94	20:53	89.0
08/31/94	22:58	76.0
08/31/94	23:18	74.8

Positive detections and non-detect data for selenium in associated samples were flagged as estimated (J) and (UJ). Samples associated were: 013SB00401, 013SB00501, 013SB00601, and 013SB00701.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level Soil: mg/kg</u>
CCB9	aluminum	55.4 ug/L	55.4

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>Soil: mg/kg</u>
CCB8	antimony	15.8 ug/L	15.8
CCB4	arsenic	15.4 ug/L	15.4
CCB9	barium	24.6 ug/L	24.6
CCB9	beryllium	0.7 ug/L	0.7
CCB9	cadmium	1.9 ug/L	1.9
CCB8	calcium	66.0 ug/L	66.0
CCB8	chromium	2.7 ug/L	2.7
CCB9	cobalt	7.6 ug/L	7.6
CCB9	iron	62.1 ug/L	62.1
CCB8	lead	34.6 ug/L	34.6
CCB9	magnesium	71.6 ug/L	71.6
CCB9	manganese	6.4 ug/L	6.4
CCB9	nickel	11.7 ug/L	11.7
CCB8	potassium	718 ug/L	718
CCB7	selenium	30.4 ug/L	30.4
CCB8	sodium	54.8 ug/L	54.8
CCB2	thallium	29.8 ug/L	29.8
CCB9	vanadium	6.5 ug/L	6.5
CCB9	zinc	35.1 ug/L	35.1

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u> <u>(mg/kg)</u>
CCB 5	aluminum	-1.4 ug/L	*
ICB1	arsenic	-9.7 ug/L	*
ICB1	cadmium	-0.3 ug/L	*
CCB5	chromium	-0.2 ug/L	*
ICB1	copper	-6.4 ug/L	6.4
ICB1	manganese	-0.1 ug/L	*
CCB6	selenium	-6.2 ug/L	*
CCB9	silver	-2.5 ug/L	2.5
CCB4	thallium	-6.9 ug/L	*
CCB5	vanadium	-1.4 ug/L	*

CCB = Continuing Calibration Blank, ICB = Initial Calibration Blank

* = Positive data were qualified using higher blank detection above, and non-detects were flagged as indicated below

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

Interference Check Sample (ICS) data were not included in the laboratory report for this SDG.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution results were not reported in the laboratory report for this SDG.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria for the method were met, so no action was necessary.

VIII.) Matrix Spike Recoveries:

Matrix Spike recoveries were outside the 75-125% QC limits for the following analytes which had sample concentrations less than 4X spike concentration:

<u>Analyte</u>	<u>Spike Recovery</u>
antimony	48.8%
arsenic	67.8%
lead	133%
magnesium	153%
selenium	74.8%

All positive results for lead and magnesium were flagged as estimated (J) and all positive and non-detect results for antimony, arsenic and selenium were flagged as estimated (J) and (UJ) in associated sample 013SB00501.

IX.) Field Duplicates:

No field duplicates were analyzed by the laboratory with this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

No MSA data were reported with this SDG.

Post Digestion Spike Recovery:

No post digest spike recoveries were reported with this SDG.

XI.) Sample Result, Calculation / Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

Instrument parameters were not reported with this SDG. They were, however, given with SDG CHS01. Using those previously given for appropriate instruments, all criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The standard brief physical description of the samples was omitted in the laboratory report. All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS (IR)

I.) Holding Times:

All holding times from sample to analysis were within QC limits, so no action was required.

II.) Calibration:

All Calibration criteria were met, so no action was required.

III.) Blanks:

Laboratory Blank BC1128A was dated 09/19/94 on the data report sheet. Associated Laboratory Control Sample (LCS) LS-C1128 was dated 08/19/94. Because the laboratory numbers corresponded sequentially, the validator considered this a typographical error. The blank data were considered dated 08/19/94. No further action was required.

No target compounds were detected in the method blanks. No further action was required.

IV.) Laboratory Control Sample (LCS):

All Laboratory Control Standard criteria were met. No action was required.

V.) Matrix Spike/Matrix Spike Duplicate:

All Matrix Spike / Matrix Spike Duplicate criteria were met.

VI.) Field Duplicates:

There were no field duplicates reported with this SDG.

VII.) Overall Assessment of Data/General:

The method blank associated with 08/19/94 data was reported using the date, 09/19/94. This was considered a typographical error and was treated as 08/19/94.

All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe / Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons by (TPH)

SDG NUMBER: CHS02

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
013SB00401	081322	Soil	X	X	X	X	X
013SB00401RE	081322RE	Soil	X				
013SB00501	081323	Soil	X	X	X	X	X
013SB00601	081324	Soil	X	X	X	X	X
013SB00701	081325	Soil	X	X	X	X	X
013SB00801	081326	Soil	X	X	X	X	X
013SB00801RE	081326RE	Soil	X				
013SB00802	081327	Soil	X	X	X	X	X
013SB00901	081328	Soil	X	X	X	X	X
013SB00901RE	081328RE	Soil		X			
013SB01001	081329	Soil	X	X	X	X	X
013SB01002	081330	Soil	X	X	X	X	X
013SB01101	081331	Soil	X	X	X	X	X
013SB01102	081332	Soil	X	X	X	X	X
013SB01201	081333	Soil	X	X	X	X	X
013SB01202	081334	Soil	X	X	X	X	X
013SB01301	081335	Soil	X	X	X	X	X
013SB01302	081336	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
013SB01302DL	081336DL	Soil	X				
013TB01101	081337	Water	X				
013SB01401	081601	Soil	X	X	X	X	X
013SB01402	081602	Soil	X	X	X	X	X
013SB01501	081603	Soil	X	X	X	X	X
013SB01602	081604	Soil	X	X	X	X	X
013SB00501MS	081323MS	Soil	X	X	X	X	X
013SB00501MSD	081323MSD	Soil	X	X	X	X	X
013SB00501MD	081323D	Soil				X	
013SB01402MS	081602S	Soil					X
013SB01402MSD	081602MSD	Soil					X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
 TB = TRIP BLANKS, DL = DILUTION, RE = REANALYSIS

DATA REVIEWER(S): Jean M. Delashmit, Marvin L. Smith

RELEASE SIGNATURE: 

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Pace, Incorporated - CHS01 CLP Organics and Inorganics

SAMPLES: 013SB00101, 013SB00102, 013SB00201, 013SB00202, 013SB00301, 013SB00302,
656SB00101, 656SB00102, 656SB00201, 656TB00201, 656SB00202, 656SB00301,
656SB00302, 656SB00401, 656SB00402, 656SB00501, 656SB00601, 656SB00701,
656SB00801, 656SB00901, 656SB00902

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for tetrahydrofuran was 31.1%, which exceeded the 30% QC limit for the standards run on 06/22/94 on instrument CMS-HP. There were no positive detections for this compound in associated samples, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria were within QC limits, so no action was required.

IV.) Blanks:

Method Blanks:

Methylene chloride was detected in method blank BC081794A at 6 ug/kg. Detections of this compound below 10X this amount in associated samples were flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected in method blank BC081894A at 4 ug/kg. Detections of this compound below 10X this amount in associated samples were flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample.

Rinsate Blanks:

No rinsate blank was analyzed with the samples in this SDG.

Trip Blanks:

Methylene chloride and acetone were detected in trip blank 656TB00201 at 4 ug/kg and 20 ug/kg, respectively. Detections of methylene chloride in the associated samples were flagged based on concentrations in the method blanks. Detections of acetone below 10X this amount in associated samples were flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample. There were no detections of Tentatively Identified Compounds in the trip blank.

TIC's:

No Tentatively Identified volatile compounds were detected in the blanks. No action was needed.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All Matrix Spike/Matrix Spike Duplicate criteria were met for the method, so no action was required.

VII.) Field Duplicates:

There were no field duplicate sample sets for volatile analytes reported with this SDG.

VIII.) Internal Standards Performance:

The area count for chlorobenzene-d5 in sample 081314 (EPA number 656SB00901) was 61671, which was less than the QC limit of 64771 (i.e. less than 50% of the 12-hour standard). Positive and non-detect results for this sample for compounds quantitated using this internal standard were flagged as estimated (J) and (UJ).

All other Internal Standard criteria were met, so no further action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

The laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

The holding time to extraction for 656SB0202RE was 31 days which was more than 2X the 14 day QC limit. The only target compound detected in this reanalysis was phenol, which was flagged as estimated (J). All non-detect data in this sample were flagged as rejected (R). All other sample holding times were met, so no further action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All initial calibration dates were manually changed. The manually entered dates were used for validation. There was no explanation of these changes in the laboratory narrative.

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene was 40.9%, which exceeded the 30.0% QC limit for the initial calibration standard run dated 08/30/94 on instrument HMS-HP. The positive detection of this compound in sample 656SB00101 was flagged as estimated (J). This compound was not detected in the other associated samples, so no further action was required.

Continuing Calibration:

All continuing calibration dates were manually changed. The manually entered dates were used for validation. There was no explanation of these changes in the laboratory narrative.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on instrument HMS-HP on 09/01/94 at 15:26 for the following compounds:

aniline	28.2%
benzoic acid	36.6%
benzidine	31.6%
benzo(k)fluoranthene	31.5%

Positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on instrument HMS-HP on 09/02/94 at 12:26 for the following compounds:

benzoic acid	39.6%
2,4-dinitrophenol	35.2%
benzidine	46.1%

Positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on instrument HMS-HP on 09/07/94 at 15:34 for the following compounds:

benzoic acid	46.5%
2,4-dinitrophenol	27.0%
benzidine	29.6%

Positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on instrument FMS-HP on 09/12/94 at 13:10 for the following compounds:

n-nitrosodimethylamine	41.6%
benzyl alcohol	37.7%
n-nitroso-di-n-propylamine	32.1%
nitrobenzene	26.1%
2,4,6-tribromophenol	72.5%
hexachlorocyclopentadiene	32.1%
2-nitroaniline	42.4%
2,4-dinitrophenol	32.5%
4-nitrophenol	78.4%
4-nitroaniline	40.2%
4,6-dinitro-2-methylphenol	25.5%
pentachlorophenol	33.4%

The non-detect results for these compounds in the associated sample 656SB00202 RE were already rejected due to gross exceedance of holding time.

IV.) Blanks:

Method Blanks:

No target compounds were detected in the method blanks. No action was required in any of the associated samples.

TICs:

No tentatively identified compounds were detected in the method blanks. No action was required in any of the associated samples.

V.) Surrogate Recoveries:

The following surrogate recoveries were below the QC limits in sample 656SB0202:

<u>Surrogate</u>	<u>%R</u>	<u>QC limits</u>
nitrobenzene-d5	21%	23-120%
2-fluorobiphenyl	27%	30-115%
2-fluorophenol	22%	25-121%

Two surrogates were outside QC limits in the base/neutral fractions. The associated results were flagged as estimated (J) and (UJ). Surrogate recoveries for the reanalysis were all within the QC limits, however, the results for the reanalysis were rejected due to holding time exceedances.

VI.) Matrix Spike/Matrix Spike Duplicate:

All Matrix Spike/Matrix Spike Duplicate criteria were met. All Laboratory Control Standard criteria were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates reported with this SDG.

VIII.) Internal Standards Performance:

The internal standard area count for perylene-d12 was below the 50-200% QC limits for samples 656SB00701 and 656SB00302. Reanalysis data were not included in the data package, but according to the laboratory narrative the reanalyses produced similar results. Positive and non-detect results for compounds quantitated using this internal standard were flagged as estimated (J) and (UJ) in these samples.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Sample 656SB00202 had surrogate recoveries below acceptable levels. Extraction of this sample for reanalysis was conducted outside holding time QC limits, and all non-detect sample results were rejected. All other laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

The following samples had a holding time of 12 days from sample date to extraction, which exceeded the 10 day QC limit: 013SB00101, 013SB00102, 013SB00201, 013SB00202, 013SB00301, 013SB00302, 656SB00301, 656SB00302, 656SB00401, 656SB00501, 656SB00601, 656SB00701, 656SB00801, 656SB00901 and 656SB00902. All positive and non-detect data for target analytes in these samples were flagged as estimated (J) and (UJ).

II.) Instrument Performance:

All criteria for the method were met, so no action was required.

III.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was taken.

Equipment/Rinsate Blanks:

There were no equipment or rinsate blanks reported.

V.) Surrogate Recoveries:

No data were reported for Surrogate Recoveries.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met, so no action was required.

VIII.) Field Duplicates:

No field duplicates were analyzed by the laboratory for pesticides and PCB's with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Data were not available in the package.

Gel Permeation Chromatography (GPC):

Data were not available in the package.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

Continuing Calibration Verifications for the following analytes were below the QC limits:

<u>Analyte</u>	<u>Cal. Run</u>	<u>%R</u>	<u>QC limits</u>
thallium	CCV2	87.8	90-110%
mercury	CCV6	75.0	80-120%

Data for these analytes in associated samples were flagged as estimated (J) and (UJ).

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level Soil: mg/kg</u>
CCB22	aluminum	23.1 ug/L	23.1
CCB7	antimony	15.3 ug/L	15.6
CCB30	barium	10.5 ug/L	10.5
CCB23	beryllium	0.4 ug/L	0.4
CCB31	cadmium	2.0 ug/L	2.0
CCB25	calcium	27.8 ug/L	25
CCB25	chromium	2.7 ug/L	2.7
CCB27	cobalt	4.8 ug/L	4.8
CCB22	iron	36.5 ug/L	36.5
CCB23	lead	26.2 ug/L	26.2
CCB27	magnesium	41.3 ug/L	41.3
CCB30	manganese	3.1 ug/L	3.1
PBS2	mercury	0.027 mg/kg	0.135
CCB23	nickel	10.7 ug/L	10.7
CCB4	potassium	705 ug/L	705
CCB30	silver	3.6 ug/L	3.6
CCB23	sodium	25.6 ug/L	25.6
CCB15	thallium	3.4 ug/L	3.4
CCB30	vanadium	5.8 ug/L	5.8
CCB29	zinc	19.3 ug/L	19.3

CCB = Continuing Calibration Blank, PBS = Soil Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration or preparation blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB22	iron	-29.6 ug/L	29.6
PBS3	antimony	-1.39 ug/kg	7.0
CCB23	arsenic	-3.5 ug/L	3.5
ICB3	copper	-9.5 ug/L	9.5
CCB29	lead	-18.3 ug/L	18.3
PBS3	nickel	-1.0 ug/kg	5.0
CCB7	mercury	-0.1 ug/L	0.1

CCB = Continuing Calibration Blank, ICB = Initial Calibration Blank, PBS = Soil Preparation Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample (ICS) criteria for the method were met, so no action was required.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution results were not reported with this SDG.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) for selenium in the soil LCS was 77.4%, which was below the 80-120% QC limits. Positive and non-detect data in the associated soil samples were flagged as estimated, (J) and (UJ).

VII.) Duplicate Sample Analysis:

The duplicate sample for aluminum had a Relative Percent Difference (RPD) of 52.6%, which was greater than the 35% QC limit. All other analytes had concentrations less than 5X CRDL. Associated positive and non-detect sample results for aluminum were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Matrix Spike Percent Recoveries (%R's) were below the 75-125% QC limits for the following analytes:

<u>Analyte</u>	<u>%R</u>
antimony	48.8%
chromium	64.8%
selenium	69.6%

Positive and non-detect results in associated sample 656SB00202 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

No MSA data were required with this SDG.

Post Digestion Spike Recovery:

Spike Recovery data were not reported because the packages were Level III. However, on Forms I and on the data spreadsheet the following analytes were lab flagged as having Post Digestion Spike Recoveries outside the QC limits:

<u>Analyte</u>	<u>Sample ID</u>
thallium	013SB00302
selenium	013SB00302
selenium	656SB00201
selenium	656SB00302
selenium	656SB00601

These analytes in these samples were flagged as estimated (J) and (UJ).

XI.) Sample Result, Calculation / Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

Quarterly Verification of Instrumental Parameters criteria for the method were met.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS (IR)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Calibration criteria were met, so no action was required.

III.) Blanks:

No target compounds were detected in the method blank.

IV.) Laboratory Control Sample (LCS):

All LCS recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate:

All Matrix Spike / Matrix Spike Duplicate criteria were met.

VI.) Field Duplicates:

There were no field duplicates reported with this SDG.

VII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe / Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH)

SDG NUMBER: CHS01

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
656SB00101	081002	Soil	X	X	X	X	X
656SB00102	081003	Soil	X	X	X	X	X
656SB00201	081004	Soil	X	X	X	X	X
656SB00201MS	081004MS	Soil	X	X	X	X	X
656SB00201MSD	081004MSD	Soil	X	X	X		X
656SB00201MD	081004D	Soil				X	
656SB00202	081005	Soil	X	X	X	X	X
656TB00201	081006	Water	X				
656SB00301	081306	Soil	X	X	X	X	X
656SB00302	081307	Soil	X	X	X	X	X
656SB00401	081308	Soil	X	X	X	X	X
656SB00402	081309	Soil	X	X	X	X	X
656SB00501	081310	Soil	X	X	X	X	X
656SB00601	081311	Soil	X	X	X	X	X
656SB00701	081312	Soil	X	X	X	X	X
656SB00801	081313	Soil	X	X	X	X	X
656SB00901	081314	Soil	X	X	X	X	X
656SB00902	081315	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
013SB00101	081316	Soil	X	X	X	X	X
013SB00102	081317	Soil	X	X	X	X	X
013SB00201	081318	Soil	X	X	X	X	X
013SB00202	081319	Soil	X	X	X	X	X
013SB00301	081320	Soil	X	X	X	X	X
013SB00302	081321	Soil	X	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
 TB = TRIP BLANK

DATA REVIEWER(S): Jean M. Delashmit, Marvin L. Smith

RELEASE SIGNATURE: 

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS06 SW-846 Organics and Inorganics

SAMPLES: 178SB00101, 178TB00101, 178SB00102, 178SB00201, 178SB00202, 178SB00202RE, 178SB00301, 178SB00302, 178SB00401, 178SB00402, 178SB00501, 178SB00502, 660SB00401, 660SB00401RE, 660SB00501, 660SB00501RE, 660SB00601, 660SB00602RE, 660SB00602, 660SB00602RE, 660SB00701, 660SB00701RE, 660SB00702, 660SB00702RE, 660SB00801, 660SB00801RE, 666TB00101, 666SB00502, 666SB00601, 666SB00601RE, 666SB00701, 666SB00701RE, 666SB00701MS, 666SB00701MSD, 666SB00701D*, 666SB00701S*, 666SB00702, 666SB00702RE

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for methylene chloride was 37.7%, which exceeded the 30% QC limit for the standards run on 6/29/94. There were no positive detections of this compound in the associated samples, so no action was required.

Continuing Calibration:

The Percent Difference (%D) for chloromethane was 30.1%, which exceeded the 25% QC limit for the standard run on 8/31/94 at 10:38. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for chloromethane was 30.6%, which exceeded the 25% QC limit for the standard run on 9/1/94 at 11:39. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for chloromethane was 28.1%, which exceeded the 25% QC limit for the standard run on 9/6/94 at 12:15. All results for this compound in the associated samples, which

consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/6/94 at 15:36 for the following compounds:

methylene chloride	31.3 %
tetrahydrofuran	27.8 %
1,1,1-trichloroethane	30.2 %

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 2.5 ug/kg and 3.5 ug/kg, respectively, in soil method blank BG090294A. These compounds were qualified using the trip blanks. No further action was required.

Acetone and methylene chloride were detected at 2.6 ug/kg and 1.8 ug/kg, respectively, in soil method blank BG090694A. The two compounds were qualified using the trip blanks, so no further action was necessary.

Trip Blanks:

Two trip blank samples, 178TB00101 and 666TB00101, were analyzed. Acetone and methylene chloride were detected at 16 ug/L and 13 ug/L, respectively, in trip blank 178TB00101, and 4.7 ug/L and 21 ug/L, respectively, in trip blank 666TB00101. The detections of these compounds in associated samples below 160 ug/kg for acetone and 210 ug/kg for methylene chloride were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS/MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

No field duplicates were associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the area counts for the following internal standards and associated samples were below the 50-200% QC limits:

<u>Sample</u>	<u>Internal Standard</u>	<u>%R</u>
178SB00202	bromochlorobenzene	39
178SB00202RE	1,4-difluorobenzene	43
	chlorobenzene	40
666SB00601	chlorobenzene	45
666SB00601RE	chlorobenzene	45
666SB00701	bromochlorobenzene	48
	1,4-difluorobenzene	42
	chlorobenzene	35
666SB00701RE	chlorobenzene	47
666SB00702	chlorobenzene	46
666SB00702RE	chlorobenzene	47

Positive and non-detect results for compounds quantified on these internal standards in the associated samples were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was required.

XII.) System Performance:

All criteria for the method were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

Four samples were re-analyzed due to internal standard deficiencies. The initial analysis of sample 178SB00202 was considered to be of preferable data quality since only one IS was outside QC limits, whereas, two IS's were below QC limits in the re-analysis. The initial analysis of sample 666SB00701 was considered to be of preferable data quality because of a shorter holding time. The re-analysis (666SB00701RE) of sample 666SB00701 was considered to be of preferable data quality as only one IS was below QC limits in the RE, while all three were below QC limits in the initial analysis. The initial analysis of sample 666SB00702 was considered to be of preferable data quality because of a shorter holding time.

SEMI-VOLATILE ORGANICS

I.) Holding Times:

Holding time for the following samples were exceeded.

<u>Sample Name</u>	<u>Date of Collection</u>	<u>Date of Extraction</u>	<u>Days Exceeded</u>
660SB00401RE	8/24/94	9/15/94	6
660SB00501RE	8/24/94	9/15/94	6
660SB00601RE	8/24/94	9/15/94	6
660SB00602RE	8/24/94	9/15/94	6
660SB00701RE	8/24/94	9/15/94	6
660SB00702RE	8/24/94	9/15/94	6
660SB00801RE	8/24/94	9/15/94	6

All positive and non-detect results in the re-analyzed (RE) samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene was 40.9% for the standards run on 8/30/94 on instrument HMS. Associated positive results were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/13/94 at 11:09 for the following compounds:

benzyl alcohol	40.5 %
n-nitroso-di-n-propylamine	40.0 %
hexachloroethane	28.6 %
nitrobenzene	36.2 %
isophorone	28.7 %
benzoic acid	34.9 %
2-nitroaniline	59.2 %
4-nitrophenol	76.1 %
4-nitroaniline	48.5 %
di-n-butylphthalate	27.3 %
benzidine	28.1 %

Associated positive and non-detect results were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/14/94 at 10:33 for the following compounds:

benzyl alcohol	29.8 %
4-nitrophenol	25.9 %
4-nitroaniline	31.1 %

Associated positive and non-detect results were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/15/94 at 10:51 for the following compounds:

benzyl alcohol	36.8 %
4-nitroaniline	43.3 %
benzidine	59.8 %

Associated positive and non-detect results were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met, so no action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS/MSD criteria for the method were met, so no action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the area counts for the following internal standards and associated samples were below the 50-200% QC limits:

<u>Sample</u>	<u>Internal Standard</u>	<u>%R</u>
178SB00101	perylene-d12	42
178SB00201	perylene-d12	28
178SB00302	perylene-d12	37
660SB00401	perylene-d12	39
660SB00501	perylene-d12	43

Positive and non-detect results for compounds quantified on these internal standards in the associated samples were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was necessary.

XI.) Tentatively Identified Compounds (TIC's):

All criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria for the method were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

The re-extractions of samples 660SB00401RE, 660SB00501RE, 660SB00601RE, 660SB00602RE, 660SB00701RE, 660SB00702RE and 660SB00801RE were all re-extracted outside holding time QC limits. For this reason all initial analyses of these samples are considered to be of preferable data quality.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Instrument Performance:

All criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of tetrachloro-m-xylene (TCX) and dibutylchlorendate (DBC) for the following sample were below the 30-150% QC limits:

<u>Sample</u>	<u>TCX, %R</u>	<u>DBC, %R</u>
178SB00102	27	In
660SB00501	26	27
660SB00601	24	26

Associated positive and non-detect results in these samples were flagged as (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recoveries (%R's) were below their respective QC limits in spiked samples 666SB00701MS and 666SB00701MSD for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
gamma-BHC	43		46-127%
aldrin	28	32	34-132%

The non-detect results for gamma-BHC and aldrin in sample 666SB00701 were flagged as estimated (UJ).

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

PIS data were not present, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Data was not present, so no action was taken.

Gel Permeation Chromatography (GPC):

Data were not present, so no action was taken.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Calibration:

All Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.(ug/L)</u>	<u>Action Level</u> <u>mg/kg</u>
CCB	aluminum	40.6	203
CCB	antimony	29.5	148
CCB	arsenic	2.4	12.0
CCB	barium	6.8	34.0
CCB	beryllium	0.4	2.00
CCB	cadmium	1.8	9.00
CCB	calcium	49.3	247
CCB	chromium	6.8	34.0
CCB	cobalt	6.5	32.5
CCB	iron	30.2	151
CCB	lead	21.0	105
CCB	magnesium	38.6	193
CCB	manganese	5.9	29.5
CCB	mercury	0.2	1.00
CCB	nickel	9.6	48.0
CCB	potassium	704	3520
CCB	silver	3.2	16.0
CCB	sodium	44	220
CCB	thallium	5.0	25.0
CCB	vanadium	7.1	35.5
CCB	zinc	24.7	124

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated continuing calibration blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

Negative results were observed for barium (-51 ug/L), lead (-78 ug/L) and potassium (-1100 ug/L) in ICS Solution A. These metals should not be present. Since neither aluminum, iron, magnesium nor calcium were present in the samples at concentrations equivalent to the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution Analysis was not performed for this SDG. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria for the method were met, so no action was necessary.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of nickel, vanadium and zinc were 23.5%, 9.5% and 0%, respectively, in soil matrix spike sample 666SB00701S*, which were below the 30% QC limit. All results for these metals in sample 666SB00701 greater than IDL were flagged as estimated (J), and all non-detects were rejected (R).

The Percent Recoveries (%R's) of antimony, chromium and copper were 33.5% , 65.9% and 73.3% , respectively, in soil matrix spike sample 666SB00701S*, which were below the 75-125% QC limits. All positive and non-detect results for these metals in sample 666SB00701 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used for samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All metal concentrations presented on the spreadsheet were incorrectly transcribed. Copies of flagged Form I's with the correct concentrations are included and are to be used in lieu of the spreadsheets. Additionally, cyanide concentrations were added to the metal Form I's.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The non-detect result for nickel was rejected in sample 666SB00701 due to a spike recovery of less than the 30% QC limit in the matrix spike sample. All remaining laboratory data were acceptable with qualification.

Please note the comment presented in section XI regarding incorrect data on the spreadsheets. The spreadsheets cannot be used for metals.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (TRPH)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks. No action was necessary.

IV.) Laboratory Control Sample :

All Quality Check Sample Recovery criteria for the method were met, so no action was required.

V.) Matrix Spied/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria were met, so no action was necessary.

VI.) Field Duplicates:

No field duplicate samples were associated with this SDG.

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbon (TPH)
SDG NUMBER: CHS07

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
178SB00602	082601	Soil	X	X	X	X	X
178SB00602RE	082601RE	Soil		X			
178SB00601	082602	Soil	X	X	X	X	X
178SB00601RE	082602RE	Soil		X			
660SB00301	082603	Soil	X	X	X	X	X
660SB00301RE	082603RE	Soil		X			
660SB00101	082604	Soil	X	X	X	X	
660SB00101RE	082604RE	Soil		X			
660SB00201	082605	Soil	X	X	X	X	
660SB00201RE	082605RE	Soil		X			
178TB00601	082606	Water	X				
665SB00101	082701	Soil	X	X	X	X	X
665SB00102	082702	Soil	X	X	X	X	X
665SB00201	082703	Soil	X	X	X	X	X
665SB00202	082704	Soil	X	X	X	X	X
665SB00301	082705	Soil	X	X	X	X	X
665SB00302	082706	Soil	X	X	X	X	X
665SB00401	082707	Soil	X	X	X	X	X

<u>Client</u> Sample #:	<u>Lab</u> Sample #:	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
665SB00402	082708	Soil	X	X	X	X	X
121SB00101	082709	Soil	X	X	X	X	
121SB00501	082710	Soil	X	X	X	X	
121SB00401	082711	Soil	X	X	X	X	
121SB00201	082712	Soil	X	X	X	X	
121TB00401	082713	Water	X				
019SB00101	083005	Soil	X	X	X	X	
019SB00101MS	083005MS	Soil	X	X	X	X	
019SB00101MSD	083005MSD	Soil	X	X	X		
019SB00101MD	083005MD	Soil				X	
019SB00102	083006	Soil	X	X	X	X	
019SB00201	083007	Soil	X	X	X	X	

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
TB = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS07 Organics and Inorganics

SAMPLES: 178SB00602, 178SB00601, 660SB00301, 660SB00101, 660SB00201, 178TB00601, 665SB00101, 665SB00102, 665SB00201, 665SB00202, 665SB00301, 665SB00302, 665SB00401, 665SB00402, 121SB00101, 121SB00501, 121SB00401, 121SB00201, 121TB00401, 019SB00101, 019SB00101MS, 019SB00101MSD, 019SB00101MD, 019SB00102, 019SB00201

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of tetrahydrofuran (31.1%) exceeded the 30% QC limit for the initial calibration run on 9/19/94. Since there were no positive results for this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Difference (%D) of 1,1,1-trichloroethane (25.5%) exceeded the 25% QC limit for the continuing calibration run on 8/30/94 at 11:54. The results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of 2-butanone (26.2%) exceeded the 25% QC limit for the continuing calibration run on 8/31/94 at 11:50. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 9.0 ug/kg in soil method blank BC083094A. Detections of this

compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 7.0 ug/Kg in soil method blank BC083194A. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 11.0 ug/Kg in soil method blank BC090194A. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

Trip Blanks:

Methylene chloride was detected at 9 ug/L in trip blank 121TB00401. Results for this compound in the associated samples were previously qualified using the method blank.

Methylene chloride was detected at 9 ug/L in trip blank 178TB00601. Results for this compound in the associated samples were previously qualified using the method blank.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of bromochloromethane (21%), 1,4-difluorobenzene (19%) and chlorobenzene (17%) were below the 50-200% QC limits for sample 121SB00501. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ). The laboratory did not re-analyze the sample.

IX.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met. No action was necessary.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met. No action was required.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

The 15 days between sampling date and extraction date for samples 178SB00602RE, 178SB00601RE, 660SB00301RE, 660SB00101RE, 660SB00201RE exceeded the 14 day QC limit. All positive and non-detect data for the reanalyses are flagged as estimated. These results did not appear on the data forms.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene (40.9%) exceeded the QC limit of 30% for the initial calibration run on 8/31/94. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of 4,6-dinitro-2-methylphenol (28.7%) and benzo(k)fluoranthene (33.1%) exceeded the 25% QC limit for the standard run on 9/14/94 at 12:48. All results for 4,6-dinitro-2-methylphenol, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ). All positive and non-detect results for benzo(k)fluoranthene in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) of hexachlorocyclopentadiene (26.2%), benzidine (29.7%) and benzo(k)fluoranthene (46.3%) exceeded the 25% QC limit for the standard run on 9/15/94 at 12:01. All results for these compounds, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

The Percent Differences (%D's) of 4-chlorophenyl-phenylethene (25.5%) and benzo(k)fluoranthene (34.3%) exceeded the 25% QC limit for the standard run on 9/16/94 at 12:43. All results for 4-chlorophenyl-phenylethene in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All positive and non-detect results for benzo(k)fluoranthene were flagged as estimated (J) and (UJ) in the associated samples.

The Percent Differences (%D's) of benzoic acid (30.1%), 2,4-dinitrophenol (38.0%), benzidine (35.7%), and benzo(k)fluoranthene (35.7%) exceeded the 25% QC limit for the standard run on 9/19/94 at 10:13. All positive and non-detect results for benzo(k)fluoranthene in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

The Percent Recoveries (%R's) of the compounds listed below were outside their respective QC limits for Laboratory Control Sample LSA-2049:

<u>Compound</u>	<u>%R</u>	<u>QC limits</u>
1,4-dichlorobenzene	21	28-104%
n-nitroso-di-n-propylamine	31	41-126%
1,2,4-trichlorobenzene	24	38-107%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

All Percent Recoveries (%R's) for LSA-2057 were 0% because the spiking compound mix was inadvertently not added to the sample. Since all other QC related to this batch met the method criteria, no action was taken.

XIII.) Overall Assessment of Data/General:

Non-detect results for 1,4-dichlorobenzene, n-nitroso-di-n-propylamine and 1,2,4-trichlorobenzene were rejected in the associated samples due to low LCS recoveries. All remaining laboratory data were acceptable with qualification. The original analyses are considered to be of preferable data quality for the following samples because the reanalyses exceeded holding times. These samples are: 178SB00602, 178SB00601, 660SB00301, 660SB00101 and 660SB00201.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Differences (%D's) of beta-BHC (22%) and delta-BHC (22%) exceeded the 20% QC limit for the continuing calibration run on 9/10/94 at 05:21. Since up to two compounds are allowed to exceed the QC limit as long as they are below 30%, no action was necessary.

Continuing Calibration:

The Percent Difference (%D) of 4,4'-DDT (45.3%) exceeded the 20% QC limit for the continuing calibration run on 9/17/94 at 02:10. All positive and non-detect results for this compound were flagged as estimated (J) and (UJ) for the associated samples.

The Percent Difference (%D) of 4,4'-DDT (25.7%) exceeded the 20% QC limit for the continuing calibration run on 9/19/94 at 09:38. All positive and non-detect results for this compound were flagged as estimated (J) and (UJ) for the associated samples.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of tetrachloro-m-xylene (TCX) for sample 660SB00301 (28%) was below the 30-150% QC limits. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of TCX (13%) and DBC (16%) were below the 30-150% QC limits for sample 121SB00201. All positive and non-detect results for this samples were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Laboratory Control Sample (LCS):

The Percent Recoveries (%R's) of the compounds listed below were outside their QC limits for LS-P4028:

<u>Compound</u>	<u>%R</u>	<u>QC limits</u>
alpha-BHC	39	46-127%
gamma-BHC	43	46-127%
aldrin	30	34-132%

All positive results for these compounds in the associated soil samples were flagged as estimated (J) and all non-detects were rejected (R).

VIII) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

XI) Overall Assessment of Data/General:

All non-detect results for aldrin, alpha-BHC and gamma-BHC were rejected in the associated soil samples due to low LCS recoveries. All remaining data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB5	zinc	13.5 ug/L	13.5
CCB4	aluminum	26.7 ug/L	26.7
CCB4	potassium	709.7 ug/L	709.7

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB3	chromium	-2.5 ug/L	2.5
CCB1	selenium	-4.7 ug/L	4.7
CCB5	iron	-17.9 ug/L	17.9

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was necessary.

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample 019SB00101MD. The Relative Percent Difference (RPD) for calcium (98.6%) exceeded the 35% QC limit. All results for this analyte in associated sample 019SB00101 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for antimony (50%), lead (134%) and zinc (-76%) were outside the QC limits of 75-125%. The positive results for antimony and lead in associated sample 019SB00101 were flagged as estimated (J). The positive result for zinc was rejected (R) since the %R was less than zero.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analysis were not performed for samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The result for zinc in one sample was rejected due to a low spike recovery. All remaining laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS (TPH)

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Laboratory Control Sample (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VIII) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH)

SDG NUMBER: CHS08

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
121SB00301	082714	Soil	X	X	X	X	
653SB00101	082715	Soil	X	X	X	X	X
653SB00201	082716	Soil	X	X	X	X	X
653SB00301	082717	Soil	X	X	X	X	X
653SB00401	082718	Soil	X	X	X	X	X
653SB00302	082719	Soil	X	X	X	X	X
653SB00102	082720	Soil	X	X	X	X	X
019SB00301	083008	Soil	X	X	X	X	
019SB00401	083009	Soil	X	X	X	X	
019SB00402	083010	Soil	X	X	X	X	
667SB00101	083011	Soil	X	X	X	X	
667SB00102	083012	Soil	X	X	X	X	
667SB00201	083013	Soil	X	X	X	X	
667SB00202	083014	Soil	X	X	X	X	
667SB00301	083015	Soil	X	X	X	X	
667SB00302	083016	Soil	X	X	X	X	
667SB00401	083017	Soil	X	X	X	X	

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
667SB00402	083018	Soil	X	X	X	X	
138SB00101	083019	Soil	X	X	X	X	
138SB00102	083020	Soil	X	X	X	X	
138SB00102MD	083020MD	Soil					X
138SB00102MS	083020MS	Soil	X	X	X	X	X
138SB00102MSD	083020MSD	Soil	X	X	X	X	

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS08 Organics and Inorganics

SAMPLES: 121SB00301, 653SB00101, 653SB00201, 653SB00301, 653SB00401, 653SB00302, 653SB00102, 019SB00301, 019SB00401, 019SB00402, 667SB00101, 667SB00102, 667SB00201, 667SB00202, 667SB00301, 667SB00302, 667SB00401, 667SB00402, 138SB00101, 138SB00102, 138SB00102MD, 138SB00102MS, 138SB00102MSD

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Relative Percent Difference (RPD) of tetrahydrofuran (31.1%) exceeded the 30% QC limit for the initial calibration run on 6/22/94. Since there were no positive results for this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Differences (%D's) for acetone (38.8%) and 2-butanone (27.9%) exceeded the 25% QC limit for the continuing calibration run on 9/01/94 at 14:38. All positive and non-detect results for acetone in the associated samples were flagged as estimated (J) and (UJ). All results for 2-butanone in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for 1,1,1-trichloroethane (27.6%) exceeded the 25% QC limit for the continuing calibration run on 9/02/94 at 11:12. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for carbon disulfide (28.4%) exceeded the 25% QC limit for the continuing calibration run on 9/06/94 at 09:19. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for 1,1,1-trichloroethane (27.0%) exceeded the 25% QC limit for the

continuing calibration run on 9/08/94 at 10:23. All results for this compound in the associated samples which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for carbon disulfide (28.6%), 2-butanone (29.2%), 1,1,1-trichloroethane (28.6%), and carbon tetrachloride (25.7%) exceeded the 25% QC limit for the continuing calibration run on 9/09/94 at 11:04. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 10.5 ug/kg and 8.9 ug/kg in soil method blanks BC090194A and BC090294A, respectively. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 1.9 ug/kg and 3.4 ug/kg in soil method blanks BC090694A and BC090994A, respectively. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TICS reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of toluene-d8 (120%) in sample 667SB00401 exceeded the QC range of 81-117%. The sample was not reanalyzed. All positive results for the affected fraction in this sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met. No action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene (40.9%) exceeded the QC limit of 30% for the initial calibration run on 8/30/94. Since there were no positive results for this compound in the associated samples, no action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/16/94 at 09:16 for the following compounds:

n-nitrosodimethylamine	28.2%
phenol	28.3%
bis(2-chloroethyl)ether	27.5%
benzyl alcohol	54.2%

n-nitroso-di-n-propylamine	29.5%
2-nitroaniline	26.2%
4-nitroaniline	44.0%
benzidine	40.6%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/19/94 at 12:38 for the following compounds:

n-nitrosodimethylamine	38.0%
bis(2-chloroethyl)ether	26.3%
benzyl alcohol	53.1%
2-methylphenol	28.0%
n-nitroso-di-n-propylamine	41.0%
benzoic acid	28.4%
2-nitroaniline	36.3%
3-nitroaniline	25.2%
4-nitroaniline	50.5%
benzidine	43.3%
3,3'-dichlorobenzidine	26.4%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/20/94 at 09:54 for the following compounds:

n-nitrosodimethylamine	41.5%
bis(2-chloroethyl)ether	30.7%
benzyl alcohol	58.9%
2-methylphenol	26.9%
n-nitroso-di-n-propylamine	50.8%
benzoic acid	37.9%
2-nitroaniline	51.3%
3-nitroaniline	34.6%
2,4-dinitrophenol	25.7%
4-nitroaniline	57.4%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All method blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of 2,4,6-tribromophenol (5.0%) was below the QC range of 19-122% for sample 667SB00302. The sample was not reanalyzed. All positive results for the associated fraction were flagged as estimated (J) and all non-detect results for the fraction were rejected (R).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the internal standards listed below were below the QC limits of 50-200% for the samples listed:

<u>Client ..</u> <u>sample #:</u>	<u>perylene-d12</u> <u>(%R)</u>	<u>chrysene-d12</u> <u>(%R)</u>
138SB00101	21	
121SB00301	24	
653SB00302	22	
653SB00102	22	
653SB00101	15	34
653SB00201	17	38
653SB00401	13	30
667SB00401	35	
667SB00402	33	
667SB00301	18	45
019SB00402	39	
019SB00401	38	
667SB00101	31	
667SB00201	31	
667SB00302	35	

All positive and non-detect results for the compounds associated with these internal standards were flagged as estimated (J) and (UJ).

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Relative Standard Deviation (%RSD) of 4,4'-DDT (27.2%) exceeded the QC limit of 20% for the continuing calibration run on 9/19/94 at 17:52. Since only one compound exceeded the QC limit, no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

The Percent Recovery (%R) of thallium (121%) exceeded the 90-110% QC limits for the continuing calibration run (CCV) on 8/31/94. There were no positive results for this analyte in the associated samples. No action was necessary.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB4	calcium	32 ug/L	32.0
CCB1	magnesium	34 ug/L	34.0
CCB6	potassium	850 ug/L	850.0

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analyte had a negative result with absolute value greater than the IDL:

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB2	lead	-18.0 ug/L	18.0

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria for the method were met, so no action was required.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for antimony (63.2%), chromium (51.9%) and vanadium (71.2%) were below the QC limits of 75-125%. All positive and non-detect results for these analytes were flagged as estimated (J) and (UJ) in the associated samples.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analyses were not used for samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS (TPH)

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was required.

VII.) TCL Compound Identification:

All Compound Identification Criteria for the method were met. No action was required. ~

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: *Appendix IX SW846: 8240, 8270, 8080, 6010, 7196, 9012, 418.1, 7040*
VALIDATION GUIDELINES: *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data USEPA Contract Laboratory Program National Functional Guidelines for Evaluating Inorganics Data, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics(VOA), Semivolatile Organics(SVO), Organochlorine Pesticides/PCB's(P/PCB), Total Metals and Cyanide(ME/CN), Total Recoverable Petroleum Hydrocarbons (TRPH)
SDG NUMBER: CHS09

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TRPH</u>
136SB00201	41381-037	Soil				X	
136SB00201	41381-052	Soil					X
136SB00201	BDB654	Soil	X	X	X		
138SB00201	41355-010	Soil				X	
138SB00201	BDB643	Soil	X	X	X		
138SB00201MS	BDB643MS	Soil	X				
138SB00201MSD	BDB643MSD	Soil	X				
138SB00202	41355-011	Soil				X	
138SB00202	BDB644	Soil	X	X	X		
138SB00301	41355-012	Soil				X	
138SB00301	BDB645	Soil	X	X	X		
138SB00301RE	BDB645RE	Soil	X	X			
138SB00302	41355-013	Soil				X	
138SB00302	BDB646	Soil	X	X	X		
659SB00101	41381-038	Soil				X	
659SB00101	41381-053	Soil					X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TRPH</u>
659SB00101	BDB655	Soil	X	X	X		
659SB00101RE	BDB655RE	Soil		X			
659SB00102	41381-039	Soil				X	
659SB00102	41381-054	Soil					X
659SB00102	BDB656	Soil	X	X	X		
659SB00102DL	BDB656DL	Soil		X			
659SB00201	41381-040	Soil				X	
659SB00201	41381-055	Soil					X
659SB00201	BDB657	Soil	X	X	X		
659SB00201RE	BDB657RE	Soil		X			
659SB00202	41381-041	Soil				X	
659SB00202	41381-056	Soil					
659SB00202	BDB658	Soil	X	X	X		
659SB00202RE	BDB658RE	Soil		X			
659SB00301	41381-042	Soil				X	
659SB00301	41381-057	Soil					X
659SB00301	BDB659	Soil	X	X	X		
659SB00302	41381-043	Soil				X	
659SB00302	41381-058	Soil					X
659SB00302	BDB660	Soil	X	X	X		
659SB00302DL	BDB660DL	Soil		X			
659SB00401	41381-044	Soil				X	
659SB00401	41381-059	Soil					X
659SB00401	BDB661	Soil	X	X	X		
659SB00402	41381-045	Soil				X	
659SB00402	41381-060	Soil					X
659SB00402	BDB662	Soil	X	X	X		
663SB00101	41381-031	Soil				X	
663SB00101	41381-046	Soil					X
663SB00101	BDB648	Soil	X	X	X		
663SB00201	41381-032	Soil				X	
663SB00201	41381-047	Soil					X
663SB00201	BDB649	Soil	X	X	X		
663SB00201RE	BDB649RE	Soil	X				
665JB00401	41381-033	Soil				X	
663SB00401	41381-048	Soil					X
663SB00401	BDB650	Soil	X	X	X		
663SB00402	41381-034	Soil				X	
663SB00402	41381-049	Soil					X
663SB00402	BDB651	Soil	X	X	X		
663SB00501	41381-035	Soil				X	
663SB00501	41381-050	Soil					X
663SB00501	BDB652	Soil	X	X	X		
663SB00502	41381-036	Soil				X	
663SB00502	41381-051	Soil					X
663SB00502	BDB653	Soil	X	X	X		
667IB00101	BDB647	Water	X				
663SB00101D*	41381-031D*	Soil				X	

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TRPH</u>
663SB00101S*	41381-031S*	Soil				X	
663SB00101MS	BDB648MS	Soil		X	X		
663SB00101MSD	BDB648MSD	Soil		X	X		
BDD647BS	BLKSPK	Water	X				
BDD647BSD	BLKSPKD	Water	X				

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, BS = BLANK SPIKE,
 BSD = BLANK SPIKE DUPLICATE, RE = RE-ANALYSES / RE-EXTRACTIONS, D* = MATRIX
 DUPLICATES, S* = MATRIX SPIKES, DL = DILUTED ANALYSIS

DATA REVIEWER(S): Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS09 Organics and Inorganics

SAMPLES: 136SB00201, 138SB00201, 138SB00202, 138SB00301, 138SB00302, 659SB00101, 659SB00102, 659SB00201, 659SB00202, 659SB00301, 659SB00302, 659SB00401, 659SB00402, 659SB00101, 663SB00201, 663SB00402, 663SB00501, 663SB00502, 667TB00101, 663SB00101D, 663SB00101S, 663SB00101MS, 663SB00101MSD, 138SB00201MS, 138SB00201MSD, 138SB00301RE, 659SB00101RE, 659SB00102DL, 659SB00201RE, 659SB00202RE, 659SB00302DL, 663SB00201RE, BDD647BS, BDD647BSD

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial calibration criteria for the method were met, so no action was necessary.

Continuing Calibration:

The Percent Difference (%D) for acetone was 32%, which exceeded the 25% QC limit for continuing calibration standard analyzed 09/08/94 on instrument C. All associated samples with positive or non-detect results for this compound were qualified as estimated (J) and (UJ).

The Percent Difference (%D) for acetone was 33%, which exceeded the 25% QC limit for continuing calibration standard analyzed 09/09/94 on instrument C. All associated samples with positive or non-detect results for this compounds were qualified as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed 09/01/94 on Instrument I for the following compounds:

trichlorofluoromethane	35 %
acetone	31 %

All associated samples with positive or non-detect results for any of the above compounds were flagged as estimated (J) or (UJ).

The Percent Difference (%D) for trichlorofluoromethane was 41%, which exceeded the 25% QC limit for continuing calibration standard analyzed on 09/07/94 on Instrument I for trichlorofluoromethane which was 41 %. All associated samples with positive or non-detect results for this compound were flagged as estimated (J) and (UJ).

The Percent Difference (%D) for dichlorodifluoromethane was 29%, which exceeded the 25% QC limit for continuing calibration standard analyzed on 09/12/94 on Instrument I for dichlorodifluoromethane which was 29 %. All associated samples with positive or non-detect results for this compound were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was taken.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was necessary.

Trip Blanks:

The trip blank associated with this SDG had no positive detections, so no action was necessary.

V.) Surrogate Recoveries:

The surrogate bromofluorobenzene in sample 659SB00102 had a Percent Recovery (%R) of 130%, which exceeded the QC limits of 74-121%. Associated positive sample results were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no qualification was needed.

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

The internal standard area count for 1,4-dichlorobenzene was outside the 50-200% QC limits for samples 138SB00201 (39%), 138SB00301 (48%), and 633SB00201 (49%). The internal standard area count for chlorobenzene was outside the 50-200% QC limits of for samples 138SB00201 (35%), 138SB00301 (45%), 663SB00201 (49%), 138SB00301RE (47%) and 633SB00201RE (49%). All associated positive and non-detect sample data associated with these internal standards were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

The original analyses of samples 663SB00201 and 138SB0301 are considered to be of preferable data quality to the reanalyses since both analyses had low internal standard percent recoveries and the original analyses had a better holding time dates. All laboratory data were acceptable with qualification. Form I's for the re-analyses were not included on data package.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for 2,4-dinitrophenol was 33%, which exceeded the 30 % QC limit for the initial calibration analyzed on instrument K. There were no positive results for this compound in associated samples, so no action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed 09/21/94 for the following compounds:

4-nitrophenol	46 %
3,3'-dichlorobenzidine	43 %
benzo(g,h,i)perylene	26 %

Associated positive and non-detect sample results were flagged as estimated (J) or (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed 09/22/94 for the following compounds:

aniline	26 %
n-nitrosodi-n-propylamine	28 %
bis(2-chloroisopropyl)ether	35 %
benzoic acid	36 %
quinoline	39 %
hexachlorocyclopentadiene	49 %
2,4-dinitrophenol	43 %
2,4-dinitrotoluene	34 %
benzidine	46 %
3,3'-dichlorobenzidine	37 %
benzo(g,h,i)perylene	28 %

There were no positive detections of these compounds in the associated samples and all non-detects were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks associated with this SDG, so no qualification was needed.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was taken.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of 2,4,6-tribromophenol were above the 19-122% QC limits for the following samples:

138SB00301RE	128 %
659SB00102	156 %
659SB00302	176 %

Since there was only one surrogate outside the QC limits for each sample, no qualification was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Relative Percent Differences (RPD's) between the MS and MSD of sample 663SB00101 for 2-chlorophenol was 50%, 38% for n-nitrosodi-n-propylamine, 50% for 4-nitrophenol, 47% for 2,4-dinitrotoluene, 47% for pentachlorophenol and 36% for pyrene, which were outside the 35% QC limit.

The Percent Recovery (%R) for 2,4-dinitrotoluene in the MS of sample 663SB00101 was 96%, which was above the 28-89% QC limits. The %R for n-nitrosodi-n-propylamine in the MSD of sample 663SB00101 was 40%, which was below the 41-126% QC limits. The %R for acenaphthene was 22%, which was below the 31-137% QC limits. All results for these compounds in sample 663SB00101 were flagged as estimated (J) or (UJ).

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. Data qualification was not necessary.

VIII.) Internal Standards Performance:

The area counts was outside the 50-200% QC limits for internal standard 1,4-dichlorobenzene-d4 for sample 138SB00301RE (48%). Associated positive and non-detect sample data were flagged as estimated (J) and (UJ).

The area counts were outside the 50-200% QC limits for the internal standard naphthelene-d8 for the following samples:

138SB00301RE	42 %
659SB00102	39 %

Associated positive and non-detect sample data were flagged as estimated (J) and (UJ).

The area counts were outside the 50-200% QC limits for the internal standard acenaphthene-d10 for the following samples:

138SB00301RE	44 %
659SB00101RE	26 %
659SB00102	41 %

Associated positive and non-detect sample data were flagged as estimated (J) of (UJ).

The area counts were outside the 50-200% QC limits for the internal standard phenanthrene-d10 for the following samples:

Associated positive sample data were flagged as estimated (J). Associated sample results for sample 659SB00101RE that were non-detects were rejected (R).

The area counts were outside the 50-200% QC limits for the internal standard perylene-d12 for the following samples:

659SB00101RE	3 %
659SB00202RE	489 %
659SB00201RE	314 %

Associated positive sample data were flagged as estimated (J). Associated sample results for sample 659SB00101RE that were non-detects were rejected (R).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The original analyses of samples 659SB00101, 659SB00102, and 138SB00301 were considered to be of preferable data quality since both analyses had low internal standard percent recoveries and the original analyses had a better holding time dates. All non-detect sample results associated with internal standards phenanthrene-d10, chrysene-d12 and perylene-d12 were rejected due to excessively low area counts for these internal standards in sample 659SB00101RE. All remaining laboratory data were acceptable with qualification. Form I's for the re-analyses were not included in the data package.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The initial calibration analyzed on the primary column on 09/20/94 had Percent Relative Standard Deviations (%RSD's) for delta-BHC of 24% and 4,4-DDT of 27%, which exceeded the QC limit of 20%. Since there were only two %RSD's that exceeded the 20% QC limit, and neither were in excess of 30%, no data qualification was necessary.

The initial calibration analyzed on the primary column on 09/21/94 had %RSD's that exceeded the QC limit of 20% for the following compounds:

endrin	22 %
4,4-DDD	23 %
endosulfan II	23 %
4,4-DDT	24 %
endosulfan sulfate	25 %
endrin ketone	29 %

All positive and non-detect results in the associated samples were flagged as estimated (J) and (UJ).

Continuing Calibration:

The continuing calibration standard analyzed on the primary column on 9/21/94 had a Percent Difference (%D) of 35% for 4,4'-DDT which was above the 25% QC limit. All associated positive sample data were flagged as estimated (J).

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recovery (%R) for the surrogate decachlorobiphenyl in sample 136SB00201 was 159%. Associated positive data for sample 136SB00201 were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Action Level Max Conc.</u>	<u>mg/kg</u>
CCB	aluminum	17.4 ug/L	17.4
CCB	antimony	14.1 ug/L	14.1
CCB	barium	8.2 ug/L	8.2
PBS	calcium	7.55 mg/kg	37.8
CCB	chromium	3.0 ug/L	3.0
CCB	copper	12.1 ug/L	12.1

Blank Type/ID#	Element	Action Level Max Conc.	mg/kg
CCB	iron	34.0 ug/L	34.0
CCB	manganese	2.1 ug/L	2.1
CCB	potassium	850 ug/L	850
CCB	nickel	9.5 ug/L	9.5
PBS	sodium	3.22 mg/kg	16.1
CCB	silver	2.8 ug/L	2.8
CCB	thallium	3.6 ug/L	3.6
CCB	zinc	14.5 ug/L	14.5

CCB = Continuing Calibration Blank, PBS = Soil Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated preparation blank or continuing calibration blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met, so no action was necessary.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) was 46% for manganese in duplicate sample 663SB00101D*, which exceeded the 35% QC limit. The positive result for manganese in sample 663SB00101 was flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) for antimony was 33% for spiked sample 663SB00101S*, which was below the 75-125% QC limits. The non-detect result for antimony in sample 663SB00101 was flagged as estimated (UJ).

IX.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

X.) Furnace Atomic Absorption QC:

Graphite Furnace analyses were not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (TRPH)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike / Matrix Spike Duplicates (MS / MSD):

All MS / MSD criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was required.

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH)
SDG NUMBER: CHS10

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
655SB00101	090201	Soil	X	X	X	X	X
655SB00101MD	090201MD	Soil				X	
655SB00102	090202	Soil	X	X	X	X	X
655SB00201	090203	Soil	X	X	X	X	X
655SB00301	090204	Soil	X	X	X	X	X
655SB00302	090205	Soil	X	X	X	X	X
655SB00401	090206	Soil	X	X	X	X	X
655SB00402	090207	Soil	X	X	X	X	X
665TB00101	090208	Water	X				
655SB00501	090811	Soil	X	X	X	X	X
655SB00502	090812	Soil	X	X	X	X	X
655SB00601	090813	Soil	X	X	X	X	X
655SB00601MS	090813MS	Soil	X	X	X	X	X
655SB00601MSD	090813MSD	Soil	X	X	X		X
655SB00601MD	090813MD	Soil				X	
655SB00701	090814	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
655SB00701RE	090814RE	Soil	X			
654SB00101	090815	Soil	X	X	X	X
654SB00102	090816	Soil	X	X	X	X
654SB00102RE	090816RE	Soil	X			
654SB00201	090817	Soil	X	X	X	X
654SB00202	090818	Soil	X	X	X	X
654SB00301	090819	Soil	X	X	X	X
654SB00302	090820	Soil	X	X	X	X
654SB00302RE	090820RE	Soil	X			
654SB00501	090821	Soil	X	X	X	X
654SB00501RE	090821RE	Soil	X			
654SB00601	090822	Soil	X	X	X	X
654SB00601RE	090822RE	Soil	X			
654SB00602	090823	Soil	X	X	X	X
654SB00602RE	090823RE	Soil	X			

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE
RE = RE-ANALYSIS, TB = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS10 Organics and Inorganics

SAMPLES: 655SB00101, 655SB00101MD, 655SB00102, 655SB00201, 655SB00301, 655SB00302, 655SB00401, 655SB00402, 665TB00101, 655SB00501, 655SB00502, 655SB00601, 655SB00601MS, 655SB00601MSD, 655SB00701, 655SB00701RE, 654SB00101, 654SB00102, 654SB00102RE, 654SB00201, 654SB00202, 654SB00301, 654SB00302, 654SB00302RE, 654SB00501, 654SB00501RE, 654SB00601, 654SB00601RE, 654SB00602, 654SB00602RE

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of methylene chloride (30.8%) exceeded the 30% QC limit for the initial calibration run on 9/19/94. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Difference (%D) of carbon disulfide (26.9%) exceeded the 25% QC limit for the continuing calibration run on 9/14/94 at 12:27. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ).

The Percent Difference (%D) of carbon disulfide (28.0%) exceeded the 25% QC limit for the continuing calibration run on 9/15/94 at 11:49. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) of acetone (59.9%), carbon disulfide (29.2%) and 2-butanone (40.0%) exceeded the 25% QC limit for the continuing calibration on 9/16/94 at 11:32. All the results for acetone in the associated samples, which consisted entirely of positives, were flagged as estimated (J). All results for carbon disulfide and 2-butanone in the associated samples, which consisted entirely of non-detects were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 3.9 ug/kg in soil method blank BE092094A. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and acetone were detected at 2.2 ug/kg and 3.0 ug/kg, respectively, in soil method blank BG091594A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

There were no positive detections in the trip blank associated with this SDG.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TICS reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of toluene-d8 exceeded the 81-117% QC limits for samples 654SB00102 (125%), 654SB00602 (119%) and 654SB00602RE (125%). All positive results in each sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the internal standards listed below were below the 50-200% QC limits samples listed:

<u>Client</u>	<u>bromochloromethane</u>	<u>1,4-difluorobenzene</u>	<u>chlorobenzene</u>
<u>Sample #:</u>	<u>%R</u>	<u>%R</u>	<u>%R</u>
655SB00701			48.8
654SB00102	48.5	44.7	30.6

<u>Client</u>	<u>bromochloromethane</u>	<u>1,4-difluorobenzene</u>	<u>chlorobenzene</u>
<u>Sample #:</u>	<u>%R</u>	<u>%R</u>	<u>%R</u>
655SB00701RE			48.8
654SB00102RE	35.7	37.6	32.6
655SB00601MS			48.5
654SB00302	44.6	39.7	33.6
654SB00501	39.2	39.7	33.9
654SB00601	41.4	41.6	34.9
654SB00602	27.3	25.9	18.2
654SB00302RE	34.2	33.5	24.9
654SB00501RE			47.1
654SB00601RE	47.5	45.3	39.2

All positive and non-detect results for the compounds associated with the internal standard or standards in each sample were flagged as estimated (J) and (UJ). Re-analysis samples were not included in the database, so no action was taken for these samples.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The original analysis for sample 6665SB00701 is considered to be of better data quality than the reanalysis because the reanalysis is close to exceeding holding time and all other criteria are equal. The reanalysis for samples 654SB00102, 654SB00302, 654SB00501, 654SB00601 and 654SB00602 are considered to be of preferable data quality to the original analyses of these samples due to better internal standard percent recoveries.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/20/94 at 09:54 for the following compounds:

n-nitrosodimethylamine	41.5%
bis(2-chloroethyl)ether	30.7%
benzyl alcohol	58.9%
2-methylphenol	26.9%
bis(2-chloroisopropyl)ether	88.3%
n-nitroso-di-n-propylamine	50.8%
benzoic acid	37.9%
2-nitroaniline	51.2%
3-nitroaniline	34.6%
2,4-dinitrophenol	25.7%
4-nitroaniline	57.4%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected due to low LCS recoveries (see Section VI).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/21/94 at 14:51 for the following compounds:

n-nitrosodimethylamine	30.2%
bis(2-chloroethyl)ether	25.1%
benzyl alcohol	25.5%
2-methylphenol	25.4%
n-nitroso-di-n-propylamine	40.6%
benzoic acid	32.6%
2-nitroaniline	37.3%
3-nitroaniline	25.1%
4-nitroaniline	47.4%
benzidine	54.6%
benzo(b)fluoranthene	27.6%

All positive and non-detect results for benzo(b)fluoranthene in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recoveries (%R's) for LSA2057 were 0% for all of the compounds. The analyst stated that the spiking mixture was not added. All positive results for the associated samples were flagged as estimated (J) and all non-detect results for the associated samples were rejected (R), since more than half of the %R's were below the QC limits.

VII.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria for the method were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All non-detect results for the samples associated with LSA2057 were rejected due to low LCS recoveries. All other laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB1	lead	17.1ug/L	17.1
CCB6	iron	44.0 ug/L	44.0
CCB2	antimony	24.2 ug/L	24.2

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB3	potassium	-550.0 ug/L	550.0
CCB5	lead	-22.9 ug/L	22.9
CCB4	chromium	-2.4 ug/L	2.4

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria for the method were met, so no action was taken.

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) of antimony (50.0%) was below the QC limits of 75-125% for sample 655SB00601MS. The non-detect result for antimony was flagged as estimated (UJ) in associated sample 655SB00601.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

Graphite Furnace Analysis was not performed for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS11

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
654SB00701	090808	Soil	X	X	X	X
654SB00702	090809	Soil	X	X	X	X
654TB00301	090810	Water	X			
009W00101	090910	Water	X	X	X	X
009W00401	090911	Water	X	X	X	X
009W00401MS	090911MS	Water	X	X	X	X
009W00401MSD	090911MSD	Water	X	X	X	
009W00401MD	090911MD	Water				X
009T000401	090912	Water	X			
009W001501	090913	Water	X	X	X	X
670SB00101	091201	Soil	X	X	X	X
670SB00102	091202	Soil	X	X	X	X
670SB00201	091203	Soil	X	X	X	X
670SB00201RE	091203RE	Soil	X			
670SB00202	091204	Soil	X	X	X	X
015SB00101	091205	Soil	X	X	X	X
015SB00102	091206	Soil	X	X	X	X
015SB00201	091207	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
015SB00202	091208	Soil	X	X	X	X
015SB00301	091209	Soil	X	X	X	X
015SB00302	091210	Soil	X	X	X	X
015SB00302	091210RE	Soil	X			
015TB00101	091211	Soil	X			
670SB01101	091301	Soil	X	X	X	X
670SB01102	091302	Soil	X	X	X	X
670SB01201	091303	Soil	X	X	X	X
670SB01201MS	091303MS	Soil	X	X	X	X
670SB01201MSD	091303MSD	Soil	X	X	X	
670SB01201MD	091303MD	Soil				X
670SB01202	091304	Soil	X	X	X	X
670SB01301	091305	Soil	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
 TB / T = TRIP BLANKS, RE = RE-ANALYSES

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS11 Organics and Inorganics

SAMPLES: 654SB00701, 654SB00702, 654TB00301, 009W00101, 009W00401, 009W00401MS, 009W00401MSD, 009W00401MD, 009T000401, 009W001501, 670SB00101, 670SB00102, 670SB00201, 0670SB00201RE, 670SB00202, 015SB00101, 015SB00102, 015SB00201, 015SB00202, 015SB00301, 015SB00302, 015SB00302RE, 015TB00101, 670SB01101, 670SB01102, 670SB01201, 670SB01202, 670SB01301

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for methylene chloride (45.1%) exceeded the 30% QC limit for the initial calibration run on 7/11/94. All positive results for this compound in the associated samples were flagged as estimated (J).

The Percent Relative Standard Deviation (%RSD) for methylene chloride (30.8%) exceeded the 30% QC limit for the initial calibration run on 9/19/94. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) for acetone (93.3%), methylene chloride (25.6%), 2-hexanone (28.2%) and 2-butanone (35.2%) exceeded the 25% QC limit for the continuing calibration run on 9/19/94 at 15:23. All positive and non-detect results for acetone and methylene chloride in the associated samples were flagged as estimated (J) and (UJ). All results for 2-butanone and 2-hexanone in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for acetone (60.0%), carbon disulfide (29.2%) and 2-butanone (40.0%) exceeded the 25% QC limit for the continuing calibration run on 9/16/94 at 11:32. All positive and non-detect results for acetone in the associated samples were flagged as estimated (J) and (UJ). All results

for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for chloromethane (46.0%) and methylene chloride (29.4%) exceeded the 25% QC limit for the continuing calibration run on 9/22/94 at 11:43. All results for chloromethane in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All positive and non-detect results for methylene chloride in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) for chloromethane (42.6%), methylene chloride (27.3%) and tetrahydrofuran (25.6%) exceeded the 25% QC limit for the continuing calibration run on 9/23/94 at 12:16. All results for chloromethane and tetrahydrofuran, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ). All positive and non-detect results for methylene chloride in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 2.2 ug/L and 2.3 ug/kg in water method blank BG091694A and soil method blank BG091994A, respectively. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 3.9 ug/kg, 1.7 ug/kg and 1.3 ug/kg in soil method blanks BG092094A, BE092194A and BE092294A, respectively. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone was detected at 3.9 ug/kg and 5.7 ug/kg in soil method blanks BE092194A and BE092294A, respectively. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

Methylene chloride was detected at 9 ug/L in trip blank 015TB00101. Detections of this compound in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TICS reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of toluene-d8 (119%) in sample 670SB00201 exceeded the QC range of 81-117%. All positive results for the affected fraction in this sample listed were flagged as estimated (J). The laboratory re-analyzed this sample (670SB00201RE) with acceptable Surrogate Recoveries.

The Percent Recovery (%R) of toluene-d8 (121%) in sample 015SB00302 exceeded the QC range of 81-117%. All positive results for the affected fraction in this sample listed were flagged as estimated (J).

The Percent Recovery (%R) of toluene-d8 (122%) in sample 015SB00302RE exceeded the QC range of 81-117%. All positive results for the affected fraction in this sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of internal standards bromochloromethane (32.0%), 1,4-difluorobenzene (31.0%) and chlorobenzene (24.0%) were all below the QC limits of 50-200% for sample 670SB00101. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of internal standards bromochloromethane (38.0%), 1,4-difluorobenzene (35.0%) and chlorobenzene (26.0%) were all below the QC limits of 50-200% for sample 670SB00201. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of internal standard chlorobenzene (46.0%) was below the QC limits of 50-200% for sample 015SB00102. All positive and non-detect results associated with this internal standard for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of internal standards bromochloromethane (47.0%), 1,4-difluorobenzene (46.0%) and chlorobenzene (39.0%) were all below the QC limits of 50-200% for sample 015SB00301. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of internal standard chlorobenzene (39.0%) was below the QC limits of 50-200% for sample 015SB00302. All positive and non-detect results associated with this internal standard for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of internal standards bromochloromethane (38.0%), 1,4-difluorobenzene (48.0%) and chlorobenzene (40.0%) were all below the QC limits of 50-200% for sample 670SB00101RE. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of internal standards bromochloromethane (46.0%) and chlorobenzene (47.0%) were below the QC limits of 50-200% for sample 670SB00201RE. All positive and non-detect results associated with these internal standards for this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of internal standard chlorobenzene (44.0%) was below the QC limits of 50-200% for sample 015SB00302RE. All positive and non-detect results associated with this internal standard for this sample were flagged as estimated (J) and (UJ).

All internal standards were outside their established retention time windows for LCE092294. All of the Percent Recoveries (%R's) were within the QC limits. No action was necessary.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The reanalyses of samples 670SB00201 and 015SB00302 are considered to be of preferable data quality to the original analyses since they had better surrogate and internal standard percent recoveries than the original analyses.

SEMIVOLATILE ORGANICS

I.) Holding Times:

The 19 days between sample date and extraction date for samples 654SB00701 and 654SB00702 exceeded the 14 day QC limit. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/23/94 at 10:34 for the following compounds:

2-nitroaniline	25.9%
3-nitroaniline	27.0%
4-nitroaniline	47.9%
pentachlorophenol	27.3%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/26/94 at 11:02 for the following compounds:

n-nitrosodimethylamine	40.8%
bis(2-chloroethyl)ether	34.2%
benzyl alcohol	59.9%
2-methylphenol	28.4%
n-nitroso-di-n-propylamine	48.4%
hexachlorobutadiene	25.7%
2-nitroaniline	40.7%
3-nitroaniline	34.9%
4-nitroaniline	54.8%
benzo(k)fluoranthene	28.9%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All method blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate criteria for the method were met. No action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

The 19 days between sample date and extraction date for samples 654SB00701 and 654SB00702 exceeded the 14 day QC limit. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Relative Standard Deviation (%RSD) of endrin (26.4%) exceeded the QC limit of 20% for

the continuing calibration run on 9/29/94 at 17:23. Since this was the only compound outside QC criteria for this calibration, no action was taken.

IV.) Blanks:

Method Blanks:

Aroclor 1248 was detected at 240 ug/kg in soil method blank B-P4043D analyzed on 9/30/94. There were no positive detections of aroclor 1248 in the associated samples, so no data qualification was necessary.

V.) Surrogate Recoveries:

Dibutyl chloroendate was used as a surrogate as opposed to decachlorobiphenyl. All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

The six CLP MS / MSD compounds were used for this SDG instead of the normal MS / MSD spiking compounds. All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met. No action was taken.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
PB12197	iron	34.7 ug/L	34.7
CCB9	iron	27 ug/L	27.0
CCB10	potassium	406 ug/L	406

CCB = Continuing Calibration Blank, PB = Water Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank was an associated calibration blank or preparation blank were flagged as undetected (U).

The following analytes had a negative result with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB9	magnesium	-33.0 ug/L	33.0

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of selenium (79%) for LCS21685 was below the QC limits (80-120%). All positive and non-detect results for this analyte were flagged as estimated (J) and (UJ) in the associated samples.

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample 009W00401MD. The Relative Percent Difference (RPD) of aluminum (30%) exceeded the 20% QC limit for water samples. All positive and non-detect results for this compound in the associated water samples were flagged samples as estimated (J) and (UJ).

Duplicate sample analysis was performed on sample 670SB01201MD. The Relative Percent Difference (RPD's) of antimony (148%), arsenic (63%), iron (25 %) and lead (181%) exceeded the 35% QC limit. All positive and non-detect results for these analytes in associated sample 670SB01201 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony (7.4%), cadmium (142%), silver (129%), vanadium (127%) and zinc (142%) were outside the QC limits of 75-125% for spiked soil sample 670SB01201MS. All positive results for antimony were flagged as estimated (J) and all non-detect results for this analyte were rejected (R), since the %R was less than 30%. All positive results for the other analytes were flagged as estimated (J) in associated sample 670SB01201.

The Percent Recoveries (%R's) of the analytes listed below were all below the QC limits (75-125%) for spiked water sample 009W00401MS:

antimony	49.4%
arsenic	44.6%
barium	52.0%
beryllium	47.7%
cadmium	60.5%
cobalt	51.7%
copper	50.8%
iron	40.5%
lead	37.5%
manganese	46.3%
mercury	45.6%
nickel	47.0%
selenium	41.0%
silver	46.6%
thallium	33.5%
vanadium	48.5%
zinc	46.5%

All positive and non-detect results for these analytes in associated water sample 009W00401 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace analysis were not performed for the samples in this SDG.

XI.) Dissolved Inorganics:

There were no dissolved inorganics analysis for this SDG.

XII.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XIII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil/Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Pesticides/PCB's (P/PCB), Metals and Cyanide (Me/CN), Total Organic Carbon (TOC)
SDG NUMBER: CHS12

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample ID:</u>	<u>Sample ID:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TOC</u>
009M000101	41446-001/5/8	Soil	X	X	X	X	X
009M000401	41446-002/6/9	Soil	X	X	X	X	X
009M000501	41446-003/7/10	Soil	X	X	X	X	X
009M00501D	41446-010D	Soil				X	
009M000501MS	41446-003/7/10MS	Soil	X	X		X	X
009M000501MSD	41446-003/710MSD	Soil	X	X			X
009T000101	41446-004	Water	X				
009M000801	41476-001/8/15/22	Soil	X	X	X	X	X
009M000801S	41476-015S	Soil				X	
009M000701	41476-002/9/16/23	Soil	X	X	X	X	X
009M000601	41476-003/10/17/24	Soil	X	X	X	X	X
009M000201	41476-004/11/18/25	Soil	X	X	X	X	X
009M000301	41476-005/12/19/26	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample ID:</u>	<u>Sample ID:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TOC</u>
009M001301	41476-006/13/20/27	Soil	X	X	X	X	X
009M001001	41476-007/14/21/28	Soil	X	X	X	X	X
009M000101	41476-036	Soil	X	X	X	X	X
009M001201	41500-001/6/11/22	Soil	X	X	X	X	X
009M001201D	41500-011D	Soil				X	
009M001201S	41500-011S	Soil				X	
009M001201MS	41500-006MS	Soil			X		
009M001201MSD	41500-006MSD	Soil			X		
009M000901	41500-002/7/12/23	Soil	X	X	X	X	X
009M001501	41500-003/8/13	Soil	X	X	X	X	

<u>Client</u>	<u>Lab</u>						
<u>Sample ID:</u>	<u>Sample ID:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TOC</u>
009M001501	41500-024	Soil					X
009M001401	41500-004/9/14/25	Soil	X	X	X	X	X
009M001101	41500-005/10/15/26	Soil	X	X	X	X	X
009N001501	41500-001	Soil					X
009W001201	41500-028/29/30/31	Water	X	X	X	X	X

<u>Client</u>	<u>Lab</u>		
<u>Sample ID:</u>	<u>Sample ID:</u>	<u>Matrix</u>	<u>Organotin</u>
009M000801	CK-4424-1	Soil	X
009M000801D	CK-4424-1D	Soil	X
009M000701	CK-4424-2	Soil	X
009M000601	CK-4424-3	Soil	X
009M000201	CK-4424-4	Soil	X
009M000301	CK-4424-5	Soil	X
009M001301	CK-4424-6	Soil	X
009M001001	CK-4424-7	Soil	X
009N001001	CK-4424-8	Soil	X
009M001201	CK-4424-9	Soil	X
009M000901	CK-4424-10	Soil	X
009M001501	CK-4424-11	Soil	X
009M001401	CK-4424-12	Soil	X
009M001101	CK-4424-13	Soil	X
009N001501	CK-4424-14	Soil	X
009M000101	CK-4424-15	Soil	X
009M000401	CK-4424-16	Soil	X
009M000501	CK-4424-17	Soil	X
009M000501S	CK-4424-17S	Soil	X

MS, S = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D = MATRIX DUPLICATE, TB =TRIP BLANK, W = EQUIPMENT BLANK

DATA REVIEWER(S): Kent F. Pan, Ph.D., Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS12 CLP Organics and Inorganics

SAMPLES: 009M000101, 009M000401, 009M000501, 009M00501D, 009M000501MS, 009M000501MSD, 009T000101, 009M000801, 009M000801S, 009M000701, 009M000601, 009M000201, 009M000301, 009M001301, 009M001001, 009N000101, 009M001201, 009M001201D, 009M001201S, 009M001201MS, 009M001201MSD, 009M000901, 009M001501, 009M001401, 009M00110, 009N001501, 009W001201

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of chloromethane was 31.8%, which exceeded the 30% QC limit for the standards run on 09/20/94 on instrument CMS-HP. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) below exceeded the 25% QC limit for the standard run on instrument CMS-HP for the following compounds:

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
09/23/94	chloromethane	32.8
	chloroethane	26.4
	acetone	49.5
	2-butanone	45.1

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 5.7 ug/kg in method blank BC092394B. Detections of methylene chloride in the associated samples were qualified using the equipment blank. No further action was required.

Equipment Blanks:

Methylene chloride and acetone were detected at 6 ug/L and 16 ug/L, respectively, in equipment blank 009W001201. Detections of these compounds in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Trip Blanks:

No TCL compounds or TIC's were detected in the trip blank 009T000101.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Samples 009501000501MS/MSD were analyzed. All Matrix Spike/Matrix Spike Duplicate criteria for the method were met, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) below exceeded the 25% QC limit for the standard run on the following dates on instrument FMS-HP:

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
09/22/94	benzyl alcohol	43.7
	bis(2-chlorosiopropyl)ether	49.0
	n-nitroso-di-n-propylamine	36.7
	benzoic acid	33.5
	2-nitroaniline	29.2
	3-nitroaniline	29.7
	4-nitroaniline	55.8
	benzidine	47.8
	benzo(b)fluoranthene	30.6
09/26/94	n-nitrosodimethylamine	40.8
	2-fluorophenol	27.7
	bis(2-chloroethyl)ether	34.2
	benzyl alcohol	59.9
	2-methylphenol	28.4
	bis(2-chlorosiopropyl)ether	89.7
	n-nitroso-di-n-propylamine	48.4
	hexachlorobutadiene	25.7

	2,4,6-tribromophenol	28.9
	2-nitroaniline	40.7
	3-nitroaniline	34.9
	4-nitroaniline	54.8
	azobenzene	30.6
	benzo(k)fluoranthene	28.9
09/27/94	n-nitrosodimethylamine	46.6
	2-fluorophenol	25.7
	phenol	25.7
	bis(2-chloroethyl)ether	34.3
	benzyl alcohol	49.4
	2-methylphenol	28.5
	bis(2-chlorosiopropyl)ether	70.0
	n-nitroso-di-n-propylamine	56.6
	nitrobenzene	28.6
	isophorone	26.6
	2-nitroaniline	60.4
	3-nitroaniline	31.5
	2,4-dinitrophenol	30.5
	4-nitroaniline	63.0
	azobenzene	39.7
	benzidine	49.4
	di-n-octylphthalate	26.2
	benzo(b)fluoranthene	30.6
	benzo(k)fluoranthene	27.2
09/30/94	bis(2-chlorosiopropyl)ether	44.0
	2,4,6-tribromophenol	29.6
	benzo(k)fluoranthene	27.2

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections of target compounds in the method blanks, so no action was necessary.

Equipment Blanks:

There were no positive detections in the equipment blanks, so no action was required.

TIC's:

Two Tentatively Identified Compounds (TIC's), aldol condensate and C₆H₁₀O isomer, were detected in method blank SBLK01 analyzed on 09/14/94. One Tentatively Identified Compound (TIC) was detected in the method blank SBLK01 analyzed on 08/31/94. Detections of any of these TIC's in the associated

samples below 5X the blank amount were flagged as undetected (U), with the detection limit raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

The Surrogate Percent Recovery (%R) of the following was below the 33-141% QC limits for the following soil sample:

	<u>TPH (%R)</u>
009W001201	30

Since only one surrogate was outside QC limits, no action was required.

All the surrogates in sample 009M000101 were diluted out. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recovery (%R) for sample 009M000501MS/MSD was outside the QC limits for the following compound:

<u>Compounds</u>	<u>QC Limits</u>	<u>MS %REC</u>
pyrene	35-142	31

All positive and non-detect results for this compound in associated sample 009M000501 were flagged as estimated (J) and (UJ).

VII.) Field Duplicates:

There were no field duplicates analyzed in this SDG.

VIII.) Internal Standards Performance:

The internal standard retention times were outside the QC limits for the following sample analyzed on 09/30/94:

	<u>NPT</u>	<u>ANT</u>	<u>PHN</u>	<u>CRY</u>
<u>QC Limits</u>	<u>9.19-10.19</u>	<u>12.31-13.31</u>	<u>14.93-15.93</u>	<u>19.90-20.90</u>
009M000301	12.81	15.43	20.41	25.10

Since the internal standard retention times varied by great amounts, false positive/negative results were very possible. The area counts were within QC limits. All positive and non-detect results for this sample were rejected (R).

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections of TCL compounds in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recoveries (%R's) for sample 009M001201MS/MSD were below the QC limits for the following compounds:

<u>Compounds</u>	<u>QC Limits</u>	<u>MS %R</u>	<u>MSD %R</u>
gamma-BHC	46-127	42	31
aldrin	34-132	32	29

All positive and non-detect results for the these compounds were flagged as estimated (J) and (UJ).

VII.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisol Cartridge Check and Gel Permeation Chromatography (GPC) data were not present. Since no significant interference was observed in the chromatogram, no action was required.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID</u>	<u>Analyte</u>	<u>Max. Conc. mg/kg</u>	<u>Action Level mg/kg</u>
PBS	calcium	17.2	86.0
PBS	sodium	12.5	62.5
PBS	zinc	1.4	7.0

PBS = Preparation Blank

All associated positive sample results greater than IDL but less than 5X the blank results (Action Level, mg/kg for soil samples before percent solids correction) were flagged as undetected (U), with the detection limits being raised to the levels of contamination in each sample.

IV.) ICP Interference Check Sample Results:

No ICS data were present with this SDG.

V.) ICP Serial Dilution Analysis:

Serial Dilution data was not required with this SDG.

VI.) Laboratory Control Samples (LCS):

All LCS Percent Recovery criteria for the method were met, so no action was necessary.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for copper in duplicate sample 009M001201 was 80%, which exceeded the 35% QC limit for soils. The positive result for copper in associated sample 009M002101 was flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of the following analytes were outside the QC limits (75-125%) for spiked soil sample 009M00501S:

<u>Analyte</u>	<u>%R</u>
aluminum	2540
antimony	17.1
calcium	163
copper	22.8
iron	1286

All positive results for aluminum, calcium and iron were flagged as estimated (J) and all positive and non-detect results for antimony and copper were flagged as estimated (J) and (UJ) in associated sample 009M00501.

The Percent Recoveries (%R's) of the following analytes were outside the QC limits (75-125%) for spiked soil sample 009M001201S:

<u>Analyte</u>	<u>%R</u>
aluminum	1755
antimony	40.6
calcium	1526
iron	1030
manganese	150
sodium	1.0
zinc	77.6

All positive and non-detect results for the above analytes with %R's below the QC limits were flagged as estimated (J) and (UJ) and all positive results for the above analytes with %R's above the QC limits were flagged as estimated (J) in associated sample 009M001201.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used for samples associated with this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOTIN

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All LCS Percent Recovery criteria for the method were met, so no action was required.

V.) Duplicate Sample Analysis:

All criteria for the method were met, so no action was needed.

V.) Spike Recovery:

All Percent Recovery (%R) criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG.

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL ORGANIC CARBON (TOC)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was required.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS/MSD criteria for the method were met, so no action was necessary.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG.

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: EPA Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil/Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Pesticides/PCB's (P/PCB), Metals and Cyanide (Me/CN)
SDG NUMBER: CHS13

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample ID:</u>	<u>Sample ID:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
670SB00701	41518-006/017/028	Soil	X	X	X	X
670SB00702	41518-007/018/029	Soil	X	X	X	X
670SB00801	41518-008/019/030	Soil	X	X	X	X
670SB00802	41518-009/020/031	Soil	X	X	X	X
670SB00901	41518-010/021/032	Soil	X	X	X	X
670SB00902	41518-011/022/033	Soil	X	X	X	X
670SB01302	41518-001/012/023	Soil	X	X	X	X
015SB00401	41518-002/013/024	Soil	X	X	X	X
015SB00402	41518-003/014/025	Soil	X	X	X	X
670SB01401	41518-004/015/026	Soil	X	X	X	X
670SB01402	41518-005/016/027	Soil	X	X	X	X
670SB01001	41540-001/010/019	Soil	X	X	X	X
670SB01001D	41540-D	Soil				X
670SB01001MS	41540-MS	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample ID:</u>	<u>Sample ID:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
670SB01001MSD	41540-MSD	Soil	X	X	X	
670SB01002	41540-002/011/020	Soil	X	X	X	X
670SB00301	41540-003/012/021	Soil	X	X	X	X
670SB00302	41540-004/013/022	Soil	X	X	X	X
670SB00401	41540-005/014/023	Soil	X	X	X	
670SB00402	41540-006/015/024	Soil	X	X	X	X
670SB00501	41540-007/016/025	Soil	X	X	X	X
670SB00502	41540-008/017/026	Soil	X	X	X	X
670SB00601	41540-009/018/027	Soil	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D = MATRIX DUPLICATE

DATA REVIEWER(S): Kent F. Pan, Ph.D., Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS13 CLP Organics and Inorganics

SAMPLES: 670SB00701, 670SB00702, 670SB00801, 670SB00802, 670SB00901, 670SB00902, 670SB01302, 015SB00401, 015SB00402, 670SB01401, 670SB01402, 670SB01001, 670SB01001D, 670SB01001MS, 670SB01001MSD, 670SB01002, 670SB00301, 670SB00302, 670SB00401, 670SB00402, 670SB00501, 670SB00502, 670SB00601

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of chloromethane was 31.8%, which exceeded the 30% QC limit for the standards run on 09/20/94 on instrument CMS-HP. Since there were no positive results for this compound in the associated samples, no action was taken.

Continuing Calibration:

The Percent Differences (%D's) below exceeded the 25% QC limit for the standard run on the following dates on instrument CMS-HP for the following compounds:

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
09/23/94	chloromethane	32.8
	chloroethane	26.4
	acetone	49.5
	2-butanone	45.1
09/26/94	chloromethane	46.6
	methylene chloride	54.1
	acetone	32.8
09/26/94	chloromethane	51.2

All positive and non-detect results for this compound in the associated samples were flagged as estimated

(J) and (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 6 ug/kg, 3 ug/kg and 6 ug/kg in soil method blanks BC092394B, BC092694B and BC092794B, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

Trip Blanks:

There were no trip blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates analyzed in this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards run on the following dates on instrument FMS-HP for the following compounds:

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
09/26/94	n-nitrosodimethylamine	40.8
	fluorophenol	27.7
	bis(2-chloroethyl)ether	34.2
	benzyl alcohol	59.9
	2-methylphenol	28.4
	bis(2-chloropropyl)ether	89.7
	n-nitroso-di-n-propylamine	48.4
	hexachlorobutadiene	25.7
	2,4,6-tribromophenol	28.9
	2-nitroaniline	40.7
	3-nitroaniline	34.9
	4-nitroaniline	54.8
	azobenzene	30.6
	benzo(k)fluoranthene	28.9

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
09/30/94	bis(2-chloropropyl)ether	44.0
	2,4,6-tribromophenol	29.6
	bis(2-ethylhexyl)phthalate	39.6
	benzo(k)fluoranthene	32.3

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
10/03/94	4,6-dinitro-2-methylphenol	28.1

All positive and non-detect results for these compounds in the associated samples was flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

No target compounds or TIC's were detected in the method blanks, so no action were taken.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was necessary.

VII.) Field Duplicates:

There were no field duplicates analyzed in this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections of target compounds in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was taken.

VII.) TCL Compound Identification:

Comparison data between columns 1 and 2 was absent. All positive results in the associated samples were flagged as estimated (J). All TCL Compound Identification criteria for the method were otherwise met, so no further action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed in this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check and Gel Permeation Chromatography (GPC) data were not present. Since no significant interference was observed in the chromatograms, no action was required.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

Only soil samples were analyzed in this SDG. The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID</u>	<u>Analyte</u>	<u>Max. Conc.</u> mg/kg	<u>Action Level</u> mg/kg
PBS1	aluminum	1.83	9.15
PBS2	barium	0.134	0.67
PBS3	calcium	11.8	9.00
PBS4	chromium	0.394	1.97
PBS5	copper	0.270	1.35
PBS6	iron	2.93	14.7
PBS12	potassium	63.9	320
PBS8	magnesium	3.75	18.8
PBS9	sodium	7.19	36.0
PBS7	lead	-2.42	12.1
PBS10	antimony	1.57	7.85
PBS11	zinc	0.685	3.43

PB = Preparation Blank

All associated positive sample results greater than IDL but less than 5X the blank results (Action Level, mg/kg for soil samples before percent solids correction) were flagged as undetected (U), with the detection limits being raised to the levels of contamination in each sample.

For metal blank results having negative results with absolute values larger than the IDL's, the associated positive sample results less than 5X the absolute value of the blank result and all associated non-detect results were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

All ICS Percent Recovery criteria were met, so no action was taken.

Antimony, barium, potassium, sodium and zinc were detected in ICS Solution A at concentrations greater than 2X IDL. Since neither aluminum, calcium, iron, nor magnesium were present in any sample at concentrations equal to or greater than the amounts in the ICS solutions, no action was taken.

V.) ICP Serial Dilution Analysis:

No Serial Dilution data was required for this SDG.

VI.) Laboratory Control Samples (LCS):

All LCS Percent Recovery (%R) criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for aluminum was 49% in duplicate sample 670SB01001D, which was greater than the 35% QC limit for soils. The positive detection of this metal in associated sample 670SB01001 was flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of the following analytes were below the 75-125% QC limits for spiked soil sample 670SB01001S:

<u>Analyte</u>	<u>%R</u>
antimony	41.9
chromium	17.2
lead	67.3
nickel	64.5
vanadium	65.8
zinc	54.2
cyanide	19.9

All positive and non-detect results for the above analytes were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicates analyzed in this SDG.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used for analyses in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)

SDG NUMBER: CHS14

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
670SB00602	091412	Soil	X	X	X	X
670SB02201	091512	Soil	X	X	X	X
670SB02202	091513	Soil	X	X	X	X
670SB01802	191514	Soil	X	X	X	X
670SB02101	091515	Soil	X	X	X	X
670SB02102	091516	Soil	X	X	X	X
670SB02102RE	091516RE	Soil	X			
670SB01801	091517	Soil	X	X	X	X
670SB01601	091518	Soil	X	X	X	X
670SB01601RE	091518RE	Soil	X			
670SB01702	091519	Soil	X	X	X	X
670SB01702RE	091519RE	Soil	X			
670SB01602	091520	Soil	X	X	X	X
670SB01602RE	091520RE	Soil	X			
670SB01701	091521	Soil	X	X	X	X
670SB02301	092416	Soil	X	X	X	X
670SB02301MS	092416MS	Soil	X	X	X	X
670SB02301MSD	092416MSD	Soil	X	X	X	

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
670SB02301MD	092416MD	Soil				X
670SB02302	092417	Soil	X	X	X	X
670SB02401	092418	Soil	X	X	X	X
670SB02401RE	092418RE	Soil	X			
670SB02402	092419	Soil	X	X	X	X
670SB02402RE	092419RE	Soil	X			
GDHSB01101	092825	Soil	X	X	X	X
GDHSB01102	092826	Soil	X	X	X	X
GDHSB01201	092827	Soil	X	X	X	X
GDHSB01202	092828	Soil	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
RE = RE-ANALYSIS

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS14 Organics and Inorganics

SAMPLES: 670SB00602, 670SB02201, 670SB02202, 670SB01802, 670SB02101, 670SB02102, 670SB02102RE, 670SB01801, 670SB01601, 670SB01601RE, 670SB01702, 670SB01702RE, 670SB01602, 670SB01602RE, 670SB01701, 670SB02301, 670SB02301MS, 670SB02301MSD, 670SB02301MD, 670SB02302, 670SB02401, 670SB02401RE, 670SB02402, 670SB02402RE, GDHSB01101, GDHSB01102, GDHSB01201, GDHSB01202

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of methylene chloride (30.8%) exceeded the 30% QC limit for the initial calibration run on 9/19/94. There were no positive results for this compound in the associated samples, so no action was taken.

Continuing Calibration:

The Percent Differences (%D's) of chloromethane (46.0%) and methylene chloride (29.4%) exceeded the 25% QC limit for the continuing calibration run on 9/22/94 at 11:43. All results for chloromethane in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All positive and non-detect results for methylene chloride were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) of chloromethane (42.6%), methylene chloride (27.3%) and tetrahydrofuran (25.6%) exceeded the 25% QC limit for the continuing calibration run on 9/23/94 at 12:16. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All positive and non-detects for methylene chloride were flagged as estimated (J) and (UJ).

34 The Percent Differences (%D's) of bromomethane (34.8%), tetrahydrofuran (28.5%), vinyl acetate (27.1%), 4-methyl-2-pentanone (34.8%) and 2-hexanone (30.8%) exceeded the 25% QC limit for the continuing calibration run on 10/6/94 at 14:50. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of chloromethane (40.0%) and vinyl acetate (39.7%) exceeded the 25% QC limit for the continuing calibration run on 10/11/94 at 12:35. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride and acetone were detected at 1.3 ug/kg and 5.7 ug/kg, respectively, in soil method blank BE092294A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

There were no trip blanks associated with this SDG.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

The Percent Recoveries of toluene-d8 in samples 670SB01602RE (120%) and 670SB02401 (118%) exceeded the QC limits of 81-117%. All positive results in the two associated samples were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

The Relative Percent Difference (RPD) of trichloroethylene (41%) and benzene (31%) exceeded their respective 24% and 21% QC limits for spiked samples 670SB02301MS and 670SB02301MSD. The non-detect results for these two analytes in sample 670SB02301 were flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recovery (%R) of chlorobenzene (42%) was below the 50-200% QC limits for sample 670SB02401. All positive and non-detect results for the associated compounds in this sample were

flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of 1,4-difluorobenzene (47%) was below the 50-200% QC limits for sample 670SB02301. All positive and non-detect results for the associated compounds in this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of bromochloromethane (37%), 1,4-difluorobenzene (39%) and chlorobenzene (37%) were below the 50-200% QC limits for sample 670SB02401RE. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of chlorobenzene (47%) was below the 50-200% QC limit for sample 670SB02402RE. All positive and non-detect results for the associated compounds in this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of chlorobenzene (49%) was below the 50-200% QC limit for sample 670SB02102. All positive and non-detect results for the associated compounds in this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of chlorobenzene (49%) was below the 50-200% QC limit for 670SB02102RE. All positive and non-detect results for the associated compounds in this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of bromochloromethane (39%), 1,4-difluorobenzene (44%) and chlorobenzene (38%) were below the 50-200% QC limits for sample 670SB01601. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of chlorobenzene (47%) was below the 50-200% QC limit for sample 670SB01702. All positive and non-detect results for the associated compounds in this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of bromochloromethane (38%), 1,4-difluorobenzene (44%) and chlorobenzene (39%) were below the 50-200% QC limits for sample 670SB01602. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of bromochloromethane (40%), 1,4-difluorobenzene (42%) and chlorobenzene (38%) were below the 50-200% QC limits for sample 670SB01601RE. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of chlorobenzene (42%) was below the 50-200% QC limit for sample 670SB01702RE. All positive and non-detect results for the associated compounds in this sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of chlorobenzene (43%) was below the 50-200% QC limit for sample 670SB01602RE. All positive and non-detect results for the associated compounds in this sample were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met. No action was necessary.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met. No action was required.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The original analysis of sample 670SB02401 is considered preferable because the reanalysis had poor percent recoveries for all of the internal standards. The original analysis of sample 670SB02102 is considered to be of preferable data quality since both analyses had one low internal standard percent recovery and the original analysis had a better holding time date. The original analysis of sample 670SB01601 is considered to be of preferable data quality since it had a better analysis date and both analyses had poor percent recoveries for all of the internal standards. The original analysis of sample 670SB01702 is considered to be of preferable data quality since both analyses had one poor recovery for an internal standard, and the original analysis had a better analysis date. The reanalysis of sample 670SB01602 is considered to be of preferable data quality since the original analysis had low percent recoveries for all of the internal standards.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for 4-chlorophenyl-phenylethene (35.2%) exceeded the QC limit of 30% for the standards run on 9/29/94. Since all results for this compound consisted entirely of non-detects, no action was necessary.

Continuing Calibration:

The Percent Difference (%D) of benzo(k)fluorathene (37.8%) exceeded the 25% QC limit for the standard run on 10/04/94 at 09:43. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of benzidine (26.5%) and bis(2-ethylhexyl)phthalate (27.3%) exceeded the 25% QC limit for the standard run on 10/05/94 at 11:16. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All method blank criteria for the method were met. No action was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of tetrachloro-*m*-xylene (TCX) were below the 30-150% QC limits for the samples listed below:

<u>Client</u>	<u>TCX</u>
<u>Sample#:</u>	<u>%R</u>
670SB00602	26
670SB02201	27
670SB02202	25
670SB02102	27

All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB7	potassium	688.1 ug/L	688.1
CCB6	antimony	15.32 ug/L	15.32
CCB2	zinc	71.25 ug/L	71.25
CCB7	iron	27.06 ug/L	27.06
CCB8	magnesium	50.19 ug/L	50.19

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB3	selenium	-31.2 ug/L	31.2
CCB6	arsenic	-30.3 ug/L	30.3

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was necessary.

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample 670SB02301MD. The Relative Percent Difference (RPD) for lead (192%) exceeded the 35% QC limit. All results for this analyte in associated sample 670SB02301 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for antimony (-230%), chromium (71), manganese (55%), silver (71%), vanadium (65%) and zinc (66%) were below the QC limits of 75-125%. With the exception of antimony, all positive and non-detect results for these analytes in associated sample 670SB02301 were flagged as estimated (J) and (UJ). The result for antimony in the associated sample was rejected due to a recovery less than 0%.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analysis were not performed for samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The antimony result was rejected in one sample due to a low %R. All remaining laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS15

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
<u>Sample #:</u>	<u>Sample #:</u>					
GDHSB00101	092806	Soil	X	X	X	X
GDHSB00101MD	092806MD	Soil				X
GDHSB00101MS	092806MS	Soil	X	X	X	X
GDHSB00101MSD	092806MSD	Soil	X	X	X	
GDHSB00102	092807	Soil	X	X	X	X
GDHSB00201	092808	Soil	X	X	X	X
GDHSB00202	092809	Soil	X	X	X	X
GDHSB00301	092810	Soil	X	X	X	X
GDHSB00301RE	092810RE	Soil	X			
GDHSB00302	092811	Soil	X	X	X	X
GDHSB00401	092812	Soil	X	X	X	X
GDHSB00402	092813	Soil	X	X	X	X
GDHSB00402RE	092813RE	Soil	X			
GDHSB00501	092814	Soil	X	X	X	X
GDHSB00502	092815	Soil	X	X	X	X
GDHSB00601	092816	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB00602	092817	Soil	X	X	X	X
GDHSB00701	092818	Soil	X	X	X	X
GDHSB00702	092819	Soil	X	X	X	X
GDHSB00801	092820	Soil	X	X	X	X
GDHSB00802	092821	Soil	X	X	X	X
GDHSB00901	092822	Soil	X	X	X	X
GDHSB01002	092823	Soil	X	X	X	X
GDHSB00902	092824	Soil	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = RE=EXTRACTION,
MD = MATRIX DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS15 Organics and Inorganics

SAMPLES: GDHSB00101, GDHSB00101MD, GDHSB00101MS, GDHSB00101MSD,
GDHSB00102, GDHSB00201, GDHSB00202, GDHSB00301, GDHSB00301RE,
GDHSB00302, GDHSB00401, GDHSB00402, GDHSB00402RE, GDHSB00501,
GDHSB00502, GDHSB00601, GDHSB00602, GDHSB00701, GDHSB00702,
GDHSB00801, GDHSB00802, GDHSB00901, GDHSB01002, GDHSB00902

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of tetrahydrofuran (32.7%) exceeded the 30% QC limit for the initial calibration run on 9/28/94. Since there were no positive results for this compound in the associated samples, no action was taken.

Continuing Calibration:

The Percent Differences (%D's) of chloromethane (27.1%) and methylene chloride (26.2%) exceeded the 25% QC limit for the continuing calibration run on 10/10/94 at 11:51. All results for chloromethane in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All positive and non-detect results for methylene chloride in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) of chloromethane (27.5%) and methylene chloride (28.4%) exceeded the 25% QC limit for the continuing calibration run on 10/11/94 at 10:45. All results for chloromethane in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All positive and non-detect results for methylene chloride in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Acetone and 2-butanone were detected at 9.0 ug/kg and 4.7 ug/kg in soil method blank BC101094A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R) of the internal standards listed below were below the 50-200% QC limits for the following samples:

<u>Client sample #:</u>	<u>ISTD</u>	<u>%R</u>
GDHSB00301	chlorobenzene	48
GDHSB00301RE	chlorobenzene	49
GDHSB00402	chlorobenzene	41
GDHSB00402RE	bromochloromethane	45
	1,4-difluorobenzene	46
	chlorobenzene	37

All positive and non-detect results associated with these internal standards in the corresponding samples were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Samples GDHSB00301 and GDHSB00402 were reanalyzed due to low internal standard area counts with similar results for GDHSB00301RE and worse results for GDHSB00402RE. The original analysis results for both samples are of preferable data quality to the reanalyses because of better holding times.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for 4-chlorophenyl phenylethene (35.2%) exceeded the QC limit of 30% for the initial calibration run on 9/29/94. Since there were no positive results for this compound in the associated samples, no action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 10/07/94 at 10:10 for the following compounds:

benzidine	42.5%
bis(2-ethylhexyl)phthalate	42.4%
di-n-octylphthalate	35.2%

All positive and non-detect results for bis(2-ethylhexyl)phthalate in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted

entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 10/10/94 at 11:03 for the following compounds:

pentachlorophenol	26.4%
benzidine	31.8%
bis(2-ethylhexyl)phthalate	41.8%
di-n-octylphthalate	38.9%
benzo(k)fluoranthene	35.0%

All positive and non-detect results for bis(2-ethylhexyl)phthalate and benzo(k)fluoranthene in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Relative Standard Deviation (%RSD) of aroclor 1260 (28.5%) exceeded the QC limit of 20% for the continuing calibration run on 10/19/94 at 11:09. Since only one compound exceeded the QC limits, no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recovery (%R) of dieldrin in samples GDHSB00301MS (250%) and GDHSB00301MSD (129%) exceeded the 31-134% QC limits. Since there were no positive results for this compound in the associated sample, no action was required.

The Percent Recovery (%R) of 4,4'-DDT in samples GDHSB00301MS (186%) and GDHSB00301MSD (160%) exceeded the 23-134% QC limits. Since there were no positive results for this compound in the associated sample, no action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represents the highest detection associated with the samples and was used for data qualification:

<u>Blank</u>			<u>Action Level</u>
<u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>mg/kg</u>
CCBI	aluminum	296 ug/L	296

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB4	potassium	-178 ug/L	178

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of silver (72%) was outside the 80-120% QC limits for LCS21701. All positive and non-detect results for this analyte in the associated samples were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample GDHSB00301MD. The Relative Percent Differences (RPD's) for the compounds listed below exceeded the 35% QC limit:

aluminum	51.9%
mercury	87.5%
sodium	63.1%

All positive and non-detect results for these analytes in associated sample GDHSB00301 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for antimony (54.1%), copper (62.1%), silver (70.0%) and zinc (66.8%) were below the QC limits of 75-125% for sample GDHSB00101MS. All positive and non-detect results for these analytes were flagged as estimated (J) and (UJ) in associated sample GDHSB00101.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analyses were not performed on samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS16

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB01001	092805	Soil	X	X	X	X
GDHSB01001MS	092805MS	Soil	X	X	X	X
GDHSB01001MSD	092805MSD	Soil	X	X	X	
GDHSB01001MD	092805MD	Soil				X
GDHSB01301	093003	Soil	X	X	X	X
GDHSB01302	093004	Soil	X	X	X	X
GDHSB01401	093005	Soil	X	X	X	X
GDHSB01402	093006	Soil	X	X	X	X
GDHSB01501	093007	Soil	X	X	X	X
GDHSB01501RE	093007RE	Soil	X			
GDHSB01502	093008	Soil	X	X	X	X
GDHSB01601	093009	Soil	X	X	X	X
GDHSB01602	093010	Soil	X	X	X	X
GDHTB01011	093011	Water	X			
GDHSB01701	100401	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB01701RE	100401RE	Soil	X			
GDHSB01702	100402	Soil	X	X	X	X
GDHSB01801	100403	Soil	X	X	X	X
GDHSB01901	100404	Soil	X	X	X	X
GDHSB01902	100405	Soil	X	X	X	X
GDHSB02001	100406	Soil	X	X	X	X
GDHSB02101	100407	Soil	X	X	X	X
GDHSB02002	100408	Soil	X	X	X	X
GDHSB02201	100409	Soil	X	X	X	X
GDHTB00101	100410	Water	X			

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE
 TB = TRIP BLANK, RE = RE-ANALYSIS

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UI - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS16 Organics and Inorganics

SAMPLES: GDHSB01001, GDHSB01001MS, GDHSB01001MSD, GDHSB01301, GDHSB01302, GDHSB01401, GDHSB01402, GDHSB01501, GDHSB01501RE, GDHSB01502, GDHSB01601, GDHSB01602, GDHTB01011, GDHSB01701, GDHSB01701RE, GDHSB01702, GDHSB01801, GDHSB01901, GDHSB01902, GDHSB02001, GDHSB02101, GDHSB02002, GDHSB02201, GDHTB00101

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was taken.

Continuing Calibration:

The Percent Differences (%D's) for acetone (41.0%), tetrahydrofuran (32.4%), 2-butanone (55.5%) and 2-hexanone (25.5%) exceeded the 25% QC limit for the continuing calibration run on 10/12/94 at 11:58. All positive and non-detect results for acetone were flagged as estimated (J) and (UJ). All results for the remaining compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for acetone (27.6%) and tetrahydrofuran (36.0%) exceeded the 25% QC limit for the continuing calibration run on 10/17/94 at 13:42. All positive and non-detect results for acetone in the associated samples were flagged as estimated (J) and (UJ). All results for the other compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for chloromethane (40.0%) and vinyl acetate (39.7%) exceeded the 25% QC limit for the continuing calibration run on 10/11/94 at 12:35. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for chloromethane (52.0%), acetone (43.0%), carbon disulfide (32.7%), 1,2-dichloroethane (26.7%), 2-butanone (28.9%) and vinyl acetate (43.7%) exceeded the 25% QC limit for the continuing calibration run on 10/12/94 at 10:12. All positive and non-detect results for acetone were flagged as estimated (J) and (UJ) in the associated samples. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for chloromethane (34.3%), carbon disulfide (34.1%) and vinyl acetate (47.7%) exceeded the 25% QC limit for the continuing calibration run on 10/13/94 at 10:06. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 400 ug/kg and 600 ug/kg, respectively, in soil method blank BV1034C. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 900 ug/kg and 300 ug/kg, respectively, in soil method blank BV10139. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 4.2 ug/L in water method blank BE101794A. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

Methylene chloride was detected at 10 ug/L in trip blank GDHTB00101. All results for this compound in the associated samples were previously qualified using the method blanks.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TICS reported in the method blanks for this SDG.

Trip Blanks:

There were no positive results in the trip blanks associated with this SDG.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of toluene-d8 in samples GDHSB01001 (119%) and GDHSB01501RE (124%) exceeded the QC range of 81-117%. All positive results for compounds associated with this

surrogate in each sample were flagged as estimated (J).

The Percent Recovery (%R) of 1,2-dichloroethane-d4 in sample GDHSB01001 (127%) exceeded the 70-121% QC limits. All positive results in the sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

The Relative Percent Differences (RPD's) of toluene (24%) and chlorobenzene (23%) exceeded the 21% QC limit for samples GDHSB01001MS and GDHSB01001MSD. The non-detect results for these compounds in associated sample GDHSB01001 were flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the internal standards listed below were below the 50-200% QC limits for the following samples:

<u>Client</u>	<u>bromochloromethane</u>	<u>1,4-difluorobenzene</u>	<u>chlorobenzene</u>
<u>Sample #:</u>	<u>%R</u>	<u>%R</u>	<u>%R</u>
GDHSB01001	34.3	38.7	27.3
GDHSB01501	34.1	28.5	33.1
GDHSB01701	12.7	10.8	15.6
GDHSB01501RE			44.1
GDHSB01701RE			48.1

All positive and non-detect results in the associated samples for compounds associated with each of these internal standards were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The reanalyses of samples GDHSB01501 and GDHSB01701 are considered to be of preferable data quality since the original analysis of these samples had poor recoveries for all of the internal standards.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of 4-chlorophenyl-phenylether (35.2%) exceeded the 30% QC limit for the initial calibration run on 9/29/94. Since there were no positive results for this compound in the associated samples, no action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for pentachlorophenol (26.4%), benzidine (31.8%), bis(2-ethylhexyl)phthalate (41.8%), di-n-octylphthalate (38.9%) and benzo(k)fluoranthene (35.0%) for the continuing calibration run on 10/10/94 at 11:03. All positive and non-detect results for bis(2-ethylhexyl)phthalate and benzo(k)fluoranthene were flagged as estimated (J) and (UJ). All results for the remaining compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

TIC's:

There were no TIC's detected in the associated samples, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Difference (%D) of 4,4'-DDD (27.5%) exceeded the 25% QC limit for the continuing calibration run on 10/20/94 at 02:31. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB1	iron	27.7 ug/L	27.7
CCB1	aluminum	22.0 ug/L	22.0
CCB1	lead	25.2 ug/L	25.2

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB4	potassium	-178 ug/L	178
CCB2	thallium	-18.1 ug/L	18.1

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample GDHSB01001. The Relative Percent Difference (RPD) for lead (38.4%) exceeded the 35% QC limit. The positive result for this analyte in associated sample GDHSB01001 was flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for antimony (14.5%) and manganese (69.3%) were below the QC limits of 75-125% for sample GDHSB01001. The positive result for manganese was flagged as estimated (J) and the non-detect result for antimony, which had a %R less than 30%, was rejected (R) in the associated sample.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analysis was not performed on the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The non-detect result for antimony in sample GDHSB01001 was rejected due to a low matrix spike recovery. All remaining laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.04
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: *Appendix IX SW846: 8240, 8270, 8080, 8140, 8150, 6010, 7196, 9012, 418.1, 7040*
VALIDATION GUIDELINES: *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data USEPA Contract Laboratory Program National Functional Guidelines for Evaluating Inorganics Data, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVO), Organochlorine Pesticides/PCB's (P/PCB), Total Metals and Cyanide (ME/CN)
SDG NUMBER: CHS17

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB02301	41734010	Soil	X	X	X	X
GDHSB02301D*	41734010D*	Soil				X
GDHSB02301S*	41734010S*	Soil				X
GDHSB02302	41734011	Soil	X	X	X	X
GDHSB02401	41734012	Soil	X	X	X	X
GDHSB02501	41734013	Soil	X	X	X	X
GDHSB02601	41734014	Soil	X	X	X	X
GDHSB02602	41734015	Soil	X	X	X	X
GDHSB02701	41734016	Soil	X	X	X	X
GDHSB02702	41734017	Soil	X	X	X	X
GDHSB02801	41734018	Soil	X	X	X	X
GDHSB02901	41734019	Soil	X	X	X	X
GDHSB03001	41734020	Soil	X	X	X	X
GDHSB03101	41734001	Soil	X	X	X	X
GDHSB03102	41734002	Soil	X	X	X	X
GDHSB03201	41734003	Soil	X	X	X	X
GDHSB03202	41734004	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB03301	41734005	Soil	X	X	X	X
GDHSB03302	41734006	Soil	X	X	X	X
GDHSB03401	41734007	Soil	X	X	X	X
GDHSB03402	41734008	Soil	X	X	X	X
GDHSB03501	41734009	Soil	X	X	X	X
GDHSB03402DL	41734008DL	Soil	X			
GDHSB03501RE	41734009RE	Soil	X			
GDHSB02301MS	41734010MS	Soil	X	X	X	
GDHSB02301MSD	41734010MSD	Soil	X	X	X	

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, RE = RE-ANALYSES / RE-EXTRACTIONS, D* = MATRIX DUPLICATES, S* = MATRIX SPIKES

DATA REVIEWER(S): Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS17 Organics and Inorganics

SAMPLES: GDHSB02301, GDHSB02301D*, GDHSB02301S*, GDHSB02302, GDHSB02401, GDHSB02501, GDHSB02601, GDHSB02602, GDHSB02701, GDHSB02702, GDHSB02801, GDHSB02901, GDHSB03001, GDHSB03101, GDHSB03102, GDHSB03201, GDHSB03202, GDHSB03301, GDHSB03302, GDHSB03401, GDHSB03402, GDHSB03501, GDHSB03402DL, GDHSB03501RE, GDHSB02301MS, GDHSB02301MSD

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed on 10/11/94 for the following compounds:

chloromethane	27 %
methylene chloride	28 %

All associated samples with positive or non-detect results for any of these compounds were qualified as estimated (J) or (UJ).

The Percent Difference (%D) exceeded the 25% QC limit for continuing calibration standard analyzed 10/12/94 for the following compound:

chloromethane	36%
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All results in the associated samples, which consisted entirely of non-detects, were qualified as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed 10/17/94 for the following compounds:

chloromethane	31 %
carbon disulfide	58 %
trichlorofluoromethane	43 %

All associated samples with positive or non-detect results for any of the above compounds were flagged as estimated (J) or (UJ).

IV.) Blanks:

Method Blanks:

Acetone was detected in the soil method blank analyzed on 10/12/94 at 6.8 ug/kg. Detections of acetone in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

The soil method blank analyzed on 10/12/94 had a detection of 2-hexanone at 3.4 ug/kg. Detections of 2-hexanone in the associated samples below 5X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in soil method blank analyzed 10/17/94 at 3.7 ug/kg. Detections of methylene chloride in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was necessary.

Trip Blanks:

There were no trip blanks associated with this SDG, so no action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no qualification was needed.

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of bromochlorobenzene, 1,4-difluorobenzene, and chlorobenzene-d5 in sample GDHSB03501RE were 49%, 49% and 45%, respectively, which were below the lower limit established at 50% for standard area counts. All associated sample results were qualified estimated (J) and (UJ).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification. Sample GDHSB03501 was reanalyzed. The original analysis QC data were not included in the data package, only the Form I.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed

on 10/14/94 for the following compounds:

benzidine	30 %
di-n-octylphthalate	27 %

There were no positive detections of these compounds in the associated samples, and all non-detects were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks associated with this SDG, so no data qualification was needed.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No qualification was not necessary.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met, so no action was needed.

IX) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was taken.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc</u>	<u>Action Level</u> <u>mg/kg</u>
CCB	aluminum	18.1 ug/L	18.1
CCB	antimony	14.1 ug/L	14.1
CCB	barium	6.73 ug/L	6.73
CCB	cadmium	1.71 ug/L	1.71
CCB	cobalt	2.65 ug/L	2.65
CCB	copper	8.01 ug/L	8.01

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB	vanadium	3.46 ug/L	3.46
CCB	zinc	12.6 ug/L	12.6
CCB	nickel	7.7 ug/L	7.7
CCB	silver	2.05 ug/L	2.05
CCB	thallium	1.52 ug/L	1.52
CCB	arsenic	4.88 ug/L	4.88

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Negative Conc.</u>	<u>Action Level mg/kg</u>
CCB	aluminum	-6.09 ug/L	6.09
CCB	antimony	-5.08 ug/L	5.08
CCB	barium	-9.92 ug/L	9.92
CCB	cadmium	-2.56 ug/L	2.56
CCB	chromium	2.93 ug/L	2.93
CCB	cobalt	-2.37 ug/L	2.37
CCB	copper	-5.12 ug/L	5.12
CCB	mercury	-0.01 ug/L	0.01
CCB	vanadium	-2.87 ug/L	2.87
CCB	zinc	-13.6 ug/L	13.1
CCB	nickel	-4.55 ug/L	4.55
CCB	silver	-3.11 ug/L	3.11
CCB	selenium	-3.95 ug/L	3.95
CCB	thallium	-2.71 ug/L	2.71

All associated positive results less than 5X the absolute value of the blank contamination and all non-detects were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Laboratory Control Sample (LCS) had a Percent Recovery (%R) for silver of 72%, which was below the QC limits of 80-120%. All associated sample results, which consisted entirely of non-detects, were

flagged as estimated (UJ).

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) was 60% for antimony, 50% for beryllium, 52% for cadmium, 36% for calcium, 50% for mercury and 42% for sodium in duplicate sample GDHSB02301D*, which exceeded the 35% QC limit. All results for these metals in the associated samples were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony, chromium, silver, and zinc were 39%, 67%, 74%, and 71%, respectively, for spiked sample GDHSB02301S*, which were below the 75-125% QC limits. All positive results and all non-detects were flagged as estimated (J) and (UJ) in the associated sample.

IX.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analyses were not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS18

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB03601	100521	Soil	X	X	X	X
GDHTB00101	100522	Water	X			
GDHSB03701	100601	Soil	X	X	X	X
GDHSB03702	100602	Soil	X	X	X	X
GDHSB03801	100603	Soil	X	X	X	X
GDHSB03802	100604	Soil	X	X	X	X
GDHSB03901	100605	Soil	X	X	X	X
GDHSB03902	100606	Soil	X	X	X	X
GDHSB04001	100607	Soil	X	X	X	X
GDHSB04001MS	100607MS	Soil	X	X	X	X
GDHSB04001MSD	100607MSD	Soil	X	X	X	
GDHSB04001MD	100607MD	Soil				X
GDHSB04002	100608	Soil	X	X	X	X
GDHSB04101	100609	Soil	X	X	X	X
GDHSB04201	100610	Soil	X	X	X	X
GDHSB04202	100611	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB04301	100612	Soil	X	X	X	X
GDHSB04302	100613	Soil	X	X	X	X
GDHSB04401	100614	Soil	X	X	X	X
GDHSB04501	100615	Soil	X	X	X	X
GDHSB04502	100616	Soil	X	X	X	X
GDHSB04601	100617	Soil	X	X	X	X
GDHSB04602	100618	Soil	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
TB = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS18 Organics and Inorganics

SAMPLES: GDHSB03601, GDHTB00101, GDHSB03701, GDHSB03702, GDHSB03801, GDHSB03802, GDHSB03901, GDHSB03902, GDHSB04001, GDHSB04001MS, GDHSB04001MSD, GDHSB04002, GDHSB04101, GDHSB04201, GDHSB04202, GDHSB04301, GDHSB04302, GDHSB04401, GDHSB04501, GDHSB04502, GDHSB04601, GDHSB04602

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of methylene chloride (30.8%) exceeded the 30% QC limit for the initial calibration run on 9/19/94. Since there were no positive results for this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Differences (%D's) of chloromethane (34.3%), carbon disulfide (34.1%), and vinyl acetate (47.7%) exceeded the 25% QC limit for the continuing calibration run on 10/13/94 at 10:06. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of chloroethane (25.6%), acetone (55.2%), carbon disulfide (33.4%), 1,2-dichloroethane (37.3%), carbon tetrachloride (32.4%), 4-methyl-2-pentanone (25.8%) and 2-hexanone (31.3%) exceeded the 25% QC limit for the continuing calibration run on 10/18/94 at 11:20. All positive and non-detect results for acetone in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of acetone (47.4%), tetrahydrofuran (33.0%), 1,2-dichloroethane (31.5%), 1,1,1-trichloroethane (29.2%), and carbon tetrachloride (34.3%) exceeded the 25% QC limit for the continuing calibration run on 10/19/94 at 12:16. All positive and non-detect results for acetone in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone and 2-butanone were detected at 6.0 ug/kg and 2.5 ug/kg, respectively, in soil method blank BE101894A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and 2-butanone were detected at 5.1 ug/kg and 4.9 ug/kg, respectively, in soil method blank BE101994A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

Methylene chloride was detected at 12.0 ug/L in trip blank GDHTB00101. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

TIC's:

There were no TIC's reported in the blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria for the method were met. No action was necessary.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for bis(2-ethylhexyl)phthalate (31.6%) and di-n-octylphthalate (25.3%) for the continuing calibration run on 10/18/94 at 09:02. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB6	antimony	14.1 ug/L	14.1

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB7	potassium	-595 ug/L	595
CCB1	thallium	-34.4 ug/L	34.4

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of silver (72%) was below the 80-120% QC limits for soil LCS21704. All results for this analyte in the associated sample were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria for the method were met, so no action was taken.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony (53.2%) and silver (70.8%) were below the QC limits of 75-125% for sample GDHSB00401. The non-detect results for these analytes in associated sample GDHSB00401 were flagged as estimated (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analysis was not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*

SAMPLE MATRIX: Soil/Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)

SDG NUMBER: CHS19

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB04701	41760-015/016/030	Soil	X	X	X	X
GDHSB04701RE	41760-015RE	Soil	X			
GDHSB04702	41760-002/017/031	Soil	X	X	X	X
GDHSB04801	41760-003/018/032	Soil	X	X	X	X
GDHSB04901	41760-004/019/033	Soil	X	X	X	X
GDHSB04901RE	41760-004RE	Soil	X			
GDHSB05001	41760-005/020/034	Soil	X	X	X	X
GDHSB05001RE	41760-005RE	Soil	X			
GDHSB05101	41760-006/021/035	Soil	X	X	X	X
GDHSB05102	41760-007/022/036	Soil	X	X	X	X
GDHSB05201	41760-008/023/037	Soil	X	X	X	X
GDHSB05202	41760-009/024/038	Soil	X	X	X	X
GDHSB05301	41760-010/025/039	Soil	X	X	X	X
GDHSB05302	41760-011/026/040	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample ID:</u>	<u>Sample ID:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB05401	41760-012/027/041	Soil	X	X	X	X
GDHSB05401RE	41760-012RE	Soil	X			
GDHSB05402	41760-013/028/042	Soil	X	X	X	X
GDHSB05501	41760-014/029/043	Soil	X	X	X	X
GDHTB00101	41760-015	Water	X			
GDHSB05601	41779-001/006/011	Soil	X	X	X	X
GDHSB05602	41779-002/007/012	Soil	X	X	X	X
GDHSB05801	41779-003/008/013	Soil	X	X	X	X
GDHSB05801RE	41779-003RE	Soil	X			
GDHSB05802	41779-004/009/014	Soil	X	X	X	X
GDHSB06101	41779-005/010/015	Soil	X	X	X	X
GDHSB06101MD	41779-005/015D	Soil				X
GDHSB06101MS	41779-005/010/015MS	Soil	X	X	X	X
GDHSB06101MSD	41779-005/010MSD	Soil	X	X	X	

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, TB= TRIP BLANK,
MD = MATRIX DUPLICATE, RE = REANALYSIS

DATA REVIEWER(S): Kent F. Pan, Ph.D., Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE Incorporated - CHS19 Organics and Inorganics

SAMPLES: GDHSB04701, GDHSB04701RE, GDHSB04702, GDHSB04801, GDHSB04901, GDHSB04901RE, GDHSB05001, GDHSB05001RE, GDHSB05101, GDHSB05102, GDHSB05201, GDHSB05202, GDHSB05301, GDHSB05302, GDHSB05401, GDHSB05401RE, GDHSB05402, GDHSB05501, GDHTB00101, GDHSB05601, GDHSB05602, GDHSB05801, GDHSB05801RE, GDHSB05802, GDHSB06101, GDHSB06101D, GDHSB06101MS, GDHSB06101MSD

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of tetrahydrofuran was 32.7%, which exceeded the 30% QC limit for the standards run on 09/27/94 on instrument CMS-HP. Since there were no positive detections of this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Differences (%D's) below exceeded the 25% QC limit for the standard run on instrument CMS-HP for the following compounds:

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
10/17/94	carbon disulfide	58.1
	trichlorofluoromethane	43.1
10/18/94	carbon disulfide	60.4
	trichlorofluoromethane	37.4
10/19/94	carbon disulfide	58.8
	trichlorofluoromethane	30.4
	2-butanone	26.9

All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 3.8 ug/kg, 7.3 ug/kg and 11.8 ug/kg in the method blanks BC101794B, BC101894A and BC101994B, respectively. Detections of methylene chloride in the associated samples below 10X these amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

2-Hexanone was detected at 2.5 ug/kg in the method blank BC101894A. Detections of this compound in the associated samples below 5X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Trip Blank:

Methylene chloride was detected at 9 ug/kg in the trip blank 100715. Detections of methylene chloride in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

V.) Surrogate Recoveries:

The following surrogate Percent Recoveries (%R's) were above the QC limits for the following samples:

<u>QC limits</u>	<u>DCE. %R</u> <u>(70-121)</u>	<u>DCE. %R</u> <u>(76-114)</u>
GDHSB05401	192	-
GDHTB00101	-	120

All associated positive sample results were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Spiked samples GDHSB06101MS/MSD were analyzed. All Matrix Spike/Matrix Spike Duplicate criteria for the method were met, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates designated in this SDG.

VIII.) Internal Standards Performance:

The internal standard area counts were below the 50-200% QC limits for the following samples:

<u>Date</u>	<u>Sample</u>	<u>BCM</u>	<u>DFB</u>	<u>CBZ</u>
10/17/94	GDHSB05801	-	47%	40%

<u>Date</u>	<u>Sample</u>	<u>BCM</u>	<u>DFB</u>	<u>CBZ</u>
10/18/94	GDHSB05801RE	-	-	47%
	GDHSB04701	47%	44%	40%
	GDHSB04901	39%	39%	36%
	GDHSB05001	48%	49%	48%

<u>Date</u>	<u>Sample</u>	<u>BCM</u>	<u>DFB</u>	<u>CBZ</u>
10/19/94	GDHSB04701RE	43%	41%	35%
	GDHSB04901RE	-	48%	40%
	GDHSB05401	48%	49%	45%

All positive and non-detects results for compounds associated with these internal standards were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification. The initial analysis of sample GDHSB04701 is considered to be of preferable data quality to the reanalysis because the initial analysis had a better holding time than the reanalysis and both had three low internal standard percent recoveries. The reanalyses of samples GDHSB05801 and GDHSB4901 are considered preferable because the reanalyses had fewer low internal standard percent recoveries.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) below exceeded the 25% QC limit for the standard run on the following dates and on instrument FMS-HP for the following compounds:

<u>CC Date</u>	<u>Compound</u>	<u>%D</u>
10/19/94	2,4,6-tribromophenol	29.4
	butylbenzylphthalate	30.1
	bis(2-ethylhexyl)phthalate	39.4
	di-n-octylphthalate	35.8

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blank B-A2067A, so no action were required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

The samples DGHSB06101MS/MSD were analyzed. All MS/MSD criteria for the method were met, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates analyzed in this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections of TCL in the method blanks B-P4070A and B-P4071, so no data qualification was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS/MSD criteria for the method were met, so no action was taken.

VII.) TCL Compound Identification:

All TCL compound identification criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates designated in this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check and Gel Permeation Chromatography (GPC) were not performed.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u>	<u>Max. Conc.</u>	<u>Action Level</u>	
<u>Type/ID</u>	<u>Analyte</u>	<u>mg/kg</u>	<u>mg/kg</u>
PBS1	aluminum	3.5	17.5
PBS2	arsenic	0.3	1.5
PBS3	barium	0.3	1.5
PBS4	calcium	5.8	25
PBS5	copper	0.49	2.45
PBS6	iron	2.1	10.5
PBS7	potassium	79.8	399
PBS8	magnesium	3.1	15.5
PBS9	sodium	2.5	12.5
PBS10	lead	0.2	1.0
PBS11	zinc	1.2	6.0

PB = Preparation Blank

All associated positive sample results greater than IDL but less than 5X the blank results (Action Level,

mg/kg for soil samples before percent solids correction) were flagged as undetected (U), with the detection limits being raised to the levels of contamination in each sample.

IV.) ICP Interference Check Sample Results:

ICP Interference Check Sample Analysis was not performed in this SDG.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution Analysis was not performed in this SDG.

VI.) Laboratory Control Samples (LCS):

The LCS Percent Recovery (%R) of the following analyte was outside the 80-120% QC limits:

<u>analyte</u>	<u>%R</u>
thallium	159

All positive results for thallium in the associated samples were flagged as estimated (J).

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for the following analytes with results greater than the CRDL exceeded the 35% QC limit for soil samples GDHSB06101/GDHSB06101MD:

<u>analyte</u>	<u>RPD</u>
calcium	91.0
sodium	57.6

The associated positive and non-detect results for these two analytes in associated sample CDHSB06101 were flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of the following analytes were outside the QC limits (75-125%) for the soil spike sample GDHSB06101S:

<u>metal</u>	<u>%R</u>
aluminum	34.0
antimony	39.6
chromium	73.0
iron	510
manganese	68.8
zinc	73.8

The positive result for iron in associated sample GDHSB06101 was flagged as estimated (J). All positive and non-detect results for the remaining analytes in associated sample GDHSB06101 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

There were no field duplicates designated in this SDG.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used for samples associated with this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data of this SDG were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS20

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB05901	100812	Soil	X	X	X	X
GDHSB06001	100813	Soil	X	X	X	X
GDHSB05701	100814	Soil	X	X	X	X
GDHSB06201	101001	Soil	X	X	X	X
GDHSB06301	101002	Soil	X	X	X	X
GDHSB06302	101003	Soil	X	X	X	X
GDHSB06401	101004	Soil	X	X	X	X
GDHSB06402	101005	Soil	X	X	X	X
GDHSB06501	101006	Soil	X	X	X	X
GDHTB00101	101007	Water	X			
SGCSB00201	101103	Soil	X	X	X	X
SGCSB00202	101104	Soil	X	X	X	X
SGCSB00101	101105	Soil	X	X	X	X
SGCSB00301	101106	Soil	X	X	X	X
SGCSB00302	101107	Soil	X	X	X	X
SGCSB00401	101108	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
SGCSB00501	101109	Soil	X	X	X	X
SGCSB00601	101110	Soil	X	X	X	X
SGCSB00602	101111	Soil	X	X	X	X
SGCSB00602MS	101111MS	Soil	X	X	X	X
SGCSB00602MSD	101111MSD	Soil	X	X	X	
SGCSB00602MD	101111MD	Soil				X
GDHSB06601	101112	Soil	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
TB = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS20 Organics and Inorganics

SAMPLES: GDHSB05901, GDHSB06001, GDHSB05701, GDHSB06201, GDHSB06301, GDHSB06302, GDHSB06401, GDHSB06402, GDHSB06501, GDHTB00101, SGCSB00201, SGCSB00202, SGCSB00101, SGCSB00301, SGCSB00302, SGCSB00401, SGCSB00501, SGCSB00601, SGCSB00602, SGCSB00602MS, SGCSB00602MSD, SGCSB00602MD, GDHSB06601

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) of bromomethane (42.0%), acetone (58.1%) and vinyl acetate (56.4%) exceeded the 25% QC limit for the continuing calibration run on 10/19/94 at 14:30. All results for bromomethane and vinyl acetate in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All positive and non-detect results for acetone were flagged as estimated (J) and (UJ) in the associated samples.

The Percent Differences (%D's) of bromomethane (36.0%) and vinyl acetate (63.5%) exceeded the 25% QC limit for the continuing calibration run on 10/20/94 at 10:00. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of bromomethane (37.9%) and vinyl acetate (57.6%) exceeded the 25% QC limit for the continuing calibration run on 10/21/94 at 10:41. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 8.0 ug/kg and 4.0 ug/kg, respectively, in soil method blank BG102194A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and toluene were detected at 18.7 ug/kg and 2.7 ug/kg, respectively, in soil method blank BG101994C. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 3.4 ug/kg in soil method blank BG102094A. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

Methylene chloride (9.0 ug/L), benzene (1.3 ug/L) and toluene (1.9 ug/L) were detected in trip blank GDHTB00193. All results for methylene chloride in the associated samples were previously qualified using the method blanks. Detections of benzene in the associated samples below 5X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. Detections of toluene in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

TIC's:

There were no TIC's reported in the method blanks for this SDG.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria for the method were met. No action was necessary.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for benzo(b)fluoranthene (26.6%), benzo(a)pyrene (26.5%), indeno(1,2,3-cd)pyrene (26.1%) and benzo(g,h,i)perylene (32.2%) for the continuing calibration run on 10/24/94 at 09:55. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of benzyl alcohol (34.0%) exceeded the 25% QC limit for the continuing calibration run on 10/25/94 at 09:01. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of benzidine (32.2%) exceeded the 25% QC limit for the continuing calibration on 10/26/94 at 08:38. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Relative Percent Differences (RPD's) of 4,4'-DDE (55%) and 4,4'-DDD (47%) exceeded the 20% QC limit for the samples SGCSB00602MS and SGCSB00602MSD. The non-detect results for these compounds in associated sample SGCSB00602 were flagged as estimated (UJ).

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB4	potassium	981 ug/L	981
CCB6	iron	44.4 ug/L	44.4
CCB4	calcium	15.8 ug/L	15.8

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U). Calcium results were not reported on the database.

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB10	chromium	-2.86 ug/L	2.86
CCB6	thallium	-5.31 ug/L	5.31

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ). Chromium results were not reported on the database.

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample SGCSB00602. The Relative Percent Difference (RPD) for calcium (44.1%) and zinc (36.4%) exceeded the 35% QC limit. All positive and non-detect results for these analytes in associated sample SGCSB00602 were flagged as estimated (J) and (UJ). Calcium results were not reported on the database and were not flagged.

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) for antimony (34.2%) was below the QC limits of 75-125% for sample SGCSB00602MS. The non-detect result for this analyte in associated sample SGCSB00602 was flagged as estimated (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

All MSA criteria for the method was met, so no action was required.

Post Digestion Spike Recoveries:

All Post Digestion Spike criteria for the method were met. No action was taken.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS21

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB06701	101203	Soil	X	X	X	X
GDHSB06702	101204	Soil	X	X	X	X
GDHSB06801	101205	Soil	X	X	X	X
GDHSB06901	101206	Soil	X	X	X	X
SGCSB00801	101207	Soil	X	X	X	X
SGCSG00802	101208	Soil	X	X	X	X
GDHSB07001	101209	Soil	X	X	X	X
GDHSB07001MS	101209MS	Soil	X	X	X	X
GDHSB07001MSD	101209MSD	Soil	X	X	X	
GDHSB07001MD	101209MD	Soil				X
GDHSB07101	101210	Soil	X	X	X	X
GDHSB07102	101211	Soil	X	X	X	X
GDHSB07102RE	101211RE	Soil	X			
GDHSB07201	101212	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB07201RE	101212RE	Soil	X			
GDHSB07202	101213	Soil	X	X	X	X
655SB00801	101214	Soil	X	X	X	X
655SB00801RE	101214RE	Soil	X			
SGCSB00701	101301	Soil	X	X	X	X
SGCSB00702	101302	Soil	X	X	X	X
GDHSB07301	101303	Soil	X	X	X	X
GDHSB07302	101304	Soil	X	X	X	X
GDHSB07302RE	101304RE	Soil	X			
SGCSB00901	101305	Soil	X	X	X	X
GDHTB00101	101306	Water	X			

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
 TB = TRIP BLANK, RE = RE-ANALYSIS

DATA REVIEWER(S):

Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated. - CHS21 Organics and Inorganics

SAMPLES: GDHSB06701, GDHSB06702, GDHSB06801, GDHSB06901, SGCSB00801, SGCSB00802, GDHSB07001, GDHSB07001MS, GDHSB07001MD, GDHSB07101, GDHSB07102, GDHSB07102RE, GDHSB07201, GDHSB07201RE, GDHSB07202, 655SB00801, 655SB00801RE, SGCSB00701, SGCSB00702, GDHSB07301, GDHSB07302, GDHSB07302RE, SGCSB00901, GDHTB00101

VOLATILE ORGANICS

I.) Holding Times:

The 21 days between sample date and analysis date for samples GDHSB07102RE, 655SB00801RE, and GDHSB07302RE exceeded the 14 day QC limit. The 15 days between sample date and analysis date for sample GDHSB07201RE exceeded the 14 day QC limit. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of chloromethane (34.7%), acetone (30.3%) and carbon disulfide (45.2%) exceeded the 30% QC limit for the initial calibration run on 10/25/94. All positive results for acetone in the associated samples were flagged as estimated (J). The results for the other compounds consisted entirely of non-detects in the associated samples, so no further action was required.

Continuing Calibration:

The Percent Differences (%D's) of bromomethane (37.9%) and vinyl acetate (57.6%) exceeded the 25% QC limit for the continuing calibration run on 10/21/94 at 10:41. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of bromomethane (33.6%) and vinyl acetate (54.4%) exceeded the 25% QC limit for the continuing calibration run on 10/24/94 at 11:40. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of chloromethane (27.9%), bromomethane (33.2%), carbon disulfide (25.7%) and vinyl acetate (50.2%) exceeded the 25% QC limit for the continuing calibration run on 10/25/94 at 10:24. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of carbon disulfide (31.7%) and 1,1-dichloroethene (25.5%) exceeded the 25% QC limit for the continuing calibration run on 11/01/94 at 12:51. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 8.0 ug/kg and 4.1 ug/kg, respectively, in soil method blank BG102194A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 11.0 ug/kg and 3.7 ug/kg, respectively, in soil method blank BG102494A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 11.0 ug/kg and 7.0 ug/kg, respectively, in soil method blank BG102594A. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 1900 ug/kg and 820 ug/kg, respectively, in soil method blank BV1044B. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

There were no positive results for the trip blank associated with this SDG.

TIC's:

There were no TIC's reported in the method or trip blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria for the method were met. No action was necessary.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The results for the initial analyses of samples GDSGB07102, GDSGB07201, GDSHB07302 and 655SB00801 are considered to be of preferable data quality due to the holding time exceedances for the re-analyses of these samples. No reasons were apparent for the decision to re-analyze these samples.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for benzidine (32.2%) for the continuing calibration run on 10/26/94 at 08:38. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of 2-methylphenol (26.4%) and hexachlorocyclopentadiene (34.4%) exceeded the 25% QC limit for the continuing calibration run on 10/27/94 at 09:10. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of chrysene-d12 (48%) and perylene-d12 (46%) were below the 50-200% QC limits for sample SGCSB00901. All positive and non-detect sample results for the compounds associated with these internal standards were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken. Blank qualifications were performed in section IV.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Difference (%D) of heptachlor (24.6%) exceeded the 20% QC limit for the continuing calibration run on 11/07/94 at 09:46. Since up to 2 compounds may exceed 20% as long as they do not exceed 30%, no action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of both surrogates were 0% for sample GDHSB06701. Since the 0% recoveries were due to dilution, all positive and non-detect results in this sample were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB4	potassium	807 ug/L	807
CCB2	selenium	3.70 ug/L	3.70

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB7	nickel	-4.33 ug/L	4.33
CCB1	thallium	-3.05 ug/L	3.05

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample GDHSB07001MD. The Relative Percent Difference (RPD) for calcium (36.7) exceeded the 35% QC limit. The positive result for this analyte in associated sample GDHSB07001 was flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) of antimony (47.6%) was below the QC limits of 75-125% for sample GDHSB07001MS. The non-detect result for this analyte was flagged as estimated (UJ) in associated sample GDHSB07001.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

Graphite Furnace Analysis was not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*

SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH)

SDG NUMBER: CHS22

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
GDHSW04D07	102001	Soil	X	X	X	X	
017GW00301	102002	Water	X	X	X	X	X
017GW00201	102003	Water	X	X	X	X	X
017GW00101	102004	Water	X	X	X	X	X
017TW00301	102005	Water	X				
017TW00301RE	102005RE	Water	X				
017TW00302	102006	Water	X				
178GW00201	102101	Water	X	X	X	X	X
178TW00102	102102	Water	X				
178GW00101	102103	Water	X	X	X	X	X
017GW00401	102104	Water	X	X	X	X	X
178TW00101	102105	Water	X				
663GW00201	102501	Water	X	X	X	X	X
662GW00201RE	102501RE	Water	X				
136GW00101	102502	Water	X	X	X	X	X
662GW00201	102505	Water	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
662TW00201	102506	Water	X				
662GW00101	102504	Water	X	X	X	X	X
662GW00101MS	102504MS	Water	X	X	X	X	X
662GW00101MSD	102504MSD	Water	X	X	X		X
662GW00101MD	102504MD	Water				X	
662TW00102	102507	Water	X				
662GW00101	102605	Water	X	X	X	X	X
660GW00201	102606	Water	X	X	X	X	X
660GW00101	102607	Water	X	X	X	X	X
667GW00201	102608	Water	X	X	X	X	X
667GW00101	102609	Water	X	X	X	X	X
666GW00101	102701	Water	X	X	X	X	X
666GW00201	102702	Water	X	X	X	X	X
656GW00201	102703	Water	X	X	X	X	X
656GW00301	102704	Water	X	X	X	X	X
666TW00101	102705	Water	X				
654SB00601	090822	Soil	X	X	X	X	
654SB00601RE	090822RE	Soil	X				
654SB00602	090823	Soil	X	X	X	X	
654SB00602RE	090823RE	Soil	X				

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE
RE = RE-ANALYSIS, TW = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS22 Organics and Inorganics

SAMPLES: GDHSW04D07, 017GW00301, 017GW00201, 017GW00101, 017TW00301, 017TW00301RE, 017TW00302, 178GW00201, 178TW00102, 178GW00101, 017GW00401, 178TW00101, 663GW00201, 663GW00201RE, 136GW00101, 136TW00101, 662GW00201, 662TW00201, 662GW00101, 662GW00101MS, 662GW00101MSD, 662GW00101MD, 662TW00102, 663GW00101, 660GW00201, 660GW00101, 667GW00201, 667GW00101, 666GW00101, 666GW00201, 656GW00201, 656GW00301, 666TW00101

VOLATILE ORGANICS

I.) Holding Times:

The samples listed below exceed the 7 day holding time QC limit for unpreserved water samples:

<u>Client</u> <u>Sample #:</u>	<u>Days to</u> <u>Analysis</u>
017GW00101	14
017GW00201	14
017GW00301	14
178GW00101	14
017GW00401	14
178GW00201	14
663GW00201	14
662GW00201	14
136GW00101	14
663GW00101	14
667GW00201	14
663GW00201RE	15

All positive and non-detect results for 663GW00201RE were flagged as estimated (J) and (UJ). Since only the 7 day QC limit was exceeded for the remaining samples, all positive and non-detect results for only aromatic volatile compounds in the remaining samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of chloromethane (34.7%), acetone (30.3%), and carbon disulfide (45.2%) exceeded the 30% QC limit for the initial calibration run on 10/25/94. Since all of the results for these compounds consisted of non-detects in the associated samples, no action was required.

Continuing Calibration:

The Percent Differences (%D's) of carbon disulfide (31.7%) and 1,1-dichloroethene (25.5%) exceeded the 25% QC limit for the continuing calibration run on 11/01/94 at 12:59. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of carbon disulfide (37.2%) exceeded the 25% QC limit for the continuing calibration run on 11/03/94 at 11:12. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of chloromethane (27.4%), carbon disulfide (94.6%), 2-butanone (25.8%), 4-methyl-2-pentanone (28.0%) and 2-hexanone (31.3%) exceeded the 25% QC limit for the continuing calibration on 11/07/94 at 13:32. All the results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of chloromethane (41.8%), acetone (41.0%) and 2-hexanone (26.1%) exceeded the 25% QC limit for the continuing calibration run on 11/08/94 at 10:34. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 760 ug/kg in soil method blank BV1044A. Detections of this compound in the associated soil samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and acetone were detected at 8.0 ug/L and 25 ug/L, respectively, in water method blank BC110894B. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 3.3 ug/L and 3.2 ug/L, respectively, in water method blanks BC110394B and BC110794B. Since the trip blanks were used for blank qualifications in the associated samples, no further action was required.

Trip Blanks:

Methylene chloride was detected in the trip blanks at the concentrations listed below:

<u>Trip Blank Sample #:</u>	<u>Methylene Chloride Concentration</u>
136TW00101	6.0 ug/L
178TW00101	4.1 ug/L
178TW00102	4.3 ug/L
662TW00102	6.0 ug/L
662TW00201	5.0 ug/L
666TW00101	7.0 ug/L

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U). Trip blank 666TW00101 (7.0 ug/L) was used for methylene chloride blank qualifications. All positive detections of this compound in the associated samples less than 10X the blank contamination were flagged as undetected with the detection limit being raised to the level of contamination in each sample.

TIC's:

There were no TICs reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of toluene-d8 was below the 88-110% QC limits for sample 017GW00301 (87%). All positive and non-detect results in sample were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of 1,2-dichloroethene-d4 in samples 017TW00301 (338%) and 017TW00301RE (125%) exceeded the 76-114% QC limits. Since this was a trip blank with no positive detections, no action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

The Relative Percent Difference (RPD) of 1,1-dichloroethene (36%) exceeded the 14% QC limit for 662GW00101MS and 662GW00101MSD. The non-detect result for this compound in associated sample 662GW00101 was flagged as estimated (UJ).

The Percent Recovery (%R) of 1,1-dichloroethene (60%) was below the 61-145% QC limits for 662GW00101MSD. The non-detect result for this compound in the associated sample was flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recovery (%R) of bromochloromethane (24%) was below the 50-200% QC limits for sample

017TW00301. The positive and non-detect results for the compounds quantified using this internal standard were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The original analyses of samples 017TW00301 and 662GW00201 are considered to be of preferable data quality to the reanalyses since the reanalyses exceeded holding times. The original analyses of samples 654SB00601 and 654SB00602 were also of preferable data quality due to holding times.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 10/27/94 at 09:10 for the following compounds:

2-methylphenol	26.4%
hexachlorocyclopentadiene	34.4%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 10/28/94 at 11:11 for the following compounds:

hexachlorobenzene	28.6%
benzidine	32.2%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no compounds detected in the method blanks. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of all of the surrogates for sample GDHSW04D07 (0%) were below the QC limits. Since the poor recoveries were due to sample dilution, all positive and non-detect sample results were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met. No action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of both the surrogates for sample GDHSW04D07 (0%) were below the 30-150% QC limits. Since the poor recoveries were due to sample dilution, all positive and non-detect results were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level (ug/L / mg/kg)</u>
PB12221	arsenic	22.6 ug/L	113 / 22.6
CCB6	zinc	48.1 ug/L	241 / 48.1
CCB9	iron	55.9 ug/L	280 / 55.9
CCB1	selenium	29.9 ug/L	150 / 29.9
CCB9	thallium	7.79 ug/L	39.0 / 7.79

CCB = Continuing Calibration Blank, PB = Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank or preparation blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (ug/L / mg/kg)</u>
CCB2	potassium	-3060 ug/L	15300 / 3060
CCB2	lead	-10.8 ug/L	54.0 / 10.8

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of cadmium (122%) exceeded the 80-120% QC limits for laboratory control sample LCS12221. Since there were no positive results for this compound in the associated samples, no action was required.

VII.) Duplicate Sample Analysis:

All Duplicate Sample Analysis criteria for the method were met. No action was necessary.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of chromium (58%), iron (151%) and mercury (58.8%) were outside the QC limits of 75-125% for spiked sample 662GW00101MS. The positive and non-detect results for chromium and mercury were flagged as estimated (J) and (UJ) in associated sample 662GW00101. The positive result for iron in the associated sample was flagged as estimated (J).

IX.) Field Duplicates:

No field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

Graphite Furnace Analysis was not performed for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Laboratory Control Sample (LCS):

All LCS Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*

SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)

SDG NUMBER: CHS23

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB07401	102204	Soil	X	X	X	X
GDHSB07402MS	102204MS	Soil	X	X	X	X
GDHSB07403MSD	102204MSD	Soil	X	X	X	
GDHSB07401MD	102204MD	Soil				X
GDHSB07501	102205	Soil	X	X	X	X
GDHSB07601	102206	Soil	X	X	X	X
GDHSB07601	102206RE	Soil	X			
GDHSB07701	102207	Soil	X	X	X	X
GDHSB07701	102207RE	Soil	X			
GDHSB07801	102208	Soil	X	X	X	X
GDHSB07801	102208RE	Soil	X	X		
GDHSB07802	102209	Soil	X	X	X	X
GDHSB07901	102210	Soil	X	X	X	X
GDHSB07902	102211	Soil	X	X	X	X
GDHSB07902DL	102211DL	Soil	X			

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB08001	102212	Soil	X	X	X	X
GDHSB08002	102213	Soil	X	X	X	X
GDHSB08101	102214	Soil	X	X	X	X
GDHSB08201	102215	Soil	X	X	X	X
GDHSB08202	102216	Soil	X	X	X	X
GDHSB08301	102217	Soil	X	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE
 RE = RE-ANALYSIS AND RE-EXTRACTION, DL = DILUTION

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS23 Organics and Inorganics

SAMPLES: GDHSB07401, GDHSB07402MS, GDHSB07403MSD, GDHSB07401MD,
GDHSB07501, GDHSB07601, GDHSB07601RE, GDHSB07701, GDHSB07701RE,
GDHSB07801, GDHSB07801RE, GDHSB07802, GDHSB07901, GDHSB07902,
GDHSB07902DL, GDHSB08001, GDHSB08002, GDHSB08101, GDHSB08201,
GDHSB08202, GDHSB08301

VOLATILE ORGANICS

I.) Holding Times:

The 19 days between sample date and analysis date for samples GDHSB07701RE and GDHSB07801RE exceeded the 14 day QC limit. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of acetone (76.2%) and 2-butanone (31.5%) exceeded the 30% QC limit for the initial calibration run on 10/21/94. All positive results for these compounds in the associated sample were flagged as estimated (J).

The Percent Relative Standard Deviation (%RSD) of acetone (45.1%) exceeded the 30% QC limit for the initial calibration run on 11/08/94. Since there were no positive results for this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Differences (%D's) of acetone (79.2%), 1,2-dichloroethane (29.1%), 1,1,1-trichloroethane (27.8%), carbon tetrachloride (35.7%), bromoform (26.0%) and vinyl acetate (37.3%) exceeded the 25% QC limit for the continuing calibration run on 10/30/94 at 18:42. All results for acetone, which consisted entirely of positive results, in the associated samples were flagged as estimated (J). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of chloromethane (46.7%), chloroethane (28.3%), acetone (61.5%), 2-butanone (65.2%), 1,1,1-trichloroethane (33.4%), carbon tetrachloride (46.4%), 2-hexanone (34.8%) and vinyl acetate (46.3%) exceeded the 25% QC limit for the continuing calibration run on 10/31/94 at 09:51. All positive and non-detect results for acetone in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of chloromethane (71.5%), chloroethane (36.6%), acetone (110%), 2-butanone (68.7%), 1,1,1-trichloroethane (47.5%), carbon tetrachloride (58.7%), benzene (30.1%) and 1,1,2,2-tetrachloroethane (37.6%) exceeded the 25% QC limit for the continuing calibration run on 10/31/94 at 21:33. All the results for acetone in the associated samples, which consisted entirely of positives were flagged as estimated (J). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of chloromethane (74.8%) exceeded the 25% QC limit for the continuing calibration run on 11/03/94 at 08:00. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

2-Butanone was detected at 2.2 ug/kg in soil method blank VBLK303 (10/30/94). Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone was detected at 5.4 ug/kg in soil method blank VBLK304 (10/31/94). Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 1.2 ug/kg in soil method blank VBLK307 (11/03/94). Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 2.1 ug/kg in soil method blank VBLK313 (11/09/94). Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

There were no trip blanks associated with this SDG.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TICS reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the internal standards listed below were below the 50-200% QC limits for the following samples:

<u>Client</u>	<u>bromochloromethane</u>	<u>1,4-difluorobenzene</u>	<u>chlorobenzene</u>
<u>Sample #:</u>	<u>%R</u>	<u>%R</u>	<u>%R</u>
GDHSB07601	41		44
GDHSB07701			45
GDHSB07801	44		
GDHSB07601RE	48	45	37

All positive and non-detect results associated with each of these internal standards were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken. Blank qualifications were performed in section IV.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The original analysis of samples GDHSB07701 and GDHSB07801 are considered to be of preferable data quality to the reanalyses because the reanalyses

exceeded holding times. The original analysis of sample GDHSB07601 is considered to be of preferable data quality to the reanalysis since it contained fewer low percent recoveries for the internal standards.

SEMI-VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of hexachlorocyclopentadiene (31.3%) exceeded the 30% QC limit for the initial calibration run on 11/08/94. Since there were no positive results for this compound in the associated samples, no action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for hexachlorocyclopentadiene (31.8%), 2,4-dinitrophenol (30.7%) and 4-nitrophenol (26.1%) for the continuing calibration run on 11/14/94 at 07:09. All positive and non-detect results for 4-nitrophenol were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of hexachlorocyclopentadiene (42.3%) exceeded the 25% QC limit for the continuing calibration run on 11/15/94 at 16:51. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of hexachlorocyclopentadiene (45.3%) exceeded the 25% QC limit for the continuing calibration run on 11/16/94 at 12:34. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of 2-fluorobiphenyl (98%) exceeded the 43-91% QC limits for sample GDHSB08101. Since there were no positive results for the compounds associated with this surrogate in

the sample, no action was necessary. The sample was not re-analyzed.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of perylene-d12 for samples GDHSB07801 (45%) and GDHSB07801RE (47%) were below the 50-200% QC limits. All positive and non-detect results for the associated compounds in these samples were flagged as estimated (J) and (UJ).

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification. The original analysis of sample GDHSB07801 is considered to be of preferable data quality to the reanalysis. Although both had low internal standard percent recoveries, the original analysis holding time was better.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary. "

III.) Calibration:

All Calibration criteria for the method were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of tetrachloro-*m*-xylene (171%) for sample GDHSB08301 exceeded the 30-150% QC limits. There were no positive results for this sample, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB2	antimony	45.5 ug/L	45.5
CCB1	zinc	4.3 ug/L	4.3
PBS	calcium	14.93 mg/kg	74.65
PBS	aluminum	11.41 mg/kg	57.05
PBS	iron	12.82 mg.kg	64.1

CCB = Continuing Calibration Blank, PBS = Soil Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank or preparation blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recoveries (%R's) of antimony (70.1%) and nickel (121.2%) were outside the 80-120% QC limit for soil LCSS. All positive and non-detect soil results for antimony were flagged as estimated (J) and (UJ). All positive results for nickel in the associated soil samples were flagged as estimated (J).

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was performed on sample GDHSB07401. The Relative Percent Difference (RPD) for lead (84.8%) exceeded the 35% QC limit for soils. The positive result for this analyte in associated sample GDHSB07401 was flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

All MS / MSD criteria for the method were met. No action was necessary.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analysis was not performed on the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW/SW846
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994.

SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Pesticides/PCB's (P/PCB), Metals, Cyanide (CN), Total Petroleum Hydrocarbons (TPH)

SDG NUMBER: CHS24

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>
<u>Sample #:</u>	<u>Sample #:</u>				
009GW00201	42048-002 / 006	Water	X	X	X
009GW00501	42048-003 / 007	Water	X	X	X
009GW02D01	42048-001 / 005	Water	X	X	X
009GW05D01	42048-004 / 008	Water	X	X	X
013G131301	42029-004 / 012	Water	X	X	X
013G131302	42029-005 / 013	Water	X	X	X
013GW00101	42017-017 / 003	Water	X	X	X
013TW00201	42017-021	Water	X		
013GW00201	42017-018 / 004	Water	X	X	X
013GW00301	42017-019 / 001	Water	X	X	X
013GW00401	42017-020 / 002	Water	X	X	X
013GW00501	42029-001 / 009	Water	X	X	X
013GW00601	42029-002 / 010	Water	X	X	X
013GW00701	42029-003 / 011	Water	X	X	X
655GW00101	42000-001 / 003	Water	X	X	X
655TW00101	42000-002	Water	X		
655GW00201	41986-003 / 005	Water	X	X	X

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>
655GW00301	41986-002 / 004	Water	X	X	X
656GW00101	41986-001 / 006	Water	X	X	X
GDHGW00301	42029-007 / 015	Water	X	X	X
GDHGW00301RE	42029-015RE	Water		X	
GDHGW03D01	42029-006 / 014	Water	X	X	X
GDHTW00301	42029-008	Water	X		
656GW00101MS	41986-001 / 006MS	Water	X	X	X
656GW00101MSD	41986-001 / 006MSD	Water	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, TW = TRIP BLANKS,
RE = RE-EXTRACTION / RE-ANALYSIS

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Metals</u>	<u>CN</u>	<u>TPH</u>
009GW00201	42048-010 / 014	Water	X	X	
009GW00501	42048-010 / 015	Water	X	X	
009GW02D01	42048-009 / 013	Water	X	X	
009GW05D01	42048-012 / 016	Water	X	X	
013G131301	42029-019 / 026 / 033	Water	X	X	X
013G131302	42029-020 / 027 / 034	Water	X	X	X
013GW00101	42017-007 / 011 / 015	Water	X	X	X
013GW00201	42017-008 / 012 / 016	Water	X	X	X
013GW00301	42017-005 / 009 / 013	Water	X	X	X
013GW00401	42017-006 / 010 / 014	Water	X	X	X
013GW00501	42029-016 / 023 / 030	Water	X	X	X
013GW00601	42029-017 / 024 / 031	Water	X	X	X
013GW00701	42029-018 / 025 / 032	Water	X	X	X
655GW00101	42000-004 / 005 / 006	Water	X	X	X
655GW00201	41986-008 / 011 / 014	Water	X	X	X
655GW00301	41986-007 / 010 / 013	Water	X	X	X
656GW00101	41986-009 / 012 / 015	Water	X	X	X
GDHGW00301	42029-022 / 029 / 036	Water	X	X	X
GDHGW03D01	42029-021 / 028 / 035	Water	X	X	X
656GW00101DUP	41986-009 / 012 / 015D	Water	X	X	X
656GW00101MS	41986-009 / 012 / 015S	Water	X	X	X
GDHGW00301DUP	42029-022D	Water	X		
GDHGW00301MS	42029-022S	Water	X		

MS = MATRIX SPIKE, DUP = MATRIX DUPLICATE

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS24 SW846 Organics and Inorganics

SAMPLES: 009GW00201, 009GW00501, 009GW02D01, 009GW05D01, 013G131301, 013G131302, 013GW00101, 013TW00101, 013GW00101, 013GW00201, 013GW00301, 013GW00401, 013GW00501, 013GW00601, 013GW00701, 655GW00101, 655TW00101, 655GW00201, 656GW00101, GDHGW00301, GDHGW00301RE, GDHGW03D01, 656GW00101MS, 656GW00101MSD, 656GW00101DUP, GDHGW00301DUP

VOLATILE ORGANICS

I.) Holding Times:

The Holding Times to analyses were 8 days to 12 days, which exceeded the 7 day QC limit for aromatic volatiles, for all samples in this SDG except 009GW00101, 009GW00501, 009GW02D01 and 009GW05D01. None of the samples were acid preserved to a pH of less than 2. All positive and non-detect aromatic volatile compounds in the associated samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for chloromethane and carbon disulfide were 34.7% and 45.2%, respectively, which exceeded the 30% QC limit for the standards run on 10/25/94. There were no positive detections of these compounds in the associated samples, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 11/8/94 at 10:34 for the following compounds:

chloromethane	41.8 %
acetone	41.0 %
2-hexanone	26.1 %

There were no positive results for these compounds in the associated samples. All associated non-detect results for these compounds were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 11/9/94 at 09:30 for the following compounds:

chloromethane	43.2 %
trichlorofluoromethan	25.7 %
tetrahydrofuran	28.2 %
2-butanone	36.7 %
2-hexanone	36.0 %
4-methyl-2-pentanone	36.0 %

There were no positive results for these compounds in the associated samples. All non-detect results for these compounds in the associated samples were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene and acetone were detected at 8 ug/L and 25 ug/L, respectively, in water method blank BC11089AB. There were no positive results for acetone in the associated samples. All detections of methylene chloride in the associated samples below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

There were no equipment rinsate blanks associated with this SDG.

Trip Blanks:

Methylene chloride was detected at 6 ug/L in trip blank 013TW00101. All detections of this compound in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was also detected at 4.9 ug/L and 3.5 ug/L, respectively in trip blanks 655TW00101 and GDHTW0030. The previous trip blank was used for qualification. No further action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate:

All MS/MSD criteria for the method were met, so no action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XIII.) System Performance:

All System Performance criteria for the method were met.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 11/10/94 at 09:10 for the following compounds:

benzoic acid	64.5 %
benzidine	36.5 %
di-n-octylphthalate	30.0 %
benzo(k)fluoranthene	26.6 %

Positive and non-detect results for benzoic acid in the associated samples were flagged as estimated (J) and (UJ). There were no positive results for the remaining compounds. The non-detect results for these compounds in the associated samples were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. Data qualification was not required.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate:

All Percent Recovery (%R) criteria for the method were met, so no action was necessary.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

Sample GDHGW00301 was reanalyzed, but there was no apparent reason for the reanalysis. The initial analysis results for the sample are of preferable data quality to the reanalyses due to better holding times. All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

The Percent Recovery (%R) dibutyl chlorendate (DBC) was 177% in sample GDHGW03D01, with was above the 24-154% QC limits. Since there were no positive detections in this sample, no action was necessary.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate:

All MS/MSD criteria for the method were met, so no action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for the method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

GPC was not required for this SDG.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

III.) Blanks:

Laboratory Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.(ug/L)</u>	<u>Action Level ug/L</u>
CCB	aluminum	16.5	82.5
CCB	arsenic	6.58	32.9
CCB	barium	7.02	35.1
PBW	calcium	72.1	361
CCB	chromium	3.65	18.3
CCB	copper	15.8	79.0
CCB	cobalt	3.33	16.7
CCB	iron	16.0	80.0
CCB	lead	1.22	6.10
PBW	magnesium	29.4	147
CCB	manganese	1.65	8.25
CCB	nickel	7.32	36.6
CCB	potassium	476	2380
CCB	vanadium	4.09	20.5
CCB	zinc	3.70	18.5

CCB = Continuing Calibration Blank, PBW = Water Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank is an associated calibration or preparation blank were flagged as undetected (U).

Negative results were observed for the following metals in the initial (ICB) and continuing (CCB) calibration blanks:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.(ug/L)</u>	<u>Action Level ug/L</u>
CCB	lead	-1.17	5.85
ICB	nickel	3.94	19.7
CCB	potassium	-302	1510
CCB	selenium	-3.44	17.2
CCB	thallium	-4.01	20.1

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken. Zinc (8 ug/L) was present in ICS Solution A at a concentration greater than 2X IDL. This analytes should not be present. Magnesium was present at concentrations greater than the amount in Solution A in samples 009GW02D01, 009GW05D01, 655GW00101 and GDHGW03D01. Zinc was not detected in these samples, so no action was required.

Negative results were observed for cobalt (-9 ug/L), nickel (-3 ug/L), potassium (-176 ug/L) and thallium (-164 ug/L) in the ICS solution. Magnesium was present at concentrations greater than the amount in Solution A in samples 009GW02D01, 009GW05D01, 655GW00101 and GDHGW03D01. All associated positive sample results less than 5X the absolute value of the ICS result and all non-detects were flagged as estimated (J) and (UJ).

V.) ICP Serial Dilution Analysis:

Serial Dilution Analysis was not performed for this SDG.

VI.) Laboratory Control Samples (LCS):

All LCS criteria for the method were met, so no action was taken.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for aluminum was 40% for duplicate sample 656GW00101DUP, which exceeded the 20% QC limit for water samples. The positive result in associated sample 656GW00101 was flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) were 131% and 55% for aluminum and mercury, respectively, for spiked water sample 656GW00101MS, which were outside the 75-125% QC limits. The positive result for aluminum was flagged as estimated (J), and the non-detect result for mercury was flagged as estimated (UJ) in associated sample 656GW00101.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS (TPH)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was required.

V.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All Percent Recovery criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicate samples associated with this SDG.

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH)
SDG NUMBER: CHS25

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
GDHGW00101	42057-001	Water	X				
GDHGW00101MS	42057-001MS	Water	X				
GDHGW00101MSD	42057-001MSD	Water	X				
GDHGW00101	42057-004	Water		X	X		
GDHGW00101MS	42057-004MS	Water		X	X		
GDHGW00101MSD	42057-004MSD	Water		X	X		
GDHGW00101	42057-006/008	Water				X	
GDHGW00101MS	42057-006/8MS	Water				X	
GDHGW00101MD	42057-006/8MD	Water				X	
GDHTW00101	42057-002	Water	X				
GDHGW01D01	42057-003	Water	X				
GDHGW01D01	42057-005	Water		X	X		
GDHGW01D01	42057-007/009	Water				X	
GDHGW00201	42084-001	Water	X				

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
GDHGW00201	42084-004	Water		X	X		
GDHGW00201	42084-007/010	Water				X	
653GW00101	42084-002	Water	X				
653GW00101	42084-005	Water		X	X		
653GW00101	42084-008/011	Water				X	
653GW00101	42084-013	Water					X
653GW00201	42084-003	Water	X				
653GW00201	42084-006	Water		X	X		
653GW00201	42084-009/012	Water				X	
653GW00201	42084-014	Water					X
009GW01101	42086-001	Water	X				
009GW01101	42086-004	Water		X	X		
009GW01101	42086-00600/8	Water				X	
GDHGW02D01	42086-002	Water	X				
GDHGW02D01	42086-005	Water		X	X		
GDHGW02D01	42086-00700/9	Water				X	
GDHTW01101	42086-003	Water	X				
GDHGW00501	42096-010	Water	X				
GDHGW00501	42096-001	Water		X	X		
GDHGW00501	42096-007/010	Water				X	
GDHGW05D01	42096-011	Water	X				
GDHGW05D01	42096-002	Water		X	X		
GDHGW05D01	42096-005/008	Water				X	
009GW01001	42096-012	Water	X				
009GW01001	42096-003	Water		X	X		
009GW01001	42096-006/009	Water				X	
121GW00101	42136-001	Water	X				
121GW00101	42136-004	Water		X	X		
121GW00101	42136-006/008	Water				X	
GDHGW08D01	42136-002	Water	X				
GDHGW08D01	42136-005	Water		X	X		
GDHGW08D01	42136-007/009	Water				X	
121TW00101	42136-003	Water	X				
GDHSB08401	42136-010	Soil	X				
GDHSB08401MS	42136-010MS	Soil	X				
GDHSB08401MSD	42136-010MSD	Soil	X				
GDHSB08401	42136-014	Soil		X	X		
GDHSB08401	42136-018	Soil				X	
GDHSB08402	42136-011	Soil	X				
GDHSB08402	42136-015	Soil		X	X		
GDHSB08402	42136-019	Soil				X	
GDHSB08501	42136-012	Soil	X				
GDHSB08501	42136-016	Soil		X	X		
GDHSB08501	42136-020	Soil				X	
GDHSB08502	42136-013	Soil	X				
GDHSB08502RE	42136-013RE	Soil	X				
GDHSB08502	42136-017	Soil		X	X		
GDHSB08502	42136-021	Soil				X	

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
CSYGFMW401	42140-008	Water	X				
CSYGFMW401	42140-001	Water		X	X		
CSYGFMW401	42140-003	Water					X
CSYGFMW401	42140-006/008	Water				X	
GDHGW00801	42140-010	Water	X				
GDHGW00801	42140-002	Water		X	X		
GDHGW00801	42140-005/007	Water				X	
GDHTW00801	42140-009	Water	X				

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE
RE = RE-ANALYSIS, TW = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated. - CHS25 Organics and Inorganics

SAMPLES: GDHGW00101, GDHGW00101RE, GDHGW00101MS, GDHGW00101MSD, GDHGW00101MD, GDHTW00101, GDHGW01D01, GDHGW00201, 653GW00101, 653GW00201, 009GW01101, GDHGW02D01, GDHTW01101, GDHGW00501, GDHGW05D01, 009GW01001, 121GW00101, GDHGW08D01, 121TW00101, GDHSB08401, GDHSB08401MS, GDHSB08401MSD, GDHSB08402, GDHSB08501, GDHSB08502, GDHSB08502RE, CSYGFMW401, GDHGW00801, GDHTW00801

VOLATILE ORGANICS

I.) Holding Times:

The 15 days between sampling date and analysis date for sample GDHSB08502RE exceeded the 14 day QC limit. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of chloromethane (34.7%), acetone (30.3%), and carbon disulfide (45.2%) exceeded the 30% QC limit for the initial calibration run on 10/25/94. Since all of the results for these compounds consisted of non-detects in the associated samples, no action was required.

The Percent Relative Standard Deviation (%RSD) of methylene chloride (34.9%) exceeded the 30% QC limit for the initial calibration run on 11/23/94. Since all results for this compound were qualified as non-detect (U) based on method blank contamination, no action was necessary.

Continuing Calibration:

The Percent Differences (%D's) of 2-butanone (30.1%), 4-methyl-2-pentanone (29.3%), 2-hexanone (39.2%) and tetrahydrofuran (30.7%) exceeded the 25% QC limit for the continuing calibration run on 11/15/94 at 10:54. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of acetone (29.4%), carbon disulfide (69.9%), tetrahydrofuran (33.5%),

2-butanone (37.7%), 4-methyl-2-pentanone (35.6%), 2-hexanone (46.0%) and 1,1,2,2-tetrachloroethane (26.1%) exceeded the 25% QC limit for the continuing calibration run on 11/17/94 at 12:23. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 8.0 ug/L in water method blank BC111594B. Detections of this compound in the associated water samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 6.0 ug/L in water method blank BC111794B. Detections of this compound in the associated water samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 1500 ug/kg in soil method blank BV1049A. Detections of this compound in the associated soil samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride and acetone were detected at 8.0 ug/L, respectively, and 6.0 ug/L in water method blank BC112394C. Detections of these compounds in the associated water samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks:

Methylene chloride was detected in the trip blanks listed below. The results for this compound in the associated samples were previously qualified using the method blanks. No further action was necessary.

<u>Trip Blank</u>	<u>Methylene Chloride</u>
<u>Sample #:</u>	<u>Concentration</u>
121TW00101	7.0 ug/L
GDHTW00801	7.0 ug/L
GDHTW00101	8.0 ug/L

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TIC's reported in the method or trip blanks for this SDG.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of bromofluorobenzene (123%) exceeded the 74-121% QC limits for sample GDHSB08502. All positive results in this sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

The Relative Percent Differences (RPD's) for 1,1-dichloroethene (27%) and trichloroethylene (18%) exceeded the 14% QC limit for spiked samples GDHSB08401MS and GDHSB08401MSD. The results for these compounds in associated sample GDHSB08401, which consisted entirely of non-detects, were flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was required.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the internal standards for the samples listed below were below the 50-200% QC limits. The positive and non-detect results for the associated compounds in each sample were flagged as estimated (J) and (UJ). The results for GDHSB08502RE were previously qualified.

<u>Client</u> <u>Sample#:</u>	<u>Internal</u> <u>Standard</u>	<u>%</u> <u>R</u>
GDHSB08401	bromochloromethane	49
	1,4-difluorobenzene	49
	chlorobenzene	44
GDHSB08502	bromochloromethane	36
	1,4-difluorobenzene	29
	chlorobenzene	33
GDHSB08502RE	bromochlorobenzene	21
	1,4-difluorobenzene	13
	chlorobenzene	27

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken. Blank qualifications were performed in section IV.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All data were acceptable with qualification. The results for the initial analysis of sample GDHSB08502 are considered to be of preferable data quality due to the holding time exceedance of the re-analyzed sample (GDHSB08502).

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 11/14/94 at 08:51 for the following compounds:

n-nitrosodimethylamine	26.5%
benzoic acid	43.6%
4-nitrophenol	30.0%
benzidine	30.6%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 11/15/94 at 09:03 for the following compounds:

n-nitrosodimethylamine	31.4%
benzoic acid	58.5%
4-nitrophenol	32.5%
benzidine	37.3%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of benzoic acid (56.5%) exceeded the 25% QC limit for the continuing

calibration run on 11/28/94 at 13:07. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All method blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of terphenyl-d14 in samples GDHGW01D01 (27%) and GDHGW00201 (27%) were below the 33-141% QC limits. Since only one surrogate was below the QC limits in the base/neutral fraction in each sample, no action was required. The laboratory did not re-analyze the samples as recommended by the SOW.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no filed duplicates associated with this SDG. No action was necessary.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken. Blank qualifications were performed in section IV.

XII.) System Performance:

All System Performance criteria for the method were met. No action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method was met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of both the surrogates for sample GDHGW00201 (0%) were below the 30-150% QC limits. Since the poor recoveries were due to sample dilution, all positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

Blank Type/ID#	Element	Max. Conc.	Action Level	
			mg/kg	ug/L
CCB15	iron	354 ug/L	354	1770
CCB12	sodium	2074 ug/L	2074	10370
CCB21	aluminum	512 ug/L	512	2560
CCB15	zinc	70.8 ug/L	70.8	354
CCB14	calcium	1138 ug/L	1138	5690
CCB12	potassium	856 ug/L	856	4280
CCB3	barium	122 ug/L	122	610
CCB3	arsenic	9.86 ug/L	9.86	49.3

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

There were no blanks with negative results with absolute values greater than the IDL's.

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

All Duplicate Sample Analysis criteria for the method were met. No action was necessary.

VIII.) Matrix Spike Recoveries:

All MS / MSD criteria for the method were met. No action was required.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

All Graphite Furnace criteria for the method were met. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary. *

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS26

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me</u>	<u>CN</u>
009GW00701	42164-001	Water	X				
009GW00701	42164-005	Water		X	X		
009GW00701	42164-008	Water				X	
009GW00701	42164-010	Water					X
009GW07D01	42164-002	Water	X				
009GW07D01	42164-006	Water		X	X		
009GW07D01	42164-009	Water				X	
009GW07D01	42164-011	Water					X
009TB00701	42164-003	Water	X				
GDHGW00601	42278-001	Water	X				
GDHGW00601	42278-007	Water		X	X		
GDHGW00601	42278-009	Water				X	
GDHGW00601	42278-011	Water					X
GDHGW06D01	42278-002	Water	X				
GDHGW06D01	42278-008	Water		X	X		

<u>Client</u> <u>Sample #:</u>	<u>Lab</u> <u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me</u> X	<u>CN</u>
GDHGW06D01	42278-010	Water				X	
GDHGW06D01	42278-012	Water					X
009GW12D01	42278-003	Water	X				
009GW12D01	42278-013	Water		X	X		
009GW12D01	42278-016	Water				X	
009GW12D01	42278-019	Water					X
GDHTW00601	42278-004	Water	X				
0009GW00301	42278-005	Water	X				
009GW00301	42278-014	Water		X	X		
009GW00301	42278-017	Water				X	
009GW00301	42278-020	Water					X
009GW01301	42278-006	Water	X				
009GW01301	42278-015	Water		X	X		
009GW01301	42278-018	Water				X	
009GW01301	42278-021	Water					X
GDHGW00401	42288-001	Water	X				
GDHGW00401	42288-004	Water		X	X		
GDHGW00401	42288-006	Water				X	
GDHGW00401	42288-008	Water					X
GDHGW04D01	42288-002	Water	X				
GDHGW04D01	42288-005	Water		X	X		
GDHGW04D01	42288-007	Water				X	
GDHGW04D01	42288-009	Water					X
GDHTW04D01	42288-003	Water	X				
009GW00101	42301-001	Water	X				
009GW00101	42301-005	Water		X	X		
009GW00101	42301-008	Water				X	
009GW00101	42301-011	Water					X
009GW00901	42301-002	Water	X				
009GW00901	42301-006	Water		X	X		
009GW00901	42301-009	Water				X	
009GW00901	42301-012	Water					X
009GW03D01	42301-003	Water	X				
009GW03D01	42301-007	Water		X	X		
009GW03D01	42301-010	Water				X	
009GW03D01	42301-013	Water					X
009TW00102	42301-004	Water	X				
009GW00401	42316-001	Water	X				
009GW00401	42316-009	Water		X	X		
009GW00401	42316-015	Water				X	
009GW00401	42316-021	Water					X
009GW04D01	42316-002	Water	X				
009GW04D01	42316-010	Water		X	X		
009GW04D01	42316-016	Water				X	
009GW04D01	42316-022	Water					X
009TW00401	42316-003	Water	X				
GDHGW01101	42316-004	Water	X				
GDHGW01101	42316-011	Water		X	X		

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me</u>	<u>CN</u>
GDHGW01101	42316-017	Water				X	
GDHGW01101	42316-023	Water					X
GDHGW00901	42316-005	Water	X				
GDHGW00901	42316-012	Water		X	X		
GDHGW00901	42316-018	Water				X	
GDHGW00901	42316-024	Water					X
GDHGW09D01	42316-006	Water	X				
GDHGW09D01	42316-013	Water		X	X		
GDHGW09D01	42316-019	Water				X	
GDHGW09D01	42316-025	Water					X
GDHGW01001	42316-007	Water	X				
GDHGW01001	42316-014	Water		X	X		
GDHGW01001	42316-020	Water				X	
GDHGW01001	42316-026	Water					X
GDHTW01101	42316-008	Water	X				
GDHGW00701	42393-004	Water	X				
GDHGW00701MS	42393-004MS	Water	X				
GDHGW00701MSD	42393-004MSD	Water	X				
GDHGW00701	42393-001	Water		X	X		
GDHGW00701MS	42393-001MS	Water		X	X		
GDHGW00701MSD	42393-001MSD	Water		X	X		
GDHGW00701	42393-002	Water				X	
GDHGW00701MS	42393-002MS	Water				X	
GDHGW00701MD	42393-002MD	Water				X	
GDHGW00701	42393-003	Water					X
GDHGW00701MS	42393-003MS	Water					X
GDHGW007001MD	42393-003MD	Water					X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
TB = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS26 Organics and Inorganics

SAMPLES: 009GW00701, 009GW07D01, 009TB00701, GDHGW00601, GDHGW06D01, 009GW12D01, GDHTW00601, 09GW00301, 009GW01301, GDHGW00401, GDHGW04D01, GDHTW04D01, 009GW00101, 009GW00901, 009GW03D01, 009TW00102, 009GW00401, 009GW04D01, 009TW00401, GDHGW01101, GDHGW00901, GDHGW09D01, GDHGW01001, GDHTW01101, GDHGW00701, GDHGW00701MS, GDHGW00701MSD, GDHGW00701MD

VOLATILE ORGANICS

I.) Holding Times:

The number of days between sample date and analysis date for the samples listed below exceeded the 7 day QC limit for unpreserved samples. The case narrative for this SDG stated that these samples were not properly preserved.

<u>Sample #:</u>	<u>Days</u>
009TB00701	8
009GW00101	13
009GW00101DL	14
009TW00102	13
009GW00301	13
009GW00401	12
009TW00401	12
009GW00701	8
009GW00901	13
009GW01301	14
009GW03D01	14
009GW04D01	13
009GW07D01	8
009GW12D01	13
GDHGW00404	15
GDHGW00601	13
GDHTW00601	13
GDHGW00901	14
GDHGW01001	14
GDHGW01101	12
GDHTW01101	13
GDHGW04D01	15
GDHTW04D01	15

Sample #:	Days
GDHGW06D01	13
GDHGW09D01	12

Since the 14 day QC limit was exceeded for all volatiles, all positive and non-detect results in samples GDHGW00404, GDHGW04D01 and GDHTW04D01 were flagged as estimated (J) and (UJ). The positive and non-detect results for the aromatic volatile compounds, only, were flagged as estimated (J) and (UJ) in the remaining samples.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of chloromethane (34.7%), acetone (30.3%) and carbon disulfide (45.2%) exceeded the 30% QC limit for the initial calibration run on 10/25/94. The results for these compounds consisted entirely of non-detects in the associated samples, so no further action was required.

The Percent Relative Standard Deviation (%RSD) of carbon disulfide (33.9%) exceeded the 30% QC limit for the initial calibration run on 11/28/94. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 11/18/94 at 10:53. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

carbon disulfide	74.4%
tetrahydrofuran	30.1%
2-butanone	37.8%
vinyl acetate	25.7%
4-methyl-2-pentanone	33.8%
2-hexanone	43.0%

The Percent Difference (%D) of carbon disulfide (45.3%) exceeded the 25% QC limit for the continuing calibration run on 12/02/94 at 11:18. All results for this compound, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

The Percent Differences (%D's) of chloromethane (31.2%), 4-methyl-2-pentanone (25.8%) and 2-hexanone (26.1%) exceeded the 25% QC limit for the continuing calibration run on 12/05/94 at 10:48. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of vinyl acetate (28.3%) exceeded the 25% QC limit for the continuing calibration run on 12/03/94 at 16:48. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected in the following method blanks at the concentrations listed:

<u>Method Blank</u>	<u>Conc., ug/L</u>
BC111894B	7.0
BC120194B	4.5
BC120294B	5.0
BC120394B	8.0
BC120594B	8.0

Blank qualifications were performed using the trip blanks. No data qualification was required.

Trip Blanks:

Methylene chloride and carbon disulfide were detected in the following trip blanks at the concentrations listed below:

<u>Blank #:</u>	<u>Compound</u>	<u>Result (ug/L)</u>
009TB00701	methylene chloride	9.0
009TW00102	methylene chloride	5.0
009TW00401	methylene chloride	7.0
	carbon disulfide	18.0
GDHTW00601	methylene chloride	4.3
GDHTW01101	methylene chloride	9.0
GDHTW04D01	methylene chloride	4.7

All positive detections of carbon disulfide in the associated samples less than 5X the blank amount (18.0 ug/L) were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. Trip blanks 009TB00701 (9.0 ug/L) and GDHTW011010 (9.0 ug/L) were used for methylene chloride blank qualification. All positive detections of this compound less than 10X the blank contamination were flagged as undetected with the detection limit being raised to the level of contamination in each sample.

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Sample (LCS):

The Percent Recovery (%R) of trichloroethylene (130%) exceeded the 71-120% QC limits for Laboratory Control Sample LCG120394. Since there were no positive results for this compound in the associated samples, no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Internal Standards Performance:

All Internal Standards Performance criteria for the method were met. No action was necessary.

X.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XIII.) System Performance:

XIV.) Overall Assessment of Data/General:

All data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

The 9 days between sampling and extraction for sample GDHGW01001 and the 11 days for sample GDHGW09D01RE exceeded the 7 day holding time QC limit. All results for these samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of 2,4-dinitrophenol (33.6%) exceeded the 30% QC limit for the initial calibration run on 12/07/94. Since all results for this compound in the associated samples were non-detects, no action was required.

Continuing Calibration:

The Percent Difference (%D) of benzoic acid (52.5%) exceeded the 25% QC limit for the continuing calibration run on 11/29/94 at 15:50. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of terphenyl-d14 (17%) was below the 33-141% QC limits for sample 009GW04D01. All positive and non-detect results for the compounds associated with this surrogate were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of all of surrogates for sample 009GW00701 were 0%. Since the poor recoveries were due to sample dilution, all positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recoveries (%R's) of pentachlorophenol in samples GDHGW00701MS (113%) and GDHGW00701MSD (111%) exceeded the 9-103% QC limits. Since the result for this compound in associated sample GDHGW00701 was a non-detect, no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of both surrogates were 0% for sample 009GW04D01. Since the 0% recoveries were due to a dilution, all positive and non-detect sample results were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of tetrachloro-m-xylene in samples 009GW00701 (28%) and 009GW07D01 (22%) were below the 30-150% QC limit. All results for these samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>ug/L</u>
CCB4	aluminum	116 ug/L	580
CCB4	iron	58.3 ug/L	292
CCB6	copper	102 ug/L	510
CCB11	zinc	63.2 ug/L	316

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (ug/L)</u>
CCB1	selenium	-31.9 ug/L	160
CCB12	potassium	-758 ug/L	3790
CCB14	sodium	-37.2 ug/L	186

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of iron (141%) exceeded the 80-120% QC limits for LCS12246. All positive results for this analyte in the associated samples were flagged as estimated (J).

VII.) Duplicate Sample Analysis:

All Duplicate Sample Analysis criteria for the method were met. No action was necessary.

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) for lead (154%) exceeded the QC limits of 75-125% for sample GDHW00701MS. The positive result for this analyte in associated sample GDHW00701 was flagged as estimated (J).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

All Furnace Atomic Absorption criteria for the method were met. No action was necessary.

XI.) Dissolved Inorganics:

There were no dissolved inorganics analysis for this SDG.

XII.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XIII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshali
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.14
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW/SW846
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil/Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Pesticides/PCB's (P/PCB), Metals/Cyanide (Me/CN)
SDG NUMBER: CHS27

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>	<u>Me/CN</u>
009GW00601	42347-023/026/030	Water	X	X	X	X
009GW00801	42381-001/004/006	Water	X	X	X	X
009TW00801	42381-003	Water	X			
009GW01201	42394-019/024028	Water	X	X	X	X
009GW01401	42394-001/002/003	Water	X	X	X	X
009GW01401RE	42394-002RE	Water		X		
009GW01501	42347-021/025029	Water	X	X	X	X
009GW06D01	42347-022/027/031	Water	X	X	X	X
009GW08D01	42381-002/005/007	Water	X	X	X	X
GDHTB00101	42593-002	Water	X			
655GW00301	42394-005	Water			X	
GDHSB08601	42347-001/007/013	Soil	X	X	X	X
GDHTB08601	42347-020	Water	X			
GDHSB08602	42347-002/008/014	Soil	X	X	X	X
GDHSB08701	42347-003/009/015	Soil	X	X	X	X
GDHSB08702	42347-004/010/016	Soil	X	X	X	X
GDHSB08801	42347-005/011/017	Soil	X	X	X	X
GDHSB08802	42347-006/012/018	Soil	X	X	X	X

<u>Client</u>	<u>Lab</u>		<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>	<u>Me/CN</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>				
GDHSB08802RE	42347-006RE	Soil	X			
GDHSB08901	42430-001/005	Soil	X	X	X	X
GDHSB09001	42430-002/006	Soil	X	X	X	X
GDHSB09001RE	42430-002RE	Soil	X			
GDHSB09101	42430-003/007	Soil	X	X	X	X
GDHTB09101	42430-004	Water	X			
GDHGW07D01	42614-001/002	Water	X	X	X	X
GDHGW10D01	42607-001/002	Water	X	X	X	X
GDHGW11D01	42593-001/003	Water	X	X	X	X
GDHGW07D01MS	42614-001/002MS	Water	X	X	X	
GDHGW07D01MSD	42614-001/002MSD	Water	X	X	X	
GDHGW07D01D*	42614-003D*	Water				X
GDHGW07D01MS	42614-003S*	Water				X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D* = MATRIX DUPLICATE, TB, TW = TRIP BLANKS, RE = RE-EXTRACTION / RE-ANALYSIS, (6D01, 8D01) = FIELD DUPLICATES

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS27, SW846 Organics and Inorganics

SAMPLES: 009GW00601, 009GW00801, 009TW00801, 009GW01201, 009GW01401, 009GW01401RE, 009GW01501, 009GW06D01, 009GW08D01, GDHTB00101, GDHSB08601, GDHTB08601, GDHSB08602, GDHSB08701, GDHSB08702, GDHSB08801, GDHSB08802, GDHSB08802RE, GDHSB08901, GDHSB09001, GDHSB09001RE, GDHSB09101, GDHTB09101, GDHGW07D01, GDHGW10D01, GDHGW11D01, GDHGW07D01MS, GDHGW07D01MSD, GDHGW07D01D*, GDHGW07D01MS

VOLATILE ORGANICS

I.) Holding Times:

The Holding Times to analyses were 15 to 16 days, which exceeded the 14 day QC limit for preserved samples GDHSB08801, GDHSB08802, GDHSB08802RE, GDHSB08901, GDHSB09001, GDHAB09001RE and GDHSB09101. All positive and non-detect volatile compounds in the associated samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for carbon disulfide was 33.9% for the standards run on 11/28/94 on instrument CMS-HP, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 12/14/94 on instrument HP-GMS for the following compounds:

methylene chloride	36.7 %
acetone	32.5 %
bromoform	30.6 %

There were no positive detections of these compounds in the associated samples. No action was necessary.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 12/6/94 at 15:33 instrument HP-GMS for the following compounds:

methylene chloride	54.2 %
carbon disulfide	29.9 %

There were no positive detections of these compounds in the associated samples. All non-detect results in the associated were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 12/7/94 at 13:09 on instrument HP-GMS for the following compounds:

chloromethane	30.1 %
methylene chloride	62.2 %

There were no positive detections of these compounds in the associated samples. All non-detect results in the associated samples were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 12/15/94 at 13:09 on instrument HP-GMS for the following compounds:

1,1,1-trichloroethane	29.4 %
carbon tetrachloride	27.4 %
vinyl acetate	26.9 %

All results for these compounds in the associated samples, which consisted entirely on non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) was 28.2% for carbon tetrachloride for the standard run on 12/16/94 at 15:14 on instrument HP-GMS, which exceeded the 25% QC limit. The non-detect result for this compound in sample GDHSB09001RE was flagged as estimated (UJ).

The Percent Difference (%D) was 35.1% for acetone for the standard run on 12/22/94 at 12:04 on instrument CMS-HP, which exceeded the 25% QC limit. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride and acetone were detected at 15 ug/kg and 35 ug/kg, respectively, in soil method blank BG120794. Detections of methylene chloride and acetone in the associated soil samples below 10X the amounts of blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

Trip Blanks:

Methylene chloride was detected at 8 ug/L in trip blanks 009TW00801 and GDHTB09101. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample. Acetone was also detected in trip blank GDHTB09101. Detections of acetone in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was also detected at 6 ug/L and 7 ug/L in trip blanks GDHTB00102 and GDHTB08601, respectively. This compound was previously qualified using other trip blanks. No further action was required.

V.) Surrogate Recoveries:

The Surrogate Recoveries (%R's) of toluene-d8 were 115% for samples GDHSB08702 and GDHSB09001, which exceeded the 86-114% QC limits. All positive results in these two samples were flagged as estimated (J). Sample GDHSB09001 was re-analyzed and all Surrogate criteria were met in sample GDHSB09001RE.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was required.

VIII.) Field Duplicates:

There were no calculable RPD's in the two field duplicates associated with this SDG.

IX.) Internal Standards Performance:

The Percent Recoveries (%R's) for the internal standard area counts were below the 50-200% QC limits for the following samples and internal standards:

Sample	IS	%R
GDHSB08802	DFB	47
	CBZ	44
GDHSB09001	BCM	31
	DFB	28
	CBZ	22

<u>Sample</u>	<u>I.S.</u>	<u>%R</u>
GDHSB09001RE	BCM	44
	DFB	46
	CBZ	47

All positive and non-detect results associated with each of these internal standards in the associated sample were flagged as estimated (J) and (UJ). In addition, the %R for internal standard CBZ in sample GDHSB09001 was below 25% and all data associated with this internal standard were rejected (R). Sample GDHSB08802 was re-analyzed. All internal standard criteria were met in re-analyzed sample GDHSB08802RE.

X.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC Identification criteria for the method were met, so no action was required.

XIII.) System Performance:

All System Performance criteria for the method were met, so no action was required.

XIV.) Overall Assessment of Data/General:

Seven soil samples' units were mislabeled as ug/L on the data spreadsheet. The units were corrected to ug/kg during the validation process.

Eight compounds were rejected in the initial analysis of sample GDHSB09001 due to an excessively low internal standard recovery. The re-analysis of this sample (GDHSB09001RE) is considered to be of preferable data quality, even though re-analyzed outside holding time, since no compounds were rejected. Both analyses of this sample exhibited low recoveries for all internal standards.

All internal standard recoveries were below the QC limits for the initial analysis of sample GDHSB08802. All internal standard criteria were met for the re-analysis of this sample (GDHSB08802RE). For this reason the re-analysis is considered to be of preferable data quality despite analysis slightly outside holding time.

All remaining laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

The Holding Time to extraction was 9 days for sample 009GW01401RE, which exceeded the 7 day QC limit for water samples. All positive and non-detect results were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 33.6% for 2,4-dinitrophenol for the standards run on 12/7/94, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

The Percent Relative Standard Deviation (%RSD) was 40.0% for benzo(k)fluoranthene for the standards run on 11/18/94, which exceeded the 30% QC limit. There were no positive detections of this compound in the associated samples, so no action was required.

Continuing Calibration:

The Relative Response Factor (RRF) was 0.047 for benzoic acid for the standard run at 09:57 on 12/8/94 on instrument FMS-HP, which was below the 0.05 QC limit. All results for this compound in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Difference (%D) was 42.6% for benzoic acid for the standard run at 09:57 on 12/8/94 on instrument FMS-HP, which exceeded the 25% QC limit. All data for this compound in the associated samples were previously rejected due to a low RRF. No further action was necessary.

The Percent Difference (%D) was 26.6% for n-nitroso-di-n-phenylamine for the standard run at 08:35 on 12/12/94 on instrument FMS-HP, which exceeded the 25% QC limit. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) was 27.9% for n-nitroso-di-n-phenylamine for the standard run at 09:23 on 12/14/94 on instrument FMS-HP, which exceeded the 25% QC limit. There were no samples associated with this calibration, so no action was required.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 12/30/94 at 15:03 on instrument HMS-HP for the following compounds:

benzoic acid	41.3 %
benzidine	65.2 %
benzo(k)fluoranthene	32.9 %

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 1/3/95 at 10:50 on instrument HMS-HP for the following compounds:

4-chlorophenyl-phenylether	29.0 %
benzidine	47.8 %
fluorene	27.9 %
benzo(k)fluoranthene	59.6 %

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. Data qualification was not required.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was required.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of terphenyl were 31%, 29% and 19%, respectively, in samples 009GW08D01, GDHGW10D01 and GDHGW07D01, which were below the 33-141% QC limits. Since only one surrogate was outside the QC limits in the base/neutral fraction for each sample, no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recoveries (%R's) of pentachlorophenol were 105% for the water LCS's run on 12/7/94 and 12/12/94, which exceeded the 9-103% QC limits. There were no positive detections of this compound in the associated water samples, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was necessary.

VIII.) Field Duplicates:

There were no calculable RPD's for the field duplicates associated with this SDG.

IX.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

Benzoic acid was rejected in ten samples due to a low RRF in the associated Continuing Calibration.

Sample 009GW01401 was re-analyzed for undocumented reasons. The re-extraction (009GW01401RE) of this sample was performed slightly outside holding time. The initial analysis is considered to be of preferable data quality due to holding time exceedance of the re-extraction.

All remaining laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was required.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All PIS criteria for the method were met, so no action was taken.

IX.) Field Duplicates:

There were no calculable RPD's for the field duplicates associated with this SDG.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for the method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

GPC was not performed for this SDG.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

III.) Blanks:

Laboratory Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u>	
			<u>ug/L</u>	<u>mg/kg</u>
PBS	aluminum	9.80 mg/kg	9.80	49.0
CCB17	antimony	29.7 ug/L	149	29.7
CCB11	arsenic	21.9 ug/L	110	21.9
CCB11	barium	10.4 ug/L	52.0	10.4
CCB11	beryllium	0.40 ug/L	2.00	0.40
PBW	calcium	78.3 ug/L	392	78.3
PBW	copper	102 ug/L	510	102
CCB12	cobalt	4.65 ug/L	23.3	4.65
CCB9	iron	81.7 ug/L	409	81.7
CCB14	lead	7.61 ug/L	38.5	7.61
PBS	magnesium	5.80 mg/kg	5.80	44.0
CCB11	manganese	2.74 ug/L	13.7	2.74
CCB6	selenium	15.1 ug/L	75.5	15.1
PBW	sodium	153 ug/L	765	153
CCB16	thallium	9.88 ug/L	49.4	9.88
CCB7	vanadium	3.47 ug/L	17.4	3.47
CCB4	zinc	58.4 ug/L	292	58.4

CCB = Continuing Calibration Blanks, PBW = Water Preparation Blank, PBS = Soil Preparation Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration or preparation blank were flagged as undetected (U).

Negative results were observed for the following metals in the continuing calibration blanks (CCB):

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.(ug/L)</u>	<u>Action Level</u>	
			<u>ug/L</u>	<u>mg/kg</u>
CCB4	lead	-5.63	28.2	5.63
CCB14	selenium	-22.3	112	22.3
CCB2	thallium	-16.5	82.5	16.5

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all associated non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met, so no action was required.

V.) ICP Serial Dilution Analysis:

Serial Dilution Analysis was not performed for this SDG. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS criteria for the method were met, so no action was taken.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for vanadium was 29% for duplicate water sample GDHGW07D0101D*, which exceeded the 20% QC limit for waters. The non-detect results for vanadium in associated samples GDHGW07D01D* and GDHGW07D01 were flagged as estimated (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) were 70.2%, 67.5% and 69.5% for lead, mercury and thallium, respectively, for spiked water sample GDHGW07D01S*, which were outside the 75-125% QC limits. All results for these metals in associated sample GDHGW07D01, which consisted entirely of non-detects were flagged as estimated (UJ).

IX.) Field Duplicates:

Two sets of field duplicates, 009GW00601 / 009GW06D01 and 009GW00801 / 009GW08D01 were analyzed by the laboratory for total metals. The calculable Relative Percent Differences (RPD's) are listed below:

<u>Metal</u>	<u>009GW00601, ug/L</u>	<u>009GW06D01, ug/L</u>	<u>RPD</u>
calcium	100,000	344,000	110
iron	1,310	6,800	135
magnesium	3,910	690,000	198
manganese	56.7	139	84
potassium	3,400	186,000	193
sodium	5,740	6,190,000	199

<u>Metal</u>	<u>009GW00801, ug/L</u>	<u>009GW08D01, ug/L</u>	<u>RPD</u>
aluminum	1,050	182	141
calcium	263,000	92,200	96
iron	22,800	1,010	183
magnesium	273,000	559,000	69
manganese	1,190	211	140
potassium	59,200	170,000	97
sodium	2,430,000	5,070,000	70

The Relative Percent Differences (RPD's) for all the above metals exceeded the 30% QC limit for water field duplicates. All positive results for these metals in the two samples and their corresponding field duplicates were flagged as estimated (J).

X.) Furnace Atomic Absorption QC:

Furnace Atomic Absorption was not used in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.04
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: *Appendix IX SW846: 8240, 8270, 8080, 8140, 8150, 6010, 7196, 9012, 418.1, 7040*
VALIDATION GUIDELINES: *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data USEPA Contract Laboratory Program National Functional Guidelines for Evaluating Inorganics Data, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVO), Organochlorine Pesticides/PCB's (P/PCB), Total Metals and Cyanide (ME/CN), Total Recoverable Petroleum Hydrocarbons (TRPH)
SDG NUMBER: CHS28

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TRPH</u>
690SB00101	42574002	Soil	X				
690SB00101	42574006	Soil		X	X		
690SB00101	42574010	Soil				X	
690SB00101	42574013	Soil					X
690SB00101MS	42574002MS	Soil	X				
690SB00101MSD	42574002MSD	Soil	X				
690SB00101MS	42574006MS	Soil		X	X		
690SB00101MSD	42574006MSD	Soil		X	X		
690SB00101D*	42574010D*	Soil				X	
690SB00101S*	42574010S*	Soil				X	
690SB00201	42574003	Soil	X				
690SB00201RE	42574003RE	Soil	X				
690SB00201	42574007	Soil		X	X		
690SB00201	42574011	Soil				X	
690SB00601	42606004	Soil	X				

<u>Client</u> <u>Sample #:</u>	<u>Lab</u> <u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TRPH</u>
690SB00601RE	42606004RE	Soil	X				
690SB00301	42606010	Soil		X	X		
690SB00301	42606018	Soil				X	
690SB00301	42606026	Soil					X
690SB00301	42606001	Soil	X				
690TB00301	42606009	Water	X				
690SB00401	42606002	Soil	X				
690SB00401RE	42606002RE	Soil	X				
690SB00401	42606011	Soil		X	X		
690SB00401	42606019	Soil				X	
690SB00401	42606027	Soil					X
690SB00501	42606003	Soil	X				
690SB00501	42606012	Soil		X	X		
690SB00501	42606020	Soil				X	
690SB00501	42606028	Soil					X
690SB00601	42606013	Soil		X	X		
690SB00601	42606021	Soil				X	
690SB00601	42606029	Soil					X
690SB00701	42606005	Soil	X				
690SB00701RE	42606005RE	Soil	X				
690SB00701	42606014	Soil		X	X		
690SB00701	42606022	Soil				X	
690SB00701	42606030	Soil					X
690SB00801	42606006	Soil	X				
690SB00801	42606015	Soil		X	X		
690SB00801	42606023	Soil				X	
690SB00801	42606031	Soil					X
690SB00901	42606007	Soil	X				
690SB00901RE	42606007RE	Soil	X				
690SB00901	42606016	Soil		X	X		
690SB00901	42606024	Soil				X	
690SB00901	42606032	Soil					X
690SB01001	42606008	Soil	X				
690SB01001RE	42606008RE	Soil	X				
690SB01001	42606017	Soil		X	X		
690SB01001	42606025	Soil				X	
690SB01001	42606033	Soil					X
GDHSB09201	42574001	Soil	X				
GDHSB09201	42574005	Soil		X	X		
GDHSB09201	42574009	Soil				X	
GDHSB09202	42574004	Soil	X				
GDHSB09202	42574008	Soil		X	X		
GDHSB09202	42574012	Soil				X	
GDHSB09301	42613001	Soil	X				
GDHSB09301	42613003	Soil		X	X		
GDHSB09301	42613004	Soil				X	
GDHTB09301	42613002	Soil	X				

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, RE = RE-ANALYSES /
RE-EXTRACTIONS, D* = MATRIX DUPLICATES, S* = MATRIX SPIKES

DATA REVIEWER(S): Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Kevin C. Harmon". The signature is written in a cursive style with a large, stylized initial "K".

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS28 Organics and Inorganics

SAMPLES: 690SB00101, 690SB00101MS, 690SB00101MSD, 690SB00101D*, 690SB00101S*,
690SB00201, 690SB00201RE, 690SB00601, 690SB00601RE, 690SB00301, 690SB00401,
690SB00401RE, 690SB00501, 690SB00701, 690SB00701RE, 690SB00801, 690SB00901,
690SB00901RE, 690SB01001, 690SB01001RE, GDHSB09201, GDHSB09202,
GDHSB09301, GDHTB09301, 690TB00301

VOLATILE ORGANICS

I.) Holding Times:

The holding times to analysis for samples 690SB01001RE, 690SB00701RE and 690SB00901RE were 18 days, which exceeded the holding time of 14 days. All associated positive and non-detect data were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for methylene chloride, acetone and bromoform were 37%, 32% and 31%, respectively, for the initial calibration analyzed on Instrument G on 12/14/94, which exceeded the 30% QC limit. All positive results for these compounds in associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Difference (%D) was 31% for carbon disulfide, which exceeded the 25% QC limit, for continuing calibration standard analyzed 12/23/94 on Instrument G. All associated samples with positive or non-detect results for carbon disulfide were qualified as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed 12/27/94 on Instrument G for the following compounds:

acetone	29 %
carbon disulfide	50 %

All positive and non-detect results in the associated samples were qualified as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed 12/29/94 on Instrument C for the following compounds:

acetone	49 %
carbon disulfide	38 %

All associated samples with positive or non-detect results for these compounds were flagged as estimated (J) and (UJ).

The Percent Difference (%D) was 36% for carbon disulfide, which exceeded the 25% QC limit, for continuing calibration standard analyzed 12/29/94 on Instrument G. All associated samples with positive or non-detect results for carbon disulfide were qualified as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the continuing calibration standard analyzed on 12/30/94 on Instrument C for the following compounds:

acetone	52 %
methylene chloride	30 %

All associated samples with positive or non-detect results for these compounds were flagged as estimated (J) and (UJ).

The Percent Difference (%D) was 28% for chloromethane, which exceeded the 25% QC limit, for the continuing calibration standard analyzed on 12/30/94 on Instrument G. All results for chloromethane in the associated samples, which consisted entirely of non-detect, were qualified as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone was detected in soil method blanks GVBLK1223, GVBLK1227, GVBLK1229 and GVBLK1230 at 8.0 ug/kg, 8.0 ug/kg, 10.0 ug/kg and 6.0 ug/kg, respectively. Detections of acetone in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Soil method blank GVBLK1229 had chloromethane detected at 16 ug/kg, bromomethane at 13 ug/kg and toluene at 1 ug/kg. Detections of chloromethane and bromomethane in the associated samples below 5X their respective amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. Detections of toluene in the associated samples below 10X the blank contamination were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in soil method blanks CVBLK1230, CVBLK103, GVBLK1223, GVBLK1227, GVBLK1229 and GVBLK1230 at 490 ug/kg, 1500 ug/kg, 3.5 ug/kg, 3.3 ug/kg, 6.0 ug/kg and 4.1 ug/kg, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in water method blank CVBLK1229 at 3.0 ug/L. Since all associated samples were trip blanks, no data qualification was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was necessary.

Trip Blanks:

Methylene chloride was detected in trip blanks 690TB00301 and GDHTB09301 at 4.1 ug/L and 3.5 ug/L, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of surrogate standard toluene-d8 in sample 690SB00201 was 129%, which was above the 86-114% QC limits. All positive results in this sample were flagged as estimated (J).

The Percent Recoveries (%R's) of surrogate standard 1,2-dichloroethane-d4 in samples 690SB00401 and 690SB00701 were 57% and 172%, respectively, which were outside the 70-138% QC limits. All positive results in sample 690SB00701 were flagged as estimated (J). All positive and non-detect results in sample 690SB00401 were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no qualification was needed.

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

The following Percent Recoveries (%R's) of the internal standard area counts were below the 50-200% QC limits:

<u>Internal Standard</u>	<u>Sample ID</u>	<u>%R</u>
bromochloromethane	690SB00701	46
	690SB00201RE	28
	690SB00901	28
	690SB00401	19*
	690SB00601RE	42
1,4-difluorobenzene	690SB00201RE	20*
	690SB00901	22*
	690SB00401	14*
	690SB00601	45

<u>Internal Standard</u>	<u>Sample ID</u>	<u>%R</u>
1,4-difluorobenzene	690SB00601RE	36
chlorobenzene-d5	690SB00201	36
	690SB00201RE	26
	690SB00901	31
	690SB00401	31
	690SB00601	46
	690SB00401RE	49
	690SB00601RE	40

All associated sample results were qualified as estimated (J) and (UJ) for %R's greater than 25%. All sample results associated with the internal standards that were less than 25% R, indicated by "*" above, had positive results flagged as estimated (J) and non-detect results rejected (R).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

The original analysis of sample 690SB00201 is considered to be of preferable data quality since only one surrogate percent recovery and one internal standard %R were outside QC limits, while the re-analysis had low internal standard percent recoveries for all three internal standards. The reanalysis of sample 690SB00401 is considered to be of preferable data quality since only one internal standard percent recovery was low, and the original analysis had low internal standard percent recoveries for all three internal standards and one low surrogate percent recovery. The original analysis of sample 690SB00601 is considered to be of preferable data quality because the reanalyses had poor percent recoveries for all of the internal standards, and the original had low recoveries for only two internal standards. The original analyses of samples 690SB00701, 690SB00901 and 690SB1001 were of preferable data quality since the holding times were exceeded in the re-analyses.

All non-detect sample results associated with the internal standards bromochloromethane and 1,4-difluorobenzene in sample 690SB00401 were rejected due to excessively low percent recoveries for the area counts of these internal standards. All non-detect sample results associated with the internal standard 1,4-difluorobenzene in samples 690SB00201RE and 690SB00901 were rejected due to excessively low

percent recoveries for the area counts of these internal standards. All remaining laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for the initial calibration analyzed on Instrument F for 2,4-dinitrophenol and benzo(k)fluoranthene were 35%, and 37%, respectively, which were above the 30% QC limit. The %RSD for the initial calibration analyzed on Instrument H for benzo(k)fluoranthene was 40%, which was above the QC limit of 30%. All associated positive sample results were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed on Instrument F on 12/19/94 for the following compounds:

benzidine	40 %
benzo(k)fluoranthene	50 %

There were no positive detections of these compounds in the associated samples, and all non-detects were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed on Instrument H on 12/30/94 for the following compounds:

benzoic acid	41 %
benzidine	65 %
benzo(k)fluoranthene	33 %

All associated positive and non-detect sample results were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard analyzed on Instrument H on 01/03/94 for the following compounds:

4-chlorophenyl-phenylether	29 %
benzidine	48 %
benzo(k)fluoranthene	60 %
fluorene	28 %

There were no positive detections of these compounds in the associated samples, and all non-detects were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks associated with this SDG, so no data qualification was needed.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No qualification was not necessary.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met, so no action was needed.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was taken.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Action Level</u> <u>Max Conc.</u>	<u>mg/kg</u>
CCB	aluminum	42 ug/L	42
CCB	antimony	66 ug/L	66
CCB	barium	35 ug/L	35
CCB	cadmium	1.5 ug/L	1.5
CCB	cobalt	9.4 ug/L	9.4
CCB	copper	18 ug/L	18

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Action Level</u> <u>Max Conc.</u>	<u>mg/kg</u>
CCB	beryllium	8.3 ug/L	8.3
CCB	chromium	4.6 ug/L	4.6
CCB	vanadium	8.3 ug/L	8.3
CCB	zinc	26 ug/L	26
CCB	nickel	8.7 ug/L	8.7
CCB	silver	2.7 ug/L	2.7
CCB	potassium	523 ug/L	523

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Negative Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB	selenium	-15 ug/L	15
CCB	potassium	-421 ug/L	421
CCB	thallium	-11 ug/L	11

All associated positive results less than 5X the absolute value of the blank result and non-detect results were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All LCS Percent Recovery (%R) criteria for the method were met, so no action was taken.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) was 37% for calcium in duplicate sample 690SB00101D*, which exceeded the 35% QC limit. All calcium results in the associated samples were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony, arsenic, cadmium, copper, potassium, magnesium, manganese and selenium were 38%, 131%, 133%, 10%, 135%, 253%, 232% and 68%, respectively, for

spiked sample 690SB00101S*, which were outside the 75-125% QC limits. All positive and non-detect results were flagged as estimated (J) and (UJ) for antimony, copper and selenium in the associated sample. All positive results for arsenic, cadmium, potassium, magnesium and manganese were flagged as estimated (J) in the associated sample.

IX.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analyses were not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (TRPH)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike / Matrix Spike Duplicates (MS / MSD):

All MS / MSD criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was required

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW; SW-846: 8270, 8080, 6000, 7470,
8115 (Modified), 8100 (Modified)
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and
Metals and
SDG NUMBER: CHS29

SAMPLES:

<u>Client</u>	<u>Lab</u>			
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOC</u>	<u>P/PCB</u>
017SB01201	42800-005/003	Soil	X	X*
017SB01202	42800-006/004	Soil	X	X*
017SB01901	42783-019	Soil	X	X*
017SB01901RE	42783-019RE	Soil	X	
017SB01902	42783-020	Soil	X	X*
017SB02001	42783-017	Soil	X	X*
017SB02001RE	42783-017RE	Soil	X	
017SB02002	42783-018	Soil	X	X*
017SB02101	42783-013	Soil	X	X*
017SB02102	42783-014	Soil	X	X*
017SB02201	42783-011	Soil	X	X*
017SB02202	42783-012	Soil	X	X*
017SB02301	42783-015	Soil	X	X*
017SB02302	42783-016	Soil	X	X*

<u>Client</u>	<u>Lab</u>		<u>SVOC</u>	<u>P/PCB</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>		
656SB01001	42766-001/005	Soil	X	
656SB01002	42766-002	Soil	X	
656SB01101	42766-003	Soil	X	
656SB01102	42766-004	Soil	X	
655SB00901	42766-006	Soil		X
655SB01001	42766-005	Soil		X
655SB01101	42766-010	Soil		X
655SB01102	42766-012	Soil		X
655SB01201	42766-008	Soil		X
655SB01202	42766-009	Soil		X
655SB01301	42766-007	Soil		X
655SB01302	42766-011	Soil		X
017SB02202MS	42783-012MS	Soil	X	X
017SB02202MSD	42783-012MSD	Soil	X	X

* Note: PCB analyses only, pesticides not required.

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = RE-ANALYSES

<u>Client</u>	<u>Lab</u>		<u>Metals</u>	<u>GAS</u>	<u>HYD*</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>			
017SB01201	42800-005/001/003	Soil	X	X	X
017SB01202	42800-006/002/004	Soil	X	X	X
017SB01901	42783-029/009/019	Soil	X	X	X
017SB01902	42783-030/010/020	Soil	X	X	X
017SB02001	42783-027/007/017	Soil	X	X	X
017SB02002	42783-028/008/018	Soil	X	X	X
017SB02101	42783-023/003/013	Soil	X	X	X
017SB02102	42783-024/004/014	Soil	X	X	X
017SB02201	42783-021/001/011	Soil	X	X	X
017SB02202	42783-022/002/012	Soil	X	X	X
017SB02301	42783-025/005/015	Soil	X	X	X
017SB02302	42783-026/006/016	Soil	X	X	X
017SB02202D	42783-022D/012D	Soil	X		X
017SB02202S	42783-022S/012S	Soil	X		X
655SB00901	42766-014/006	Soil		X	X
655SB01001	42766-013/005	Soil		X	X
655SB01101	42766-018/010	Soil		X	X
655SB01102	42766-020/012	Soil		X	X
655SB01201	42766-016/008	Soil		X	X
655SB01202	42766-017/009	Soil		X	X
655SB01301	42766-015/007	Soil		X	X
655SB01302	42766-019011	Soil		X	X

* Note: Analyses include intermediate lubricating oil, miscellaneous light products and heavy products

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D = MATRIX DUPLICATE,
S = MATRIX SPIKE

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:

A handwritten signature in cursive script, appearing to read "Kevin C. Harmon". The signature is written in black ink and is positioned to the right of the "RELEASE SIGNATURE:" label.

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS29 SW-846 Organics and Inorganics

SAMPLES: 017SB01201, 017SB01202, 017SB01901, 017SB01901RE, 017SB01902, 017SB02001, 017SB02001RE, 017SB02002, 017SB02101, 017SB02102, 017SB02201, 017SB02202, 017SB02301, 017SB02302, 656SB01001, 656SB01001, 656SB01002, 656SB01101, 656SB01102, 655SB00901, 655SB01001, 655SB01101, 655SB01102, 655SB01201, 655SB01202, 655SB01301, 655SB01302, 017SB02202MS, 017SB02202MSD, 017SB02202D, 017SB02202S

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 41.7% for benzo(k)fluoranthene for the standards run on 1/4/95 on instrument FMS, which exceeded the 30% QC limit. The positive result for this compound in associated sample 656CB01101 was flagged as estimated (J). No further action was required.

The Percent Relative Standard Deviation (%RSD) was 40.0% for benzo(k)fluoranthene for the standards run on 11/18/94 on instrument HMS, which exceeded the 30% QC limits. Since there were no positive detections of this compound in the associated samples, no action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 1/17/95 at 10:49 on instrument FMS for the following compounds:

benzidine	33.5 %
benzo(k)fluoranthene	32.5 %

All positive and non-detect results for these compounds in the associated samples were flagged as

estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 1/20/95 at 12:35 on instrument FMS for the following compounds:

benzidine	53.5 %
benzo(k)fluoranthene	40.3 %

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 1/19/95 at 15:52 on instrument HMS for the following compounds:

2,4-dinitrophenol	27.6 %
pentachlorophenol	25.6 %
benzidine	45.2 %
benzo(b)fluoranthene	33.9 %
dibenz(a,h)anthracene	26.0 %

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was taken.

Equipment Blanks:

There were no field blanks associated with this SDG.

TICs:

There were no TIC detections in the blanks, so no action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. In addition, all Laboratory Control Sample (LCS) criteria were met. No action was taken.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was necessary.

VIII.) Internal Standards Performance:

The area count Percent Recoveries (%R's) of perylene-d12 were 45% and 41%, respectively, for samples 017CB01901RE and 017CB02001RE, which were below the 50-200% QC limits. All positive and non-detect results associated with this internal standard in the two samples were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met. No action was necessary.

XIII.) Overall Assessment of Data/General:

Samples 017CB01901 and 017CB02001 were re-analyzed for no apparent reason, except suspected TIC contamination. Internal standard deficiencies were observed in the re-analyses (017CB01901RE and 017CB02001RE). For this reason the initial analyses were considered to be of preferable data quality. All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method was met. No action was required.

Continuing Calibration:

The Percent Difference (%D) was 29.0% for endrin for the continuing calibration standard run on 1/23/95 at 09:28, which exceeded the 25% QC limit. The non-detect results for endrin in associated samples 017SB01201 and 017SB01202 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of both surrogates were 0% for samples 017SB02001, 017SB02002 and 017SB01901, which were below the 30-150% QC limits. Since the poor recoveries were due to sample dilution, all positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Data was not provided for the florisil cartridge check. No action was taken.

Gel Permeation Chromatography (GPC):

GPC data was not provided. No action was taken.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB	aluminum	41.2	41.2
CCB	antimony	32.7	32.7
CCB	arsenic	1.01	1.01
CCB	barium	26.6	26.6
CCB	beryllium	1.10	1.10
CCB	cadmium	2.99	2.99
CCB	calcium	209.	209.
CCB	chromium	2.68	2.68
CCB	cobalt	5.17	5.17
CCB	copper	23.8	23.8
CCB	iron	33.0	33.0
CCB	lead	1.14	1.14
CCB	magnesium	33.0	33.0
CCB	manganese	10.5	10.5
CCB	nickel	10.7	10.7
CCB	potassium	425.	425.
CCB	selenium	2.30	2.30
CCB	silver	1.71	1.71
CCB	sodium	65.6	65.6
CCB	thallium	2.44	2.44
CCB	vanadium	9.39	9.39
CCB	zinc	43.7	43.7

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples)

for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

Negative results were observed for the following metals in the initial (ICB) and continuing (CCB) calibration blanks:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.(ug/L)</u>	<u>Action Level</u> <u>mg/kg</u>
CCB	arsenic	-0.23	0.23
ICB	barium	-0.62	0.62
ICB	cadmium	-0.35	0.35
ICB	cobalt	-0.75	0.75
ICB	lead	-0.79	0.79
ICB	magnesium	-9.19	9.19
CCB	mercury	-0.04	0.04
CCB	silver	-2.72	2.72
CCB	selenium	-1.55	1.55
ICB	sodium	-9.37	9.37
CCB	thallium	-0.49	0.49

ICB = Initial Calibration Blank, CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

The following metals were present in ICS Solution A at concentrations greater than 2X IDL:

antimony	16 ug/L
copper	24 ug/L
lead	16 ug/L
manganese	4 ug/L
nickel	6 ug/L
sodium	43 ug/L
thallium	17 ug/L
vanadium	3 ug/L
zinc	26 ug/L

These analytes should not be present. Since aluminum, calcium, iron nor magnesium were present at greater than 50% these amounts in Solution A, no action was required.

The following metals were present in ICS Solution A at negative concentrations greater than the IDL:

arsenic	-305 ug/L
barium	-15 ug/L
cadmium	-3 ug/L

chromium	-5 ug/L
cobalt	-3 ug/L
lead	-5 ug/L
potassium	-413 ug/L
selenium	-49 ug/L
silver	-5 ug/L
thallium	-26 ug/L

Since neither aluminum, calcium, iron nor magnesium were present at greater than 50% the amounts in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

No Serial Dilution analyses were performed for samples associated with this SDG.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample Analysis criteria for the method were met. No action was necessary.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries of the following metals were outside the 75-125% QC limits for spiked sample 017SB2202S:

antimony	40 %
chromium	150 %
potassium	148 %
silver	72 %

The non-detect results for antimony and silver in sample 017SB02202S were flagged as estimated (UJ), and positive results for chromium and potassium in samples 017SB02202 and 017SB02202D were flagged as estimated (J).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

All Graphite Furnace criteria for the method were met. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL GASOLINE

I.) Holding Times

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

IV.) Laboratory Control Sample (LCS)

There were no LCS analyses performed for this fraction. No action was required.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

No MS/MSD analyses were performed for this fraction. No action was necessary.

VI.) Field Duplicates

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's)

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General

All data were acceptable without qualification.

HYDROCARBONS

I.) Holding Times

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

IV.) Laboratory Control Sample (LCS)

All LCS criteria were met for the method, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All MS/MSD criteria for the method were met, so no action was required.

VI.) Field Duplicates

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's)

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General

The TPH notation includes analyses for intermediate lubricating oil, miscellaneous light products and heavy products.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW; SW-846: 8270, 8080, 6000, 7470,
8015 (Modified), 8100 (Modified).
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Semivolatile Organics (SVOC), Polychlorinated Biphenyls (PCB), Total Metals, Total Gasoline (GAS), Hydrocarbons (HYD)
SDG NUMBER: CHS30

SAMPLES:

<u>Client</u>	<u>Lab</u>			
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOC</u>	<u>PCB*</u>
017SB01301	42808-017	Soil	X	X
017SB01302	42808-018	Soil	X	X
017SB01401	42799-027	Soil	X	X
017SB01501	42799-023	Soil	X	X
017SB01502	42799-024	Soil	X	X
017SB01601	42799-025	Soil	X	X
017SB01602	42799-026	Soil	X	X
107SB01701	42799-021	Soil	X	X
017SB01702	42799-022	Soil	X	X
017SB01801	42799-019	Soil	X	X
017SB01802	42799-020	Soil	X	X
017SB02401	42808-013	Soil	X	X
017SB02402	42808-014	Soil	X	X
017SB02501	42808-015	Soil	X	X

<u>Client</u>	<u>Lab</u>			
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOC</u>	<u>PCB*</u>
017SB02502	42808-016	Soil	X	X
019SB01001	42848-002	Soil	X	X
019SB01101	42808-003	Soil	X	X
019SB01101RE	42808-003RE	Soil	X	
019SB01201	42808-001	Soil	X	X
121SB00701	42808-019	Soil	X	X
121SB00702	42808-020	Soil	X	X
017SB01802MS	42799-020MS	Soil	X	X
017SB01802MSD	42799-020MSD	Soil	X	X

* Note; PCB analysis only, no pesticides.

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = RE-ANALYSIS

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Metals</u>	<u>GAS</u>	<u>HYD*</u>
017CB01301	42808-017/005/011	Soil	X	X	X
017SB01302	42808-018/006/012	Soil	X	X	X
017SB01401	42799-027/009/018	Soil	X	X	X
017SB01501	42799-023/005/014	Soil	X	X	X
017SB01502	42799-024/006/015	Soil	X	X	X
017SB01601	42799-025/007/016	Soil	X	X	X
017SB01602	42799-026/008/017	Soil	X	X	X
017SB01701	42799-021/003/012	Soil	X	X	X
017SB01702	42799-022/004/013	Soil	X	X	X
017SB01801	42799-019/001/010	Soil	X	X	X
017SB01802	42799-020/002/011	Soil	X	X	X
017SB02401	42808-001/007	Soil		X	X
017SB02402	42808-002/008	Soil		X	X
017SB02501	42808-003/009	Soil		X	X
017SB02502	42808-004/010	Soil		X	X
019SB01001	42848-002	Soil	X		
019SB01101	42848-003	Soil	X		
019SB01201	42848-001	Soil	X		
121SB00701	42808-019	Soil	X		
121SB00702	42808-020	Soil	X		
017SB01802D	42799-020D	Soil	X		
017SB01802S	42799-020S	Soil	X		
017SB01802MS	42799-002/011MS	Soil		X	X
017SB01802MSD	42799-002/011MSD	Soil		X	X

* Note: Analyses include intermediate lubricating oil, miscellaneous light products and heavy products

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D = MATRIX DUPLICATE
S = MATRIX SPIKE

DATA REVIEWER(S):

Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Kevin C. Harmon". The signature is written in a cursive style with a prominent initial "K" and "H".

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS30 SW-846 Organics and Inorganics

SAMPLES: 017SB01301, 017SB01302, 017SB01401, 017SB01501, 017SB01502, 017SB01601, 017SB01602, 017SB01701, 017SB01702, 017SB01801, 017SB01802, 017SB02401, 017SB02402, 017SB02501, 017SB02502, 019SB01001, 019SB01101, 019SB01101RE, 019SB01201, 121SB00701, 121SB00702, 017SB01802MS, 017SB01802MSD, 017SB01802D, 017SB01802S

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 40.0 % for benzo(k)fluoranthene for the standards run on 11/18/94 on instrument HMS, which exceeded the 30% QC limits. The positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 1/19/95 on instrument HMS at 15:52 for the following compounds:

2,4-dinitrophenol	27.6 %
pentachlorophenol	25.6 %
benzidine	45.2 %
benzo(b)fluoranthene	33.9 %
dibenz(a,h)anthracene	26.0 %

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 1/24/95 at 10:25 on

instrument HMS for the following compounds:

2,4-dinitrophenol	25.8 %
pentachlorophenol	28.5 %
benzidine	56.0 %
benzo(b)fluoranthene	28.7 %
indeno(1,2,3-cd)pyrene	27.5 %
dibenz(a,h)anthracene	28.0%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

The Percent Difference (%D) was 28.1% for 4,6-dinitro-2-methylphenol for the standard run on 2/1/95 on instrument FMS, which exceeded the 25% QC limit. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

Equipment Blanks:

There were no equipment blanks associated with the SVOC fraction of this SDG.

TICs:

No TIC's were detected in the blanks, so no action was necessary.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met, so no action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. Additionally, all criteria were met for the three Laboratory Control Samples (LCS's) analyzed with this SDG. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was necessary.

VIII.) Internal Standards Performance:

The Retention Times (RT's) were 1.60 minutes to 5.76 minutes above the upper limits for the six internal standards associated with sample 019SB01101. The RT's were acceptable for the re-analysis (017SB01101RE), however, the area count Percent Recovery (%R) was 35% for perylene-d12, which was

below the 50-200% QC limits. All positive and non-detect results in sample 017SB01101RE associated with this internal standard was flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met. No action was necessary.

XIII.) Overall Assessment of Data/General:

The re-analysis (019SB01101RE) of sample 019SB01101 is considered to be of preferable data quality to the original analysis since there were fewer deficiencies involved. The initial sample results were not reported by the laboratory. All laboratory data were acceptable with qualification.

POLYCHLORINATED BIPHENYLS:

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method was met. No action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no equipment blanks associated with the PCB fraction of this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil Check data was not provided with this SDG. No action was taken.

Gel Permeation Chromatography (GPC):

GPC data was not provided for this SDG. No action was taken.

X.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB	aluminum	41.2	41.2
CCB	antimony	32.7	32.7
CCB	arsenic	2.03	2.03
CCB	barium	39.0	39.0
CCB	beryllium	0.55	0.55
CCB	cadmium	2.99	2.99
CCB	calcium	210.	210.
CCB	chromium	5.01	5.01
CCB	cobalt	5.17	5.17
CCB	copper	39.8	39.8
CCB	iron	33.0	33.0
CCB	lead	1.01	1.01
CCB	magnesium	37.9	37.9
CCB	manganese	10.5	10.5
CCB	nickel	10.7	10.7
CCB	potassium	583	583.
CCB	selenium	4.22	4.22
CCB	silver	7.97	7.97
CCB	sodium	222	222
CCB	thallium	2.37	2.37
CCB	vanadium	3.39	3.39
CCB	zinc	31.7	31.7

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

Negative results were observed for the following metals in the initial (ICB) and continuing (CCB) calibration blanks:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.(ug/L)</u>	<u>Action Level mg/kg</u>
CCB	arsenic	-0.63	0.63
ICB	barium	-0.62	0.62
ICB	cadmium	-0.66	0.66
ICB	cobalt	-0.75	0.75
ICB	copper	-1.97	1.97
CCB	lead	-0.31	0.31
ICB	magnesium	-9.19	9.19

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.(ug/L)</u>	<u>Action Level mg/kg</u>
CCB	mercury	-0.04	0.04
CCB	nickel	-5.83	5.83
CCB	silver	-4.26	4.26
CCB	selenium	-2.41	2.41
ICB	sodium	-9.37	9.37
CCB	thallium	-1.93	1.93
ICB	vanadium	-0.88	0.88

ICB = Initial Calibration Blank, CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

The following metals were present in ICS Solution A at concentrations greater than 2X IDL:

antimony	16 ug/L
copper	24 ug/L
lead	72 ug/L
manganese	4 ug/L
nickel	4 ug/L
sodium	42 ug/L
thallium	16 ug/L
vanadium	3 ug/L
zinc	26 ug/L

These analytes should not be present. Since aluminum, calcium, iron nor magnesium were present at the amounts in Solution A, no action was required.

The following metals were present in ICS Solution A at negative concentrations greater than the IDL:

antimony	-11 ug/L
arsenic	-305 ug/L
barium	-17 ug/L
cadmium	-3 ug/L
chromium	-5 ug/L
cobalt	-3 ug/L
lead	-5 ug/L
potassium	-754 ug/L
selenium	-232 ug/L
silver	-5 ug/L
sodium	-7 ug/L

thallium	-26 ug/L
zinc	-2 ug/L

Since neither aluminum, calcium, iron nor magnesium were present at the amounts in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

No Serial Dilution analysis was performed for this SDG.

VI.) Laboratory Control Samples (LCS):

The LCS Percent Recoveries (%R's) for selenium were 78.0% and 78.5%, respectively, in LCS 21734 and LCS 21738, which were below the 80-120% QC limits. All positive and non-detect results for selenium were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

The Relative Percent Differences (RPD's) for beryllium (53.4%), copper (49.0%), manganese (52.5%), nickel (37.1%) and zinc (46.5%) for duplicate sample 017SB01802D exceeded the 35% QC limit. The positive and non-detect results for these analytes in associated sample 017SB01802 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony and zinc were 32.2% and 72.0%, respectively, for spiked sample 017SB01802S, which were below the 75-125% QC limits. All positive and non-detect results for these metals in associated sample 017SB01802 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

All Graphite Furnace criteria for the method were met. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL GASOLINE

I.) Holding Times

All Holding Times criteria for the method were met, so no action was taken.

II.) Calibration

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

IV.) Laboratory Control Sample (LCS)

All LCS Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All MS/MSD criteria for the method were met, so no action was required.

VI.) Field Duplicates

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's)

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General

All data were acceptable without qualification.

HYDROCARBONS

I.) Holding Times

All Holding Times criteria for the method were met, so no action was taken.

II.) Calibration

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

IV.) Laboratory Control Sample (LCS)

All LCS Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All MS/MSD criteria for the method were met, so no action was required.

VI.) Field Duplicates

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's)

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General

The TPH notation includes analyses for intermediate lubricating oil, miscellaneous light products and heavy products. All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), PCB'S (PCB), Total Metals (Metals)
SDG NUMBER: CHS31

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>SVOC</u>	<u>PCB</u>	<u>P/PCB</u>	<u>Metals</u>
121SB00901	42821-001	Soil	X	X		X
121SB01101	42821-002	Soil	X	X		X
121SB00801	42821-003	Soil	X	X		X
121SB00601	42821-004	Soil	X	X		X
121SB01001	42821-005	Soil	X	X		X
121SB01001MS	42821-005MS	Soil	X		X	X
121SB01001MSD	42821-005MSD	Soil	X		X	
121SB01001MD	42821-005MD	Soil				X
019SB01401	42821-006	Soil	X	X		X
019SB00701	42849-001	Soil	X	X		X
019SB00801	42849-002	Soil	X	X		X
019SB00601	42849-003	Soil	X	X		X
019SB00901	42849-004	Soil	X	X		X
019SB00501	42849-005	Soil	X	X		X
019SB01301	42849-006	Soil	X	X		X
663SB00601	42865-001	Soil	X		X	X
663SB00701	42865-002	Soil	X		X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOC</u>	<u>PCB</u>	<u>P/PCB</u>	<u>Metals</u>
136SB00301	42865-003	Soil	X		X	X
136SB00302	42865-004	Soil	X		X	X
136SB00401	42865-005	Soil	X		X	X
650SB01002	42865-006	Soil	X		X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS31 Organics and Inorganics

SAMPLES: 121SB00901, 121SB01101, 121SB00801, 121SB00601, 121SB01001, 121SB01001MS, 121SB01001MSD, 121SB01001MD, 019SB01401, 019SB00701, 019SB00801, 019SB00601, 019SB00901, 019SB00501, 019SB01301, 663SB00601, 663SB00701, 136SB00301, 136SB00302, 136SB00401, 650SB01002

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of benzo(k)fluoranthene (40.0%) exceeded the 30% QC limit for the initial calibration run on 11/18/94. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of benzidine (35.1%) and benzo(k)fluoroanthene (31.5%) exceeded the 25% QC limit for the continuing calibration run on 1/25/95 at 11:29. All results for benzidine in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). All non-detect results for benzo(k)fluoranthene were flagged as estimated (UJ) and all positive results for this compound were previously qualified using the initial calibration.

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 1/27/95 at 11:46:

benzoic acid	29.1%
4-nitrophenol	29.7%
pentachlorophenol	27.4%
benzidine	45.9%

All results for these compounds, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 1/31/95 at 09:43:

2,4-dinitrophenol	31.1%
4-nitrophenol	33.1%
pentachlorophenol	25.6%
benzidine	68.0%

All results for these compounds, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recovery (%R) of perylene-d12 (36.5%) was below the 50-200% QC limits for sample 019SB01401. The sample was re-analyzed, and all internal standard %R's were within the QC range. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XL) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Sample 019SB01401 was re-analyzed due to Internal Standard recoveries outside limits. All Internal Standard criteria were met in the re-analysis. The re-analysis was considered to be of preferable data quality. All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Relative Percent Differences (RPD's) of endosulfan II (29%) and methoxychlor (26%) exceeded the 25% QC limit for the continuing calibration run on 1/24/95 at 13:42. The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Percent Difference (RPD) of aroclor-1260 (39%) exceeded the 25% QC limit for the continuing calibration run on 1/25/95 at 12:24. All positive and non-detect results for this compound were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

The Percent Recoveries (%R's) of 4,4'-DDT for samples 121SB01001MS (235%) and 121SB01001MSD

(190%) exceeded the 23-134% QC limits. Since the result in the associated sample (121SB01001) consisted of a non-detect, no action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB4	copper	42.6 ug/L	42.6
CCB3	zinc	44.5 ug/L	44.5
CCB3	potassium	689 ug/L	689

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB6	aluminum	101 ug/L	101
CCB6	antimony	97.9 ug/L	97.9
CCB5	barium	55.7 ug/L	55.7

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB1	arsenic	-7.85 ug/L	7.85
CCB1	nickel	-26.3 ug/L	26.3
CCB5	thallium	-38.7 ug/L	38.7
CCB1	selenium	-16.0 ug/L	16.0
CCB2	chromium	-1.60 ug/L	1.60
CCB2	iron	-11.1 ug/L	11.1
CCB3	lead	-20.2 ug/L	20.2
CCB5	magnesium	-12.4 ug/L	12.4

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of selenium (77.5%) was below the 80-120% QC limits for soil LCS21736. All positive and non-detect results for this analyte in the associated samples were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of selenium (78.5%) was below the 80-120% QC limits for soil LCS21738. All positive and non-detect results for this analyte in the associated samples were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of selenium (77.5%) and thallium (77.5%) were below the 80-120% QC

limits for soil LCS21739. All positive and non-detect results for these analytes in the associated samples were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

The Relative Percent Differences (RPD's) of the compounds listed below exceeded the 35% QC limits for sample 121SB01001MD:

barium	43.1%
beryllium	78.6%
calcium	38.7%
cobalt	56.4%
copper	57.8%
iron	47.8%
lead	43.1%
manganese	58.3%
nickel	56.1%
sodium	39.7%
zinc	71.8%

All positive and non-detect results for these analytes in the associated sample (121SB01001) were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for the following compounds were below the 75-125% QC limits for sample 121SB01001MS:

antimony	48.3%
barium	34.1%
chromium	31.1%
nickel	51.1%
vanadium	63.9%

All positive and non-detect results for these analytes in the associated sample (121SB01001) were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

GFAA analyses were not performed for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals (Metals)
SDG NUMBER: CHS32

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Metals</u>
649SB00901	42866-001	Soil	X	X	X
649SB00801	42866-002	Soil	X	X	X
649SB01001	42866-003	Soil	X	X	X
650SB00501	42866-004	Soil	X	X	X
649SB00601	42866-005	Soil	X	X	X
649SB00601MS	42866-005MS	Soil	X	X	
649SB00601MSD	42866-005MSD	Soil	X	X	
649SB00701	42866-006	Soil	X	X	X
650SB00601	42866-007	Soil	X	X	X
650SB00901	42866-008	Soil	X	X	X
650SB00701	42866-009	Soil	X	X	X
650SB01001	42866-010	Soil	X	X	X
670SB02801	42874-001	Soil	X		
670SB02802	42874-002	Soil	X		
670SB02901	42874-003	Soil	X		
670SB03001	42874-004	Soil	X		
670SB03002	42874-005	Soil	X		

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Metals</u>
<u>Sample #:</u> 670SB03101	<u>Sample #:</u> 42874-006	Soil	X		
015SB00501	42874-007	Soil	X		
015SB00601	42874-008	Soil	X		
015SB00701	42874-009	Soil	X		
015SB00801	42874-010	Soil	X		
015SB00802	42874-011	Soil	X		
014SB01001	42874-012	Soil			X
014SB01101	42874-013	Soil			X
014SB01101MS	42874-013MS	Soil			X
014SB01101MD	42874-013MD	Soil			X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS32 Organics and Inorganics

SAMPLES: 649SB00901, 649SB00801, 649SB01001, 650SB00501, 649SB00601, 649SB00601MS, 649SB00601MSD, 649SB00701, 650SB00601, 650SB00901, 650SB00701, 650SB01001, 670SB02801, 670SB02802, 670SB02901, 670SB03001, 670SB03002, 670SB03101, 015SB00501, 015SB00601, 015SB00701, 015SB00801, 015SB00802, 014SB01001, 014SB01101, 014SB01101MS, 014SB01101MD

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of benzo(k)fluoranthene (40.0%) exceeded the 30% QC limit for the initial calibration run on 11/18/94. All positive results for this compound in the associated samples were flagged as estimated (J).

The Percent Relative Standard Deviation (%RSD) of benzo(k)fluoranthene (41.7%) exceeded the 30% QC limit for the initial calibration run on 01/04/95. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 1/31/95 at 09:43:

2,4-dinitrophenol	31.1%
4-nitrophenol	33.1%
pentachlorophenol	25.6%
benzidine	68.0%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were

flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 1/27/95 at 12:00:

benzoic acid	30.3%
2,4-dinitrophenol	26.0%
benzidine	37.3%
benzo(k)fluoranthene	47.6%
benzo(g,h,i)perylene	29.2%

All positive results for benzo(k)fluoranthene were previously qualified as estimated (J) based on the associated initial calibration. All results for the other compounds in the associated sample, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of 4,6-dinitro-2-methylphenol (28.1%) exceeded the 25% QC limit for the continuing calibration run on 2/01/95 at 09:50. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no compounds detected in the method blanks.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII) Field Duplicates:

There were no field duplicates associated with this SDG.

IX) Pesticide Cleanup Check:

Florasil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB6	antimony	97.9 ug/L	97.9
CCB1	iron	35.1 ug/L	35.1
CCB6	arsenic	24.5 ug/L	24.5
CCB5	aluminum	101 ug/L	101
CCB6	barium	55.7 ug/L	55.7
CCB6	calcium	82.7 ug/L	82.7
CCB6	copper	20.0 ug/L	20.0
CCB13	potassium	689 ug/L	689

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples)

for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB1	chromium	-2.90 ug/L	2.90
CCB3	lead	-20.2 ug/L	20.2
CCB3	nickel	-28.3 ug/L	28.3
CCB3	selenium	-16.0 ug/L	16.0
CCB5	thallium	-38.7 ug/L	38.7
CCB5	magnesium	-12.4 ug/L	12.4

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recoveries (%R's) of selenium (77.5%) and thallium (77.5%) were below the 80-120% QC limits for LCS21739. All positive and non-detect results for these analytes in the associated samples were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

All Duplicate Sample Analysis criteria for the method were met. No action was required.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for the compounds listed below were outside the 75-125% QC limits for sample 014SB01101MS:

antimony	54.0%
manganese	398%
potassium	151%
silver	38%
zinc	126%

All positive results for manganese, potassium and zinc were flagged as estimated in associated sample

014SB01101. All positive and non-detect results for antimony and silver in associated sample 014SB01101 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

GFAA Analyses were not performed for the samples in this SDG.

XI.) Dissolved Inorganics:

There were no Dissolved Inorganics Analyses for this SDG.

XII.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XIII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Semivolatile Organics (SVOC), PCB's (PCB), pH, Total Dissolved Solids (TDS), Chloride (Cl), Sulfate (SO₄), Total Petroleum Hydrocarbons (TPH), Total Gasoline (GAS)
SDG NUMBER: CHS33

SAMPLES:

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOC</u>	<u>PCB</u>	<u>pH</u>	<u>TDS</u>
684SB03201	42909-001	Soil	X	X		
684SB03401	42909-002	Soil	X	X		
684SB03301	42909-003	Soil	X	X		
684SB03801	42909-004	Soil	X	X		
684SB03901	42909-005	Soil	X	X		
684SB03902	42909-006	Soil	X	X		
684SB03701	42909-007	Soil	X	X		
684SB03701MS	42909-007MS	Soil	X	X		
684SB03701MSD	42909-007MSD	Soil	X	X		
684SB03501	42909-008	Soil	X	X		
684SB03601	42909-010	Soil	X	X		
684SB03602	42090-011	Soil	X	X		
GDHGW0031A	42949-001	Water			X	X
GDHGW03D1A	42949-002	Water			X	X
GDHGW0081A	42956-001	Water			X	X
GDHGW08D1A	42956-002	Water			X	X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOC</u>	<u>PCB</u>	<u>pH</u>	<u>TDS</u>
GDHGW0071A	42956-003	Water			X	X
GDHSB09901	42968-001	Soil	X	X		
GDHSB09902	42968-002	Soil	X	X		
GDHSB09601	42968-003	Soil	X	X		
GDHSB09602	42968-004	Soil	X	X		
GDHSB09801	42968-005	Soil	X	X		
GDHSB09802	42968-006	Soil	X	X		
GDHSB09701	42968-007	Soil	X	X		
GDHSB09702	42968-008	Soil	X	X		
GDHGW0061A	42968-011	Water			X	X
GDHGW0061AMS	42968-011MS	Water			X	X
GDHGW0061AMSD	42968-011MSD	Water			X	X
GDHGW0091A	42968-012	Water			X	X
GDHGW0111A	42968-013	Water			X	X
GDHHW0091A	42968-014	Water			X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D = FIELD DUPLICATE

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Cl</u>	<u>SO₄</u>	<u>TPH</u>	<u>GAS</u>
GDHGW0031A	42949-001	Water	X	X		
GDHGW03D1A	42949-002	Water	X	X		
GDHGW0081A	42956-001	Water	X	X		
GDHGW08D1A	42956-002	Water	X	X		
GDHGW0071A	42965-003	Water	X	X		
GDHSB09901	42968-009	Soil			X	X
GDHSB09901MS	42968-009MS	Soil			X	X
GDHSB09901MSD	42968-009MSD	Soil			X	X
GDHSB09902	42968-010	Soil			X	X
GDHGW0061A	42968-011	Water	X	X		
GDHGW0091A	42968-012	Water	X	X		
GDHGW0111A	42968-013	Water	X	X		
GDHHW0091A	42968-014	Water	X	X		

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D = FIELD DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS33 Organics and Inorganics

SAMPLES: 684SB03201, 684SB03401, 684SB03301, 684SB03801, 684SB03901, 684SB03902, 684SB03701, 684SB03701MS, 684SB03701MSD, 684SB03501, 684SB03502, 684SB03601, 684SB03602, GDHGW0031A, GDHGW03D1A, GDHGW0081A, GDHGW08D1A, GDHGW0071A, GDHSB09901, GDHSB09902, GDHSB09601, GDHSB09602, GDHSB09801, GDHSB09802, GDHSB09701, GDHSB09702, GDHGW0061A, GDHGW0061AMS, GDHGW0061AMSD, GDHGW0091A, GDHGW0111A, GDHHW0091A

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

The Percent Difference (%D) of 4,6-dinitro-2-methylphenol (28.1%) exceeded the 25% QC limit for the continuing calibration run on 2/01/95 at 09:50. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 2/09/95 at 11:24:

benzoic acid	50.2%
4,6-dinitro-2-methylphenol	30.4%
benzidine	33.3%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no compounds detected in the method blanks.

Field Blanks:

There were no field blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PCB's

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recovery (%R) of 4,4'-DDT (144%) exceeded the 23-134% QC limits for sample 684SB03701. Since this compound was not a target compound for the samples in this SDG, no action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for the method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL GASOLINE

I.) Holding Times:

All Holding Time criteria for the method were met so no action was taken.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

All criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. No data qualification was required.

Field Blanks:

There were no field blanks associated with this SDG for this fraction.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was required.

VII.) Compound Identification and Quantitation:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

pH

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL DISSOLVED SOLIDS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required. *

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

CHLORIDES

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

The Relative Percent Difference (RPD) of 185% for field duplicate samples GDHGW0031A and GDHGW03D1A exceeded the 30% QC limit. The positive results in these associated samples were flagged as estimated (J).

The Relative Percent Difference (RPD) of 198% for field duplicate samples GDHGW0081A and GDHGW08D1A exceeded the 30% QC limit. The positive results in these associated samples were flagged as estimated (J).

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

SULFATES

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

The Relative Percent Difference (RPD) of 174% exceeded the 30% QC limit for field duplicate samples GDHGW0031A and GDHGW03D1A. All positive results in these associated samples were flagged as estimated (J). The RPD for the other field duplicate samples (GDHGW0081A and GDHGW08D1A) were not calculable. No further action was taken.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), PCB's (PCB), Organochlorine Pesticides/PCB's (P/PCB's) pH, Total Dissolved Solids (TDS), Chloride (Cl), Sulfate (SO₄), Total Petroleum Hydrocarbons (TPH), Total Gasoline (GAS), Total Metals / Cyanide (Me/ CN)
SDG NUMBER: CHS34

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>PCB</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB09401	42980-001	Soil			X		
GDHSB09402	42980-002	Soil			X		
GDHSB09501	42980-003	Soil			X		
GDHSB09502	42980-004	Soil			X		
GDHSB10101	42980-005	Soil	X	X			
GDHSB10101MS	42980-005/14MS	Soil	X	X			
GDHSB10101MSD	42980-005/14MSD	Soil	X	X			
GDHSB10102	42980-006/15	Soil	X	X			
GDHSB10301	42980-007/16	Soil	X	X			
GDHSB10201	42980-008/17	Soil	X	X			
GDHSB10202	42980-009/18	Soil	X	X			
GDHSB10302	42980-010/19	Soil	X	X			
GDHSB10001	42980-011/20	Soil	X	X			

<u>Client</u> <u>Sample #:</u>	<u>Lab</u> <u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>PCB</u>	<u>P/PCB</u>	<u>Me/CN</u>
GDHSB10002	42980-012/21	Soil	X	X			
GDHCB10201	42980-013/22	Soil	X	X			
GDHTB10201	42980-023	Water	X				
GDHEB10001	42980-024-31	Water	X	X	X		
GDHDB10001	42980-025-32	Water	X	X	X		
GDHTB10001	42980-026	Water	X				
GDHSB10401	42985-001/5/9	Soil	X	X		X	X
GDHSB10402	42985-002/6/10	Soil	X	X		X	X
GDHSB10501	42985-003/7/11	Soil	X	X		X	X
GDHSB10601	42985-004/8/12	Soil	X	X		X	X
GDHSB10601MS	42985-04-12MS	Soil	X	X		X	X
GDHSB10601MSD	42985-04-12MSD	Soil	X	X		X	
GDHSB10601MD	42985-0012MD	Soil					X
GDHSB10701	43002-001/4/6	Soil	X	X		X	X
GDHSB10702	43002-002/5/7	Soil	X	X		X	X
GDHSB10702MS	43002-007MS	Soil					X
GDHSB10702MD	43002-007MD	Soil					X
GDHTB10701	43002-003	Water	X				

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
C = FIELD DUPLICATE, TB = TRIP BLANK, EB = EQUIPMENT BLANK, DB = DEIONIZED
WATER BLANK

<u>Client</u> <u>Sample #:</u>	<u>Lab</u> <u>Sample #:</u>	<u>Matrix</u>	<u>pH</u>	<u>TDS</u>	<u>Cl</u>	<u>SO₄</u>	<u>TPH</u>	<u>GAS</u>
GDHEB10001	42980-029/31	Water					X	X
GDHDB10001	42980-030/32	Water					X	X
GDHGW11D1A	42980-033	Water	X	X	X	X		
GDHHW11D1A	42980-034	Water	X	X	X	X		
GDHFW11D1A	42980-035	Water	X	X	X	X		
GDHFW11D1AMS	42980-035MS	Water	X	X	X	X		
GDHFW11D1AMD	42980-035MD	Water	X	X	X	X		
GDHEW11D1A	42980-036	Water	X	X	X	X		
GDHDW11D1A	42980-037	Water	X	X	X	X		

MS = MATRIX SPIKE, MD = MATRIX DUPLICATE, EB = EQUIPMENT BLANK,
DB = DEIONIZED WATER BLANK, H = FIELD DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - CHS34 Organics and Inorganics

SAMPLES: GDHSB09401, GDHSB09402, GDHSB09501, GDHSB09502, GDHSB10101, GDHSB10101MS, GDHSB10101MSD, GDHSB10102, GDHSB10301, GDHSB10201, GDHSB10202, GDHSB10302, GDHSB10001, GDHSB10002, GDHCB10201, GDHTB10201, GDHEB10001, GDHDB10001, GDHTB10001, GDHGW11D1A, GDHHW11D1A, GDHFW11D1A, GDHEW11D1A, GDHDW11D1A, GDHSB10401, GDHSB10402, GDHSB10501, GDHSB10601, GDHSB10601MS, GDHSB10601MSD, GDHSB10601MD, GDHSB10701, GDHSB10702, GDHSB10702MS, GDHSB10702MD, GDHTB10701

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of acetone (45.7%) exceeded the 30% QC limit for the initial calibration run on 2/08/95 on instrument C. Since there were no positive results for this compound in the associated samples, no action was necessary.

The Percent Relative Standard Deviation (%RSD) of acetone (66.4%) exceeded the 30% QC limit for the initial calibration run on 2/09/95 on instrument E. Since there were no positive results for this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Differences (%D's) of chloromethane (50.1%), acetone (33.8%) and carbon disulfide (31.4%) exceeded the 25% QC limit for the continuing calibration run on 2/10/95 at 12:53 on instrument C. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of carbon disulfide (47.7%) and trichlorofluoromethane (27.6%) exceeded the 25% QC limit for the continuing calibration run on 2/13/95 at 12:00 on instrument C. The positive and non-detect results for carbon disulfide in the associated samples were flagged as estimated (J) and (UJ). All results for trichlorofluoromethane in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of acetone (45.6%) exceeded the 25% QC limit for continuing calibration run on 2/09/95 at 12:41 on instrument E. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of acetone (29.6%) exceeded the 25% QC limit for the continuing calibration run on 2/13/95 at 10:49 on instrument E. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 15 ug/kg and 7 ug/kg, respectively, in the soil blank for 2/10/95. All positive results for these compounds less than 10X the blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone, methylene chloride and 2-hexanone were detected at 12 ug/kg, 5 ug/kg and 3.3 ug/kg, respectively, in the soil blank for 2/13/95. All positive results for these compounds less than 10X the blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 10 ug/L in the water blank for 2/09/95. Since all the associated samples were trip and field blanks, no action was necessary.

Trip Blanks:

Methylene chloride was detected at 10 ug/L in trip blank GDHTB10201. All positive results for this compound in the associated samples less than 10X the blank were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

Methylene chloride was detected at 8 ug/L in equipment blank GDHEB10001. All results for this compound in the associated samples were previously flagged based on the method blanks.

Deionized Water Blanks:

Methylene chloride was detected at 9 ug/L in deionized water blank GDHDB10001. All results for this compound in the associated samples were previously flagged based on the method blanks.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples GDHSB10201 and GDHCB10201. No action was required.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of 1,4-difluorobenzene (48.4%) and chlorobenzene-d5 (44.4%) were below the 50-200% QC limits for sample GDHSB10601. The sample was not re-analyzed. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 2/09/95 at 11:24:

benzoic acid	50.2%
4,6-dinitro-2-methylphenol	30.4%
benzidine	33.2%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 2/14/95 at 11:02:

n-nitrosodimethylamine	26.8%
phenol	25.6%
bis(2-chloroethyl)ether	29.6%
benzoic acid	49.4%
2,4-dinitrophenol	55.2%
4,6-dinitro-2-methylphenol	47.4%
pentachlorophenol	28.1%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 2/15/95 at 09:16:

benzoic acid	51.6%
2,4-dinitrophenol	63.7%
4,6-dinitro-2-methylphenol	60.1%
pentachlorophenol	26.0%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

Field Blanks:

There were no positive results for the field blanks associated with this SDG. No action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no calculable RPD's for field duplicate samples GDHSB10201 and GDHCB10201. No action was required.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of perylene-d12 in samples GDHSB10501 (37.4%) and GDHSB10601 (38.2%) were below the 50-200 QC limits. All positive and non-detect results for the compounds quantitated on this Internal Standard for both samples were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

POLYCHLORINATED BIPHENYLS (PCB's)

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG for the PCB fraction.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Overall Assessment of Data/General:

All data were acceptable without qualification.

PESTICIDES / PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was necessary.

Continuing Calibration:

The Relative Percent Differences (RPD's) of endrin (29.9%), 4,4'-DDT (26.1%) and methoxychlor (30.4%) exceeded the 25% QC limit for the continuing calibration on 2/17/95 at 13:39. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no positive results for the field blanks associated with this SDG for this fraction. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met. No action was required.

VII.) Laboratory Control Sample:

The Percent Recovery (%R) of endrin aldehyde (185%) exceeded the 125% QC limit for LCS-P4209. Since there were no positive results for this compound in the associated samples, no action was required.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

XI.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG for this fraction.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Overall Assessment of Data/General:

The database section for this fraction was incorrectly labeled with the parameter as methylphenol (total cresol). This comment was lined through and corrected by the validator during the data validation process. All other data were acceptable without qualification.

TOTAL GASOLINE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Instrument Performance:

All criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met. No action was required.

Continuing Calibration:

All criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks.

Field Blanks:

There were no field blanks associated with this SDG for this fraction.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS / MSD criteria for the method were met, so no action was required.

VII.) Compound Identification and Quantitation:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG for this fraction.

IX.) Overall Assessment of Data/General:

The database section for this fraction was incorrectly labeled with the parameter as methylphenol (total cresol). This comment was lined through and corrected by the validator during the data validation process. All other data were acceptable without qualification.

pH

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Field Blanks:

There were no field blanks associated with this SDG for this fraction.

V.) Laboratory Control Samples (LCS):

All LCS criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

The RPD was 0.3% for pH in field duplicates samples GDHGW11D1A and GDHHW11D1A. Since all criteria were met, no action was required.

VII.) Overall Assessment of Data/General:

The database section for this fraction was incorrectly labeled with the parameter as methylphenol (total cresol). This comment was lined through and corrected by the validator during the data validation process. All other data were acceptable without qualification.

TOTAL DISSOLVED SOLIDS (TDS)

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG for TDS.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

The RPD for TDS was 0% for field duplicate samples GDHGW11D1A and GDHHW11D1A. Since all criteria for the method were met, no action was taken.

IX.) Overall Assessment of Data/General:

The database section for this fraction was incorrectly labeled with the parameter as methylphenol (total cresol). This comment was lined through and corrected by the validator during the data validation process. All other data were acceptable without qualification.

CHLORIDES

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG for chloride.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

The RPD was 8.7% for chloride for field duplicate samples GDHGW11D1A and GDHHG11D1A. Since all criteria for the method were met, no action was necessary.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

SULFATES

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG for this fraction.

V.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no calculable RPD's for the field duplicate samples associated with this SDG. No action was necessary.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB10	aluminum	30.2 ug/L	30.2
CCB1	antimony	23.83 ug/L	23.8
CCB9	barium	10.95 ug/L	11.0
CCB4	cobalt	3.74 ug/L	3.74
CCB1	calcium	30.37 ug/L	30.4
CCB10	iron	20.74 ug/L	20.7
CCB1	magnesium	40.42 ug/L	40.4
CCB5	thallium	17.27 ug/L	17.3
CCB2	potassium	865 ug/L	865
CCB3	selenium	19.03 ug/L	19.0

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB2	arsenic	-10.9 ug/L	10.9
CCB1	cadmium	-0.56 ug/L	0.56
CCB7	copper	-11.4 ug/L	11.4
CCB6	lead	-8.27 ug/L	8.27
CCB2.	nickel	-0.55 ug/L	0.55

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All LCS criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) of lead (94.3%) exceeded the 35% QC limit for sample

GDHSB10601MD. All positive and non-detect results for this analyte in the associated samples were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for antimony (25.9%) and magnesium (49.1%) were below the 75-125% QC limits for sample GHDSB10601MS. The positive result for magnesium was estimated (J) and the non-detect result for antimony was rejected (R) in associated sample GHDSB10601.

IX.) Field Duplicates:

No designated field duplicates were associated with this SDG for this fraction.

X.) Furnace Atomic Absorption QC:

GFAA Analysis were not performed for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was required.

XIII.) Overall Assessment of Data/General:

Antimony was rejected in sample GHDSB10601 due to a %R less than the 30% QC limit. All remaining laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Semivolatile Organics (SVOC), PCB's (PCB), Total Metals (Met)
SDG NUMBER: CHS35

SAMPLES:

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOC</u>	<u>PCB</u>	<u>Met</u>
019SB01601	43326-001	Soil	X	X	X
019SB01601MS	43326-001MS	Soil	X	X	
019SB01601MSD	43326-001MSD	Soil	X	X	
019SB01701	43326-002	Soil	X	X	X
019SB01801	43326-003	Soil	X	X	X
121SB01701	43326-004	Soil	X	X	X
121SB01601	43326-005	Soil	X	X	X
121SB01501	43326-006	Soil	X	X	X
121SB01401	43326-007	Soil	X	X	X
121SB01301	43326-008	Soil	X	X	X
121SB01301MS	43326-008MS	Soil			X
121SB01301MD	43326-008MD	Soil			X
017SB03301	43344-001	Soil		X	
017SB01332	43344-002	Soil		X	
017SB03201	43344-003	Soil		X	
017SB03202	43344-004	Soil		X	

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>PCB</u>
<u>Sample #:</u> 017SB003101	<u>Sample #:</u> 43344-005	Soil	X
017SB03102	43344-006	Soil	X
017SB02701	43344-007	Soil	X
017SB02702	43344-008	Soil	X
017SB02801	43344-009	Soil	X
017SB02802	43344-010	Soil	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS35 Organics and Inorganics

SAMPLES: 019SB01601, 019SB01601MS, 019SB01601MSD, 019SB01701, 019SB01801,
121SB01701, 121SB01601, 121SB01501, 121SB01401, 121SB01301, 121SB01301MS,
121SB01301MD, 017SB03301, 017SB03302, 017SB03201, 017SB03202, 017SB03101,
017SB03102, 017SB02701, 017SB02702, 017SB02801, 017SB02802

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene (31.4%) exceeded the 30% QC limit for the initial calibration run on 2/17/95. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 3/28/95 at 12:30:

hexachlorocyclopentadiene	36.1%
4-chlorophenyl phenyl ether	32.2%
fluorene	26.5%
4,6-dinitro-2-methylphenol	34.1%
benzidine	32.8%
benzo(a)anthracene	26.1%
bis(2-ethylhexyl)phthalate	46.1%
benzo(k)fluoranthene	30.0%

All positive and non-detect results for benzo(a)anthracene, bis(2-ethylhexyl)phthalate and benzo(k)fluoranthene in the associated samples were flagged as estimated (J) and (UJ). All results for the

other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 3/29/95 at 10:43:

4-chlorophenyl phenyl ether	27.4%
4,6-dinitro-2-methylphenol	38.2%
bis(2-ethylhexyl)phthalate	45.4%

All positive and non-detect results for bis(2-ethylhexyl)ether in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG. No action was required.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

POLYCHLORINATED BIPHENYLS (PCB's)

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisol Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u>			<u>Action Limit</u>
<u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>mg/kg</u>
CCB2	antimony	27.3 ug/L	27.3
CCB2	arsenic	30.3 ug/L	30.3
CCB8	copper	37.2 ug/L	37.2
CCB9	thallium	33.1 ug/L	33.1
CCB6	potassium	469 ug/L	4689

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank was an associated calibration blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB2	aluminum	-24.3 ug/L	24.3
CCB5	cadmium	-1.22 ug/L	1.2
CCB2	calcium	-11.2 ug/L	11.2
CCB5	iron	-15.6 ug/L	15.6
CCB5	magnesium	-14.2 ug/L	14.2

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All LCS criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

The Relative Percent Differences (RPD's) of the analytes listed below exceeded the 35% QC limit for sample 121SB01301MD:

aluminum	36%
calcium	61%
copper	146%
iron	36%
mercury	47%
nickel	73%

All positive and non-detect results for these analytes in the associated samples were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) for the analytes listed below were outside the 75-125% QC limits for sample 121SB01301MS:

antimony	17.1%
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chromium	67.6%
manganese	51.1%
nickel	165%
selenium	73.3%
zinc	420%

The positive results for chromium, manganese, nickel and selenium were flagged as estimated (J) and the non-detect result for antimony was rejected (R) in associated sample 121SB01301.

IX.) Field Duplicates:

No designated field duplicates were associated with this SDG.

X.) Furnace Atomic Absorption QC:

GFAA analysis were not performed for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was required.

XIII.) Overall Assessment of Data/General:

Antimony was rejected in sample 121SB01301 due to a %R less than the 30% QC limit. All remaining laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.14
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level IV
EPA SOW/METHOD: EPA 1990 SOW / SW846: 8240, 8270, 8080
VALIDATION GUIDELINES: USEPA *Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994*
SAMPLE MATRIX: Soil/Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB)
SDG NUMBER: CHS36

SAMPLES:

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>
020CB00101	43391-001/002	Soil	X	X	
020CB01101	43415-001/002	Soil	X	X	
020TB00101	43391-003	Water	X		
653CB00701	43455-002	Soil		X	X
663CB00901	43455-001	Soil		X	
684CB04401	43422-001	Soil		X	
017CB02701	43345-001	Soil			X*
LCS1	LCC040695A	Water	X		
	LS-A2290	Soil		X	
	LSP-4247	Soil			X
LCS2	LCG040695	Soil	X		
	LS-A2291	Soil		X	
	LSP-4256	Soil			X
LCS3	LS-A2293	Soil		X	

*Note: Sample analyzed for PCB's only

TB = TRIP BLANK, LCS = LABORATORY CONTROL SAMPLES

DATA REVIEWER(S):

Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:

Kevin C. Harmon

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS36, SW846 Organics

SAMPLES: 020CB00101, 020CB01101, 020TB00101, 653CB00701, 663CB00901, 684CB04401,
017CB02701, LCS1, LCS2, LCS3

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for carbon disulfide was 33.9%, which exceeded the 30% QC limit for the standards run on 11/28/94 on instrument CMS-HP. Since there were no positive detections of this compound in the associated samples, no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 4/6/95 on instrument HP-GMS for the following compounds:

chloromethane	33.5 %
bromomethane	37.7 %
acetone	50.1 %
xylene (total)	34.2 %

Since there were no positive detections of these compounds in the associated samples, no action was necessary.

Continuing Calibration:

The Percent Difference (%D) for chloromethane was 36.8% for the standard run on 4/6/95 at 12:07 on instrument CMS-HP, which exceeded the 25% QC limit. There were no positive detections of this compound in the associated samples. The non-detect results for this compound in samples 020CB00101 and 020TB00101 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride was detected at 4.0 ug/L in water method blank BC040695A. Since the only associated sample was a trip blank, no action was necessary.

Methylene chloride, acetone and toluene were detected at 4.8 ug/kg, 9.0 ug/kg and 2.7 ug/kg, respectively, in soil method blank BG040695B. Methylene chloride was qualified using the trip blank. Detections of acetone and toluene in the associated soil samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

Trip Blanks:

Methylene chloride was detected at 7.0 ug/L in trip blank 020CB00101. Detections of methylene chloride in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

TIC's:

There were no positive detections of TIC's in the blanks, so no action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses associated with this SDG. Since the LCS Recoveries met QC criteria, no action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC Identification criteria for the method were met, so no action was required.

XIII.) System Performance:

All System Performance criteria for the method were met, so no action was required.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. Data qualification was not required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 3/31/95 at 08:12 for the following compounds:

benzidine	40.0 %
benzo(a)anthracene	26.6 %
bis(2-ethylhexyl)phthalate	51.8 %

The positive results for benzo(a)anthracene and bis(2-ethylhexyl)phthalate and the non-detect result for benzidine in sample 020CB00101 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/4/95 at 09:36 for the following compounds:

benzidine	38.9 %
benzoic acid	37.3 %
bis(2-ethylhexyl)phthalate	30.1 %

The positive result for bis(2-ethylhexyl)phthalate and the non-detect results for benzidine and benzoic acid in sample 020CB01101 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/5/95 at 08:57 for the following compounds:

benzidine	60.7 %
benzoic acid	39.9 %
bis(2-ethylhexyl)phthalate	34.4 %

All results for these compounds in sample 684CB04401, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/5/95 at 08:57 for the following compounds:

benzidine	53.6 %
benzoic acid	43.2 %
bis(2-ethylhexyl)phthalate	35.0 %

All results for these compounds in samples 653CB00701 and 663CB00901, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 270 ug/kg in soil method blank B-A2293. Detections of this compound in samples 663CB00901 and 684CB04401 below 10X this amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was required.

TIC's:

There were no positive detections of TIC's in the method blanks, so no action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses associated with this SDG. Since the LCS Recoveries met QC criteria, no action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. Data qualification was not required.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

There were no MS / MSD analyses associated with this SDG. Since the LCS Recoveries met QC criteria, no action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All PIS criteria for the method were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Pesticide Cleanup Check:

Florilil Cartridge Check:

Florilil data was not available for this SDG. No action was taken.

Gel Permeation Chromatography (GPC):

GPC was not performed for this SDG. No action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was required.

XII.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: *National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB)
SDG NUMBER: CHS37

SAMPLES:

<u>Client</u> <u>Sample #:</u>	<u>Lab</u> <u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>
017SB02901	43376-001	Soil			X
017SB02902	43376-002	Soil			X
017SB03001	43376-003	Soil			X
017SB03002	43376-004	Soil			X
020SB00101	43392-001/9	Soil	X	X	
020SB00201	43392-002/10	Soil	X	X	
020SB00201RE	43392-002RE	Soil	X		
020SB00301	43392-003/11	Soil	X	X	
020SB00301RE	43392-003RE	Soil	X		
020SB00401	43392-004/12	Soil	X	X	
020SB00501	43392-005/13	Soil	X	X	
020SB00601	43392-006/14	Soil	X	X	
020SB00701	43392-007/15	Soil	X	X	
020SB00801	43392-008/16	Soil	X	X	
020SB00901	43414-001/6	Soil	X	X	
020SB00901RE	43414-001RE	Soil	X		

<u>Client</u>	<u>Lab</u>			
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>
020SB01001	43414-002/7	Soil	X	X
020SB01001RE	43414-002RE	Soil	X	
020SB01101	43414-003/8	Soil	X	X
020SB01101MS	43414-003/8MS	Soil	X	X
020SB01101MSD	43414-003/8MSD	Soil	X	X
020SB01102	43414-004/9	Soil	X	X
020TB00901	43414-005	Water	X	
670SB03301	43414-010	Soil		X
670SB03302	43414-011	Soil		X
670SB03201	43414-012	Soil		X
670SB03202	43414-013	Soil		X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, TB = TRIP BLANK
RE = REANALYSIS

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS37 Organics and Inorganics

SAMPLES: 017SB02901, 017SB02902, 017SB03001, 017SB03002, 020SB00101, 020SB00201, 020SB00301, 020SB00401, 020SB00501, 020SB00601, 020SB00701, 020SB00801, 020SB00901, 020SB01001, 020SB01101, 020SB01101MS, 020SB01101MSD, 020SB01102, 020TB00901, 670SB03301, 670SB03302, 670SB03201, 670SB03202

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) of the compounds listed below exceeded the 30% QC limit for the Initial Calibration on 4/06/95 on instrument G:

chloromethane	33.5%
bromomethane	37.7%
acetone	50.1%
xylene (total)	34.2%

Since there were no positive results for these compounds in the associated samples, no action was required.

The Percent Relative Standard Deviation (%RSD) of carbon disulfide (33.9%) exceeded the 30% QC limit for the Initial Calibration run on 11/28/94 on instrument C. Since there were no positive results for this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Difference (%D) of chloromethane (36.8%) exceeded the 25% QC limit for the Continuing Calibration run on 4/06/95 at 12:07 on instrument C. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) of chloroethane (40.5%) exceeded the 25% QC limit for the Continuing Calibration run on 4/09/95 at 12:59 on instrument G. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone, methylene chloride and toluene were detected at 9 ug/kg, 4.8 ug/kg and 2.7 ug/kg, respectively, in the soil blank for 4/06/95. All positive results for these compounds less than 10X the blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 9 ug/kg and 2.3 ug/kg, respectively, in the soil blank for 4/07/95. All positive results for these compounds less than 10X the blank contamination were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 6 ug/kg and 2.6 ug/kg, respectively, in the soil blank for 4/09/95. All positive results for these compounds less than 10X the blank concentration were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 4 ug/L in the water blank for 4/06/95. Since the associated sample was a trip blank, no action was necessary.

Trip Blanks:

Methylene chloride was detected at 6 ug/L in trip blank 020TB00901. All positive results for this compound in the associated samples less than 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of toluene-d8 for the samples listed below exceeded the 86-114% QC limits:

020SB00201	119%
020SB00301	118%
020SB00901	120%
020SB00901RE	117%
020SB01001	128%
020SB01001RE	121%

All positive results in each of these samples were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was required.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of bromochloromethane (48%), 1,4-difluorobenzene (42%) and chlorobenzene-d5 (35%) were below the 50-200% QC limits for sample 020SB00901RE. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of bromochloromethane (44%), 1,4-difluorobenzene (35%) and chlorobenzene-d5 (29%) were below the 50-200% QC limits for sample 020SB01001RE. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of bromochloromethane (33%), 1,4-difluorobenzene (31%) and chlorobenzene-d5 (34%) were below the 50-200% QC limits for sample 020SB00301RE. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

The original analysis of sample 020SB00901 is considered by the validator to be of preferable data quality since the re-analysis had low internal standard recoveries and high surrogate recoveries. The original analysis of sample 020SB01001 is also considered by the validator to be of preferable data quality since the re-analysis had low internal standard recoveries and high surrogate recoveries. The original analysis of sample 020SB00301 is considered by the validator to be of preferable data quality since the re-analysis had low internal standard recoveries and high surrogate recoveries. The reanalysis of sample 020SB00201 is considered by the validator to be of preferable data quality since all surrogate recovery criteria were met. All other laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for benzo(k)fluoranthene (31.4%) exceeded the 30% QC limit for the Initial Calibration run on 2/17/95. All positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 3/31/95 at 08:12:

4,6-dinitro-2-methylphenol	32.7%
benzidine	40.0%
benzo(a)anthracene	26.6%
bis(2-ethylhexyl)phthalate	51.8%

All results for benzo(a)anthracene and bis(2-ethylhexyl)phthalate in the associated samples, which consisted entirely of positive results, were flagged as estimated (J). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 4/03/95 at 12:42:

benzoic acid	31.5%
4-chlorophenyl phenyl ether	26.8%
4,6-dinitro-2-methylphenol	26.2%
benzo(a)anthracene	27.1%
bis(2-ethylhexyl)phthalate	46.7%

All positive and non-detect results for benzo(a)anthracene and bis(2-ethylhexyl)phthalate were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 4/04/95 at 09:36:

benzoic acid	37.3%
benzidine	38.9%
bis(2-ethylhexyl)phthalate	30.1%

All positive and non-detect results for bis(2-ethylhexyl)phthalate were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration on 4/05/95 at 08:57:

benzoic acid	39.9%
benzidine	60.7%
bis(2-ethylhexyl)phthalate	34.4%

All positive and non-detect results for bis(2-ethylhexyl)phthalate were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

Field Blanks:

There were no field blanks associated with this SDG. No action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicate samples associated with this SDG. No action was required.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of perylene-d12 in samples 020SB00201 (37%) and 020SB00501 (39%) were below the 50-200 QC limits. All positive and non-detect results for the compounds quantitated with this Internal Standard for both samples were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES AND POLYCHLORINATED BIPHENYLS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Field Blanks:

There were no field blanks associated with this SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.14
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW / SW846: 8270, 8080
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: Semivolatile Organics (SVOA), Pesticides/PCB's (P/PCB)
SDG NUMBER: CHS40

SAMPLES:

<u>Client</u>	<u>Lab</u>			
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOA</u>	<u>P/PCB</u>
653SB00601	43471-003	Soil	X	X
653SB00602	43471-004	Soil	X	X
653SB00701	43451-003	Soil	X	X
653SB00702	43451-004	Soil	X	X
653SB00801	43471-001	Soil	X	X
653SB00802	43471-002	Soil	X	X
663SB00901	43451-001	Soil	X	
663SB00902	43451-002	Soil	X	
670SB03401	43421-001	Soil	X	
670SB03402	43421-002	Soil	X	
684SB04001	43421-005	Soil	X	
684SB04002	43421-006	Soil	X	
684SB04101	43421-007	Soil	X	
684SB04102	43421-008	Soil	X	
684SB04201	43421-009	Soil	X	
684SB04202	43421-010	Soil	X	
684SB04301	43421-003	Soil	X	
684SB04302	43421-004	Soil	X	
684SB04401	43421-011	Soil	X	
684SB04402	43421-012	Soil	X	
653SB00701MS	43471-003MS	Soil	X	X

<u>Client</u>	<u>Lab</u>			
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>SVOA</u>	<u>P/PCB</u>
653SB00701MSD	43471-003MSD	Soil	X	X
663SB00901MS	43451-001MS	Soil	X	
663SB00901MSD	43451-001MSD	Soil	X	
684SB04401MS	43421-011MS	Soil	X	
684SB04401MSD	43421-011MSD	Soil	X	

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS40, SW846 Organics

SAMPLES: 653SB00601, 653SB00602, 652SB00701, 65300702, 653SB00801, 653SB00802, 663SB00901, 663SB00902, 670SB03401, 670SB3402, 684SB04001, 684SB04002, 684SB04101, 684SB04102, 684SB04201, 684SB04202, 684SB04301, 684SB04302, 684SB04401, 684SB04402, 653SB00701MS, 653SB00701MSD 663SB00901MS, 663SB00901MSD, 684SB04401MS, 684SB04401MSD

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 31.4% for benzo(k)fluoranthene for the standards run on 2/17/95 on instrument FMS-HP, which exceeded the 30% QC limit. The positive results for this compound in the associated samples were flagged as estimated (J).

The Percent Relative Standard Deviation (%RSD) was 40.7% for benzo(k)fluoranthene for the standards run on 2/17/95 on instrument HMS-HP, which exceeded the 30% QC limit. The positive results for this compound in the associated samples were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/5/95 at 08:57 on instrument FMS-HP for the following compounds:

benzoic acid	39.9 %
benzidine	60.7 %
bis(2-ethylhexyl)phthalate	34.4 %

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/6/95 at 10:04 on instrument FMS-HP for the following compounds:

benzidine	53.6 %
benzoic acid	43.2 %
bis(2-ethylhexyl)phthalate	35.0 %

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) was 36.1% for benzo(k)fluoranthene, which exceeded the 25% QC limit for the standard run on 4/5/95 at 10:32 on instrument HMS-HP. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 4/6/95 at 11:12 on instrument HMS-HP for the following compounds:

benzidine	28.6 %
benzo(k)fluoranthene	38.9 %

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 270 ug/kg in soil method blank B-A2293 analyzed on 4/6/95. Detections of this compound in associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was required.

TIC's:

There were no positive detections of TIC's in the method blanks, so no action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was necessary.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

The Relative Percent Differences (RPD's) for pyrene (144%) and acenaphthene (52%) exceeded their respective 31% QC limits for spiked samples 684SB04401MS and 684SB04401MSD. The results for these compounds in associated sample 684SB04401, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Recoveries (%R's) of the following compounds were outside their respective QC limits in spiked samples 684SB04401MS and 684SB04401MSD:

<u>Compound</u>	<u>MS. %R</u>	<u>MSD. %R</u>	<u>QC Limits</u>
pyrene	415		26-127%
2,4-dinitrotoluene	22	19	24-96%
acenaphthene		38	46-118%

The non-detect results for 2,4-dinitrotoluene and acenaphthene in associated sample 686SB04401, were flagged as estimated (UJ). The positive result for pyrene in this sample was flagged as estimated (J).

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was necessary.

IX.) Internal Standards Performance:

The Percent Recoveries (%R's) for the internal standard area counts were below the 50-200% QC limits for the following samples and Internal Standards:

<u>Sample</u>	<u>Internal Standard</u>	<u>%R</u>
653SB00601	chrysene-d12	48
	perylene-d12	15
653SB00701	perylene-d12	46
653SB00801	perylene-d12	18
684SB04302	perylene-d12	36

All positive and non-detect results associated with each of these internal standards with %R's between 25% and 49% were flagged as estimated (J) and (UJ) in the associated samples. In addition, the positive results for compounds associated with perylene-d12 in samples 653SB00601 and 653SB00801 were flagged as estimated (J) and all non-detects were rejected (R) due to %R's less than 25%.

X.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XII.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XIII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIV.) Overall Assessment of Data/General:

All non-detect results for compounds associated with internal standard perylene-d12 in samples 653SB00601 and 65300801 were rejected due to excessively low Internal Standard Recoveries. The remaining laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within the required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

The Percent Difference (%D) was 28.4% for 4,4'-DDT (primary column), which exceeded the 25% QC limit for the standard run on 4/6/95 at 03:47. The non-detect result for this compound in associated sample 653SB00602 was flagged as estimated (UJ).

The Percent Difference (%D) was 55.6% for 4,4'-DDT (secondary column), which exceeded the 25% QC limit for the standard run on 4/10/95 at 09:21. The non-detect results for this compound in associated samples 653SB00601, 653SB00702 and 653SB00802 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks. Data qualification was not required.

Equipment Blanks:

There were no equipment blanks associated with this SDG. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria for the method were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria for the method were met, so no action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

PIS data were not provided with this SDG. No action was required for Level III validation.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG. Data qualification was not required.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil data was not available for this SDG. No action was taken.

Gel Permeation Chromatography (GPC):

GPC data was not present for this SDG. No action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was required.

XII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE Inc.
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement, Laboratory Statements
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: CHS40
SAMPLES:

Client	Lab		PCDD/ PCDF
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	
653SB00801	IL0591-1	Soil	X
653SB00802	IL0591-2	Soil	X
653SB00803	IL0591-3	Soil	X
653SB00602	IL0591-4	Soil	X
653SB00701	IL0592-1	Soil	X
653SB00701 MS	IL0592-2MS	Soil	X
653SB00701 MSD	IL0592-3MSD	Soil	X
653CB00701	IL0592-4	Soil	X
653SB00702	IL0592-5	Soil	X
	LCS-IL0591/592	Soil	X
	LCSD-IL0591/592	Soil	X

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE:



DATA QUALIFICATION SUMMARY

PACE Inc. - CHS40 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 653SB00801, 653SB00802, 653SB00803, 653SB00602, 653SB00701, 653SB00701 MS, 653SB00701 MSD, 653CB00701, 653SB00702, LCS-IL0591/592, LCSD-IL0591/592

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance Check:

According to EPA method 8290, a column performance check must be run before the beginning routine calibration run.

The laboratory ran a column performance check after the beginning routine calibration run, which invalidated the beginning routine calibration results. Since the effects of this sequence deviation cannot be verified, all associated positive sample results are recommended to be flagged as estimated (J).

Mass Resolution Check:

The following end of sequence Mass Resolution Checks were run outside the 12-hour QC limit:

<u>I.D.</u>	<u>Date and Time</u>	<u>Total Time</u>
End Mass Res. Check	4/12/95 21:51	13:22
End Mass Res. Check	4/14/95 08:37	18:21
End Mass Res. Check	4/14/95 21:28	12:51

The laboratory did not reanalyze the affected samples; all associated positive sample results are recommended to be flagged as estimated (J).

There were time "gaps" (more than 5 hours for the sequences run on 4/13/95 and 4/14/95) between the End of the Calibration and the End of the Mass Resolution Check runs. The laboratory certified that there were no instrument adjustments or Resolution Check runs in the time "gaps", so no action was taken (see Section X).

Mass Verification Check:

Mass Verification was checked at the beginning of each analytical sequence.

Data Acquisition:

There were no Signal-to-Noise Ratios calculated. See Section VIII for data validation action.

III.) Calibration:

Calibration Range:

According to EPA method 8290, if the concentration in the final extract of any of the fifteen PCDD's/PCDF's exceeds the upper MCL (Method Calibration Limit), a second analysis of the sample (using a one tenth aliquot) should be undertaken.

The upper MCL was 2000 pg/g for OCDD for a 10 g soil sample. Several OCDD sample results in this SDG were over the upper MCL and the laboratory did not perform the second analyses. It is believed that the OCDD results are potentially biased low. All positive OCDD sample results higher than 2000 pg/g are recommended to be flagged as estimated (J).

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

All criteria were met, so no action was required.

IV.) Blanks:

According to EPA method 8290, a method blank must be analyzed immediately after a beginning calibration run to demonstrate freedom from contamination and freedom from carryover from the calibration run. Also according to EPA method 8000, the performance of the entire analytical system must be checked daily, using data gathered from analyses of blanks, standards, and replicated samples.

The laboratory ran a method blank after the beginning calibration run, a column performance check and a nonane blank. The addition of the nonane blank (pure solvent, no internal standards added) invalidated use of the method blanks in determining instrument carryover levels.

The laboratory did not submit nonane blank quantitation results, therefore, no blank results could be used to assess instrument carryover levels.

No method blanks were analyzed for the sequences starting on 4/13/95 at 14:16 and on 4/14/95 at 08:37.

All associated low level (see Section IX) positive sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Method Blanks:

One method blank, MB-IL0591/592, was analyzed. Several PCDD's/PCDF's were detected in the method blank at the following concentrations:

<u>Blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Action Level</u>
MB-IL0591/592	1234678-HpCDD	pg/g 0.36	pg/g 3.6
	OCDD	1.13	11.3
	1234678-HpCDF	0.23	2.3

Because nonane blanks were run immediately before method blanks in the analytical sequence, it is believed that the method blank detections are biased low. For this reason, a 10X blank rule was used to qualify the data.

Detections of the above compounds in all associated samples below 10X the blank amounts (Action Level, pg/g for soil samples before percent solids correction) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

Field Blanks:

No field blank was analyzed for this batch.

V.) Internal Standards Performance:

The Percent Recoveries (%R's) of the following internal standards exceeded the 40-135% QC limits for the samples listed:

<u>Sample</u>	<u>Compound</u>	<u>%R</u>
IL0591-3	13C-12378-PeCDD	36.56
	13C-1234678-HpCDD	34.08
	13C-OCDD	24.48
	13C-2378-TCDF	37.73
IL0592-2MS	13C-OCDD	35.19

All positive and non-detected sample results associated with these internal standards are recommended to be flagged as estimated (J) and (UJ). The associated results are potentially biased low.

No data qualification action was taken for the QC sample IL0592-2MS.

VI.) Spike/Spike Duplicates:

Matrix spike/spike duplicates IL0592-2MS and IL0592-3MSD were analyzed. The Percent Recoveries (%R's) and Relative Percent Differences (RPD's) exceeded the QC limits for the following compounds:

	<u>Compound</u>	<u>MS</u> <u>%R</u>	<u>MSD</u> <u>%R</u>	<u>QC Limits</u> <u>%R</u>	<u>RPD</u>	<u>QC Limit</u> <u>RPD</u>
IL0592-2MS /	OCDD	*277.5	119.2	50-150	8.04	20
IL0592-3MSD	234678-HxCDF	*46.5	65.5	50-150	*25.9	20

* = outside the QC limits.

All results for 234678-HxCDF in the associated samples are recommended to be flagged as estimated (J) and (UJ).

The amount of OCDD spiked (116 pg/g) was about 18X less than the OCDD detected in sample IL0592-1 (2059 pg/g), so no action was required for OCDD results.

One set of LCS/LCSD was analyzed. All recoveries were within the QC limits, so no action was taken.

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identification:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

Signal-to-Noise (S/N) Ratio:

There was no evidence in the raw data that the S/N was checked by the laboratory for all reported positive sample results. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that all reported positive sample results met method S/N criteria (greater than or equal to 2.5), so no action was taken (see Section X).

Polychlorinated Diphenyl Ether (PCDPE) Interferences:

There was no evidence in the raw data that PCDPE interferences were checked by the lab. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that there were no signals detected having a S/N ratio greater than or equal to 2.5 at same retention time (+/- 2 seconds), in the corresponding PCDPE channel for all reported positive sample results, so no action was taken (see Section X).

Second Column Confirmation:

Second column confirmation was not run for all reported positive 2378-TCDF results. Since the laboratory cannot resolve the 2378-TCDF isomer from the 2347-TCDF isomer, all reported positive 2378-TCDF sample results are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

IX.) Overall Assessment of Data/General:

The laboratory did not follow the 12-hour analysis sequence and quality control (QC) procedures specified in EPA Method 8290 (Revision 0, November 1990).

Some reported positive and non-detect sample results are recommended to be flagged according to individual QC problems.

For purposes of blank assessment, all unflagged positive sample results below low level (average PQL) are recommended to be designated as EMPC (Estimated Maximum Possible Concentration).

<u>Level</u>	<u>Matrix</u>	<u>TCDD</u>	<u>PeCDD/PeCDF</u> <u>HxCDD/HxCDF</u> <u>HpCDD/HpCDF</u>	<u>OCDD/OCDF</u>
Low	Soil	< 10 pg/g	< 10 pg/g	< 50 pg/g
High	Soil	> 10 pg/g	> 10 pg/g	> 50 pg/g

All unflagged high level sample results are recommended to be flagged as estimated (J). All positive sample results may be biased high.

All total positive PCDD/PCDF sample results are recommended to be flagged as estimated (J).

X.) Laboratory Certifications Concerning Data Validation Deliverables:

In the validation of the PCDD/PCDF data, several important informational items were not verifiable from the data packages. Pace, Inc. provided certifications concerning the procedures used in the laboratory and in data reporting which address these issues.

The following certifications were made by Pace, Inc.:

- 1.) Nonane blanks were run before method blanks in the analytical sequence to document instrument condition and integrity.
- 2.) Nonane blank quantitation reports were not generated because of software limitations.
- 3.) In the event data for an analysis are unacceptable due to instrumental problems or other unpredictable factors, the analyst will reanalyze the particular extract and include only information from the reanalysis in the data package. The original analysis data is removed and the reanalysis data is inserted in the position in the raw data that would normally be occupied by the original analysis. This causes the data to appear to be out of order chronologically. This procedure was used by Pace, Inc. to report SDG APX01 method blank raw data and LCSD-AQ-IK1409/IK1054 data in the analytical sequence beginning 09/13/94. This procedure is common laboratory practice within Pace's dioxin laboratory.
- 4.) All positive reported results met all S/N method criteria.
- 5.) For all positive reported results, there were no S/N ratios greater than 2.5 in the corresponding ether channel.

- 6.) Pace, Inc. did not perform any analyses, checks or instrument adjustments between the end of sequence Calibration Checks and Mass Resolution Checks in the cases where more than one hour separated the Calibration and Mass Resolution Checks.

Validata Chemical Services, Inc. has incorporated these certifications into its data review as fact, and they have formed the basis for data validation of the unverifiable items. Validata Chemical Services, Inc. takes no responsibility for the validity of these certifications.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe / Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN)
SDG NUMBER: CHS45

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
009GW01701	43734-001	Water	X			
	43734-003	Water		X		
	43734-005	Water			X	
	43734-007/9	Water				X
009TW01701	43734-002	Water	X			
009GW01601	43734-011	Water	X			
	43734-004	Water		X		
	43734-006	Water			X	
	43734-008/10	Water				X
009GW01601MS	43734-011MS	Water	X			
009GW01601MSD	43734-011MSD	Water	X			
009GW00501	43740-025	Water	X			
	43740-003	Water		X		
	43740-007	Water			X	
	43740-0019/21	Water				X
009GW00601	43740-027	Water	X			
	43740-004	Water		X		
	43740-008	Water			X	
	43740-0020/22	Water				X

<u>Client</u>	<u>Lab</u>					
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>
009GW00601D	43740-020D	Water				X
009GW00601S	43740-020S	Water				X
009HW01601	43845-001	Water		X	X	
009HW01601MS	43845-001MS	Water		X	X	
009HW01601MSD	43845-001MSD	Water		X	X	
009TW00601	43740-026	Water	X			
009GW01801	43753-003	Water	X			
	43753-008	Water		X		
	43753-012	Water			X	
	43753-016/26	Water				X
009GW01901	43753-004	Water	X			
	43753-009	Water		X		
	43753-013	Water			X	
	43753-017/27	Water				X
009TW01901	43753-005	Water	X			

S / MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, D = MATRIX DUPLICATE,
 TW = TRIP BLANK

DATA REVIEWER(S): Jean M. Delashmit, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - CHS45 CLP Organics and Inorganics

SAMPLES: 009GW01701, 009TW01701, 009GW01601, 009GW00501, 009GW00601,
009GW01601MS, 009GW01601MSD, 009HW01601, 009HW01601MS,
009HW01601MSD, 009TW00601, 009GW01801, 009GW01901, 009TW01901

VOLATILE ORGANICS

I.) Holding Times:

The holding time from sample date to extraction was 9 days for samples 017SW00501 and 017SW00601, which exceeded the 7-day QC limit for unpreserved aromatic volatile compounds in water. The positive and non-detect results for these compounds in these samples were flagged as estimated (J) and (UJ).

All other Holding Time criteria were met, so no further action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were within QC limits, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) for the following compounds exceeded the 25% QC limit for the standard run on 05/01/95:

<u>Compound</u>	<u>%D</u>
chloromethane	31.1
bromomethane	49.3

Associated sample results for these compounds, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 009GW01601, 009GW01701, 009GW01801 and 009GW01901.

IV.) Blanks:

Method Blanks:

Methylene chloride was detected in method blank BI042795A at 1 ug/L. Associated detections of this compound were qualified based on the higher level of contamination in the trip blank. The associated samples were 009GW00501 and 009GW001601.

Rinsate Blanks:

No rinsate blank was analyzed with the samples in this SDG.

Trip Blanks:

Methylene chloride was detected in trip blank 017TW00601 at 8 ug/L. The detection of methylene chloride in the associated sample 017GW00601 below 10X this amount was flagged as undetected (U), and the detection level became the detection limit.

Chloroethane was detected in trip blank 009TW01901 at 10 ug/L. There were no detections of this compound in the associated samples, so no action was required.

TIC's:

Tentatively identified volatile compound chlorofluoromethane was detected in the trip blank 009TW01701 at 6 ug/L. There were no detections of this compound in the associated samples, so no action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was needed.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All Matrix Spike/Matrix Spike Duplicate criteria were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standards Performance criteria were met, so no action was required.

IX.) TCL Compound Identification:

All criteria were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken. No blank qualifications were needed.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Difference (%D) for benzidine exceeded the 25% QC limit for the standard run on 04/25/95 at 10:01 on instrument FMS-HP. Sample data, which consisted entirely of non-detects, were flagged as estimated (UJ) in the associated samples 009GW00501 and 009GW01061.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 05/02/95 at 12:33 on instrument FMS-HP for the following compounds:

benzoic acid	50.0 %
pentachlorophenol	29.9 %

Positive and non-detect data for these compounds were flagged as estimated (J) and (UJ) in the associated samples 009GW01601, 009GW01701, 009GW01801 and 009GW01901.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 05/05/95 at 09:56 on instrument FMS-HP for the following compounds:

benzoic acid	56.2 %
hexachlorocyclopentadiene	30.8 %
pentachlorophenol	26.0 %

Positive and non-detect data for these compounds were flagged as estimated (J) and (UJ) in associated sample 009HW01601.

IV.) Blanks:

Method Blanks:

No target compounds were detected in any of the method blanks, so no action was required.

TICs:

No Tentatively Identified Compounds were reported as detected in the method blanks.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was required.

VI.) Matrix Spike / Matrix Spike Duplicate:

All Matrix Spike / Matrix Spike Duplicate criteria were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met, so no action was required.

IX.) TCL Compound Identification:

All criteria were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria were met, so no action was taken. No blank qualifications were required.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Instrument Performance:

All criteria were met. No data qualification was performed.

III.) Calibration:

All Calibration criteria were met, so no action was required.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was taken.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

Percent Recoveries of decachlorobiphenyl were below the 30-150% QC limits for samples 009GW01601 (20%), 009GW01701 (16%), 009GW01801 (18%) and 009GW01901 (13%). The associated positive and non-detect sample results were flagged as estimated (J) and (UJ).

VI.) Laboratory Control Sample (LCS):

All Laboratory Control Sample criteria were met. No action was required.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria were met. No data qualification was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria were met, so no action was required.

IX.) Field Duplicates:

No field duplicates were analyzed by the laboratory for pesticides and PCB's. No action was required.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Data were not available in the package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC was not required for samples in this SDG.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) Calibration:

All Calibration criteria were met, no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u> <u>ug/L</u>	<u>Action Level</u> <u>ug/L</u>
CCB1	aluminum	16.7	83.5
CCB8	antimony	13.7	8.5
ICB	arsenic	3.4	17.0
CCB5	barium	7.0	35.0
CCB1	beryllium	0.4	2.00
PB	calcium	242	1210

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u> <u>ug/L</u>	<u>Action Level</u> <u>ug/L</u>
CCB8	chromium	3.6	18.0
CCB2	copper	3.1	15.5
PB	iron	94.7	474
PB	magnesium	33.3	167
CCB1	manganese	1.7	8.50
CCB5	nickel	8.6	43.0
CCB5	potassium	592	2960
ICB	silver	2.2	11.0
PB	sodium	178	890
CCB1	vanadium	3.3	16.5
CCB11	zinc	18.2	91.0

CCB = Continuing Calibration Blank, PB = Preparation Blank, ICB = Initial Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, ug/L) for which the contaminated blank was an associated calibration or laboratory preparation blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u> <u>(ug/L)</u>
CCB3	cadmium	-1.3 ug/L	6.50
PB	thallium	-4.1 ug/L	20.5
ICB2	zinc	-5.8 ug/L	29.0

CCB = Continuing Calibration Blank, PB = Preparation Blank, ICB = Initial Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

Sodium and zinc were present at 86 ug/L and 9 ug/L, respectively, in ICS Solution A, which were concentrations greater than 2X IDL. These analytes should not be present. Since aluminum, calcium, iron or magnesium were not present in any other sample at concentrations greater than their respective concentrations in ICS Solution A, no data qualification was required.

A negative result with an absolute value greater than the IDL was observed for each of the following analytes:

<u>Analyte</u>	<u>Neg. Conc.</u>
antimony	-35 ug/L
arsenic	-3 ug/L

<u>Analyte</u>	<u>Neg. Conc.</u>
barium	-17 ug/L
chromium	-6 ug/L
copper	-8 ug/L
zinc	-4 ug/L

Since aluminum, calcium, iron and magnesium were not present in any other sample at concentrations greater than their respective concentrations in ICS Solution A, no data qualification was required.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution results were not reported in the laboratory report for this SDG. No action was taken.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria were met, so no action was taken.

VII.) Duplicate Sample Analysis:

The Relative Percent Differences (RPD's) of the following analytes in water duplicate sample 009GW01601D were outside the 20% QC limit and sample results were greater than 5X CRDL:

calcium	23.1 %
iron	21.0 %
manganese	21.4 %
potassium	21.3 %

All positive results for these analytes in sample 009GW01601 were flagged as estimated (J) and (UJ).

The difference between sample and duplicate for zinc in the same sample was greater than the CRDL and the positive detections of zinc were less than 5X CRDL. The detection of zinc in this sample was eliminated as non-detect based on blank contamination and rejected due to zero percent matrix spike recovery. No further action was necessary.

VIII.) Matrix Spike Recoveries:

Matrix Spike recoveries were outside the 75-125% QC limits for the following analytes which had sample concentrations less than 4X spike concentration:

<u>Analyte</u>	<u>Spike Recovery</u>
mercury	826%
zinc	0 %

The result for zinc in sample 009GW01601 was rejected (R). Since there was no positive result for mercury, no further action was required.

IX.) Field Duplicates:

No field duplicates were analyzed by the laboratory with this SDG. No action was necessary.

X.) Furnace Atomic Absorption QC:

Samples in this SDG were not analyzed by Furnace Atomic Absorption.

XI.) Sample Result, Calculation / Transcription Verification:

All criteria were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The result for zinc in sample 009GW01601 was rejected due to a zero percent Matrix Spike Recovery. All other laboratory data were acceptable with qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level IV
EPA SOW/METHOD: EPA 1990 SOW, 8240, 8270, 8080, 8140, 8150, 6010, 7471, 9012, 7196, 418.1
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Data Analyses, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile (VOC), Semivolatile Organics (SVOC), Organochlorine Pesticides/PCB's (P/PCB), Organophosphate Pesticides (OP), Herbicides (Herb), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbon (TPH), Hexavalent Chromium (HEXCR)

SDG NUMBER: APX01

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOC</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>OP</u>	<u>HERB</u>
013TB00101	TDP-005	Water	X				X
013TB00401	TDP-003	Water	X				
013CB00601	TDP-001	Soil	X	X	X	X	X
103CB00601	TDP-001DL	Soil			X		
013CB01202	TDP-002	Soil	X	X	X	X	X
013CB01602	TEH-001	Soil	X	X	X	X	X
013TB01602	TEH-004	Water	X				
013CB02101	TEH-002	Soil	X	X	X	X	X
013CB02201	TET-002	Soil	X	X	X	X	X
017TB00101	TET-005	Water	X				
017CB00402	TET-001	Soil	X	X	X	X	X
017TB00402	TET-003	Water	X				
017EB00402	TET-004	Water	X	X	X	X	X
017TB00501	TFO-002	Water	X				
017DB00501	TFO-001	Water	X	X	X	X	X
656CB00201	TCB-001	Soil	X	X	X	X	X
656CB00901	TDP-004	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>		<u>VOC</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>OP</u>	<u>HERB</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>					
662CB00201	TEH-003	Soil	X	X	X	X	X
013CB00601MS	TDP-001MS	Soil			X		
013CB00601MSD	TDP-001MSD	Soil			X		
013CB01202MS	TDP-002MS	Soil				X	
013CB01201MSD	TDP-222MSD	Soil				X	
013CB02101MS	TEH-002MS	Soil					X
013CB02101MSD	TEH-002MSD	Soil					X
BLANK SPIKE-1MS	DW154MS	Water	X				
BLANK SPIKE-1MS	BW9442MS	Water		X			
BLANK SPIKE-1MSD	DW154MSD	Water	X				
BLANK SPIKE-1MSD	BW9442MSD	Water		X			
BLANK SPIKE-2MS	DW156MS	Water	X				
BLANK SPIKE-2MSD	DW156MSD	Water	X				
BLANK SPIKE-2MS	BSL9424MS	Soil		X			
BLANK SPIKE-2MSD	BSL9424MSD	Soil		X			
BLANK SPIKE-3MS	FL060MS	Soil	X				
BLANK SPIKE-3MSD	FL060MSD	Soil	X				
BLANK SPIKE-4MS	FW199MS	Water	X				
BLANK SPIKE-4MSD	FW199MSD	Water	X				

MS = MATRIX SPIKE, MATRIX SPIKE DUPLICATE, TB = TRIP BLANKS, EB = EQUIPMENT BLANK, DW = RINSATE WATER BLANK, DL = SAMPLE DILUTION

<u>Client</u>	<u>Lab</u>		<u>Me/CN</u>	<u>TPH</u>	<u>HEXCR</u>
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>			
013CB01602	41210-001	Soil	X	X	X
013CB02101	41210-002	Soil	X	X	X
013CB00601	41189-001	Soil	X	X	X
013CB01202	41189-002	Soil	X	X	X
013CB02201	41214-001	Soil	X	X	X
017CB00402	41214-001	Soil	X	X	X
017EB00402	41214-004	Water	X	X	X
017DB00501	41213-001	Water	X	X	X
556CB00201	41123-001	Soil	X	X	X
656CB00901	41192-001	Soil	X	X	X
662CB00201	41210-003	Soil	X	X	X
013CB00601D*	41189-001D*	Soil	X		
103CB00601S*	41189-001S*	Soil	X		
656CB00201D*	41123-001D*	Soil	X		
656CB00201S*	41123-001S*	Soil	X		
017DB00501D*	41213-001D*	Water			X
017DB00501S*	41213-001S*	Water			X
LCS1	B-C1130A	Water		X	
LCS2	B-C1132A	Water		X	
LCS3	B-C1134A	Water		X	

EB = EQUIPMENT BLANK, DB = RINSATE WATER BLANK, D* = MATRIX DUPLICATE,
S* = MATRIX SPIKE, LCS = LABORATORY CONTROL SAMPLE

DATA REVIEWER(S): Marvin L. Smith, Kevin C. Harmon

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Kevin C. Harmon". The signature is written in a cursive style with a large, stylized initial "K".

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

EnSafe/Allen & Hoshall - APX01 CLP Organics and Inorganics

SAMPLES: 13TB00101, 13TB00401, 013CB00601, 013CB00601DL, 013CB00601MS, 013CB00601MSD, 013CB00601D*, 013CB00601S*, 013CB01202, 013CB01202MS, 013CB01202MSD, 013CB01602, 013TB01602, 013CB02101, 013CB02101MS, 013CB02101MSD, 013CB02201, 017TB00101, 013CB00402, 017TB00402, 013EB00402, 017TB00501, 013DB00501, 017DB00501D*, 017DB00501S*, 656CB00201, 656CB00201D*, 656CB00201S*, 656CB00901, 662CB00201, BLANK SPIKE-1MS, BLANK SPIKE-1MSD, BLANK SPIKE-2MS, BLANK SPIKE-2MSD, BLANK SPIKE-3MS, BLANK SPIKE-3MSD, BLANK SPIKE-4MS, BLANK SPIKE-4MSD, LCS1, LCS2, LCS3

VOLATILE ORGANICS

I.) Holding Times:

All samples were analyzed within the required holding times, so no action was taken.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 8/17/94 for the following compounds:

methylene chloride	46.8%
acetone	83.4%
acrolein	65.3%
acetonitrile	35.9%
methacrylonitrile	76.1%

Associated positive and non-detect results for methacrylonitrile were flagged as estimated (J) and (UJ). All positive results for the remaining compounds in the associated water samples were flagged as estimated (J). The average Relative Response Factor (RRF) for isobutyl alcohol was 0.008 for the standards run on 8/17/94, which was below the 0.05 QC limit. All results for this compound in the associated water samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 8/23/94 for the following compounds:

methylene chloride	74.0%
acetone	68.3%
ethylbenzene	63.8%
acetonitrile	40.1%
ethyl cyanide	41.2%

Positive and non-detect results for methylene chloride were flagged as estimated (J) and (UJ). All positive results for the remaining compounds in the associated samples were flagged as estimated (J).

The average Relative Response Factor (RRF) for isobutyl alcohol was 0.004 for the standards run on 8/23/94, which was below the 0.05 QC limit. All results for this compound in the associated soil samples, which consisted entirely of non-detects, were rejected (R).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC Limit for the standard run on 8/24/94 at 12:43 for the following compounds:

methylene chloride	28.2%
acetone	96.9%
1,2,3-trichloropropane	27.8%

All positive and non-detect results for these compounds in the associated water samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC Limit for the standard run on 8/29/94 at 12:07 for the following compounds:

methylene chloride	41.1%
acetone	97.1%
acrolein	98.9%

All positive and non-detect results for these compounds in the associated water samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC Limit for the standard run on 8/30/94 at 11:29 for the following compounds:

methylene chloride	40.5%
acetone	98.4%
acrolein	94.1%
acrylonitrile	25.6%
2-butanone	45.9%
2-hexanone	31.0%
ethyl cyanide	26.7%
isobutyl alcohol	38.8%

All positive and non-detect results for these compounds in the associated water samples were flagged as estimated (J) and (UJ). All results for isobutyl alcohol were previously rejected due to a low RRF in the Initial Calibration.

The Percent Differences (%D's) exceeded the 25% QC Limit for the standard run on 9/15/94 at 14:27 on instrument E, for the following compounds:

methylene chloride	26.4%
chloromethane	33.0%
isobutyl alcohol	31.4%

All positive and non-detect results for these compounds in the associated soil samples were flagged as estimated (J) and (UJ). All results for isobutyl alcohol were previously rejected due to a low RRF in the Initial Calibration.

The Relative Response Factors (RRF's) for isobutyl alcohol were below the 0.05 QC limit in all five Continuing Calibrations. All non-detect results for this compound were previously rejected due to low RRF's in the Initial Calibrations, so no further action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was taken.

Equipment Blanks:

Xylenes (total) was detected at 0.9 ug/L in equipment blank 017EB00402. Detections of this compound group in the associated samples below 5X the blank amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. Methylene chloride and acetone were also detected in this blank. Since these compounds were qualified using the trip blanks, no further action was required.

Rinsate Water Blanks:

Toluene was detected at 2.1 ug/L in rinsate water blank 017DB00501. Detections of this compound in the associated samples below 5X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. Methylene chloride and acetone were also detected in this blank. Since these compounds were qualified using the trip blanks, no further action was required.

Trip Blanks:

Methylene chloride and 4-methyl-2-pentanone were detected at 15.4 ug/L and 3.2 ug/L, respectively, in trip blank 013TB00401. Detections of these compounds in the associated samples below 10X and 5X, these amounts respectively, were flagged as undetected (U) with the detection limits being raised to the amount of contamination in each sample. Acetone was also detected in this blank. Since acetone was qualified using another trip blank, no further action was required.

Carbon disulfide was detected at 2.0 ug/L in trip blank 013TB00101. Detections of this compound in the associated samples below 5X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. Methylene chloride and acetone were also detected in this blank. Since these compounds were qualified using other trip blanks, no further action was required.

Acetone was detected at 44.8 ug/L in trip blank 017TB00402. Detections of this compound in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. Methylene chloride was also detected in this blank. Since methylene chloride was qualified using another trip blank, no further action was required.

V.) Surrogate Recoveries:

All Surrogate Percent Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria for the method were met, so no action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All sample results for isobutyl alcohol were rejected due to low RRF's in the Initial and Continuing Calibrations. The remaining laboratory data were acceptable with qualification.

SEMIVOLATLE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC Limit for the standards run on 6/24/94 for the following compounds:

aniline	37.0%
n-nitrosodimethylamine	61.8%
4-nitroaniline	45.3%

There were no positive detections of these compounds in the associated samples, so no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC Limit for the standards run on 9/7/94 for the following compounds:

methyl methacrylate	34.2%
4-nitroquinoline-1-oxide	39.6%
methyl methanesulfonate	35.3%
2-naphthyamine	39.3%
4-aminobiphenyl	32.4%
3,3'-dimethylbenzidine	52.4%
p-phenylenediamine	50.1%

There were no positive detections of these compounds in the associated samples, so no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC Limit for the standard run on 9/8/94 at 09:46 for the following compounds:

aniline	34.2%
4-nitroaniline	44.5%
n-nitrosodimethylamine	36.0%
4-chloroaniline	34.8%
3-nitroaniline	28.8%

All positive and non-detect results for these compounds in the associated samples were flagged as

estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC Limit for the standard run on 9/8/94 at 13:23 for the following compounds:

methyl methacrylate	29.7%
ethyl methacrylate	30.2%
2-picoline	27.9%
4-aminobiphenyl	38.8%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detection in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no positive detections in the equipment blank, so data qualification was not required.

Rinsate Water Blanks:

There were no positive detections in the rinsate water blank, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met, so no action was taken.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOCHLORINE PESTICIDES AND PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for kepone (primary column) and chlorobenzilate (secondary column) were 29.5% and 51.5%, respectively, for the standards run on 8/25/94, which exceeded the 20% QC Limit. There were no positive detections of these compounds in the associated samples. The %RSD for chlorobenzilate exceeded the 30% QC limit and the non-detect results for this compound in the associated samples were flagged as estimated (UJ).

Continuing Calibration:

The Percent Difference (%D) was 26.2% for kepone (secondary column) which exceeded the 25% QC Limit for the standard run on 9/9/94 at 12:04. All results for this compound, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections of any compound in method blanks, so no data qualification was

necessary.

Equipment Blanks:

There were no positive detections in the equipment blanks, so no action was required.

Rinsate Water Blanks:

There were no positive detections in the rinsate water blank, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was necessary

VI.) Laboratory Control Samples (LCS):

All LCS criteria for the method were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate:

The Relative Percent Difference (RPD) for 4,4'-DDT in spiked samples 013CB00601MS and 013CB00601MSD was 74%, which exceeded the 50% QC Limit. The positive result for this compound in associated sample 013CB00601DL was flagged as estimated (J).

The Percent Recovery of 4,4'-DDT was 168% in matrix spike sample 013CB00601MS, which exceeded the 25-160% QC Limits. This compound was previously qualified based on the high RPD.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All criteria for the method were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was taken.

XL) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was necessary.

Continuing Calibration:

The Percent Difference (%D) was 18.5% for dimethoate (secondary column) which exceeded the 15% QC Limit for the standard run on 8/25/94 at 13:37. All results for this compound, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections of any compound in method blank, so no data qualification was necessary.

Equipment Blanks:

There were no positive detections in the equipment blanks, so no action was required.

Rinsate Water Blanks:

There were no positive detections in the rinsate water blanks, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All LCS criteria for the method were met, so no action was required.

VII.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria were met, so no action was necessary.

VIII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times

All Holding Time criteria for the method were met, so no action was taken.

II.) Instrument Performance

All Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was required.

IV.) Blanks

Method Blank:

There were no positive detections in the method blanks, so no action was taken.

Equipment Blanks:

There were no positive detections in the equipment blanks, so no action was necessary.

Rinsate Water Blanks:

There were no positive detections in the rinsate blanks, so no action was required.

V.) Surrogate Recoveries

All Surrogate Recoveries criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Spikes (LCS):

All LCS criteria for the method were met, so no action was taken.

VII.) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All MS/MSD criteria for the method were met, so no action was required.

VIII.) TCL Compound Identification

All criteria for the method were met, no action was required.

IX.) Field Duplicate

There were no field duplicate associated with this SDG.

X.) Overall Assessment of Data/General

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with these samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
DB	barium	0.56 mg/L	0.56
PBS	chrominum	0.30 mg/kg	2.50
PBS	lead	6.90 mg/kg	34.5
PBS	tin	2.60 mg/kg	13.0
PBS	vanadium	0.40 mg/kg	2.00
PBS	zinc	1.40 mg/kg	7.00

PBS = Soil Preparation Blank, DB = Rinsate Water Blank

All results greater than the IDL but less than 5X the blank amount for which the contaminated blank is an associated laboratory preparation blank or field blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

All ICP Interference criteria for the method were met, so no action was required.

V.) ICP Serial Dilution Analysis:

All criteria for ICP Dilution was met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

The Percent Recoveries (%R's) of selenium were 78% and 79% in soil LCS-21677 and soil LCS-21672, respectively, which were below the 80-120% QC limits. All positive and non-detect results for selenium in associated soil samples were flagged as estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria were met, so no action was taken.

VIII.) Matrix Spike Recoveries:

All Percent Recovery criteria for the method were met, so no action was required.

IX.) Field Duplicates:

No field duplicates were associated with this SDG.

X.) Furnace Atomic Absorption QC:

Method of Standard Additions (MSA):

All MSA criteria for the method were met, so no action was required.

Post Digestion Spike Recoveries:

All Spike Recoveries were met, so no data qualification were taken.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

Sample 013CB01602 (41210-001) was mislabeled as 013TB00401. The number was corrected on the spreadsheet during the validation process. Units for field blanks 017EB00402 and 017DB00501 were mislabeled as mg/L, instead of ug/L. Proper corrections were made on the spreadsheet during the validation process.

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBON

I.) Holding Times

All Holding Times criteria for the method were met, so no action was taken.

II.) Calibration

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no positive detections in the equipment blanks, so no data qualification was required.

Rinsate Water Blanks:

TPH was detected in rinsate water blank 017DB00501 at 1.1 mg/L. Detections of TPH below 5X this amount were flagged as undetected (U) in the associated samples, with the detection limit being raised to the amount of contamination in each sample.

IV.) Laboratory Control Sample (LCS)

All LCS criteria were met for the method, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

No MS/MSD analyses were performed for this SDG. Instead three Laboratory Control Samples were analyzed with an average Percent Recovery (%R) of 108% and a %RSD of 5.3%. Data qualification was not required.

VI.) Field Duplicates

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's)

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General

All data were acceptable without qualification.

Sample 013CB01602 (41210-001) was mislabeled as 013TB00401. The number was corrected on the spreadsheet during the validation process.

HEXA VALENT CHROMIUM

I.) Holding Times

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks

Method Blanks:

All Method Blank criteria were met, so no action was taken.

IV.) Laboratory Control Sample (LCS)

All LCS criteria were met for the method, so no action was taken.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD)

All MS and MSD criteria for the method were met, so no action was necessary.

VI.) Field Duplicates

There were no field duplicates analyzed with this SDG, so no action was necessary.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's)

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General

Sample 013CB01602 (41210-001) was mislabeled as 013TB00401. Proper corrections were made on the spreadsheet during the validation process. All laboratory data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe Environmental Services, Inc.
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: Southwest Laboratories of Oklahoma
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement
SAMPLE MATRIX: Soil
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: NAVY CLEAN / ENSAFE

SAMPLES:

Client	Lab		PCDD/ PCDF
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	
013SB02401	21330.01	Soil	X
013SB02402	21330.02	Soil	X
017SB02601	21330.03	Soil	X
017SB02602	21330.04	Soil	X
653SB00501	21330.05	Soil	X
653SB00502	21330.06	Soil	X
019SB01401	21330.07	Soil	X
121SB01201	21330.08	Soil	X
121SB01201 RE	21330.08RE	Soil	X
013CB02401	21330.09	Soil	X
013CB02401 MS	21330.10	Soil	X
013CB02401 MSD	21330.11	Soil	X

D = DUPLICATE, MS = MATRIX SPIKE, MD = MATRIX SPIKE DUPLICATE,
RE = REANALYZED

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Southwest Laboratories of Oklahoma - 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 013SB02401, 013SB02402, 017SB02601, 017SB02602, 653SB00501,
653SB00502, 019SB01401, 121SB01201, 121SB01201 RE, 013CB02401,
013CB02401 MS, 013CB02401 MSD

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance:

All criteria were met, so no action was taken.

HRMS Resolution:

All criteria were met, so no action was taken.

Mass Verification:

All criteria were met, so no action was taken.

MS Data Acquisition:

All criteria were met, so no action was taken.

III.) Calibration:

Calibration Range:

All calibration and internal standard concentration levels were used per EPA Method 1613. Comparing to EPA Method 8290, the calibration ranges of two methods were about the same, so no action was taken.

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

All criteria were met, so no action was required.

IV.) Blanks

Method Blanks:

Three 2,3,7,8-substituted PCDD's and PCDF's were detected in method blanks at the following concentrations:

<u>Method Blank</u>	<u>Compound</u>	<u>Conc.</u> ng/Kg	<u>Action Level</u> ng/Kg
BL021701	OCDD	0.60	3.0
BL021702	123789HxCDF	0.32	1.6
BL022101	OCDD	4.73	23.7

Detections of these compounds in all associated samples below 5X the blank amount were flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

No equipment blank was analyzed.

Field Blanks:

No field blank was analyzed.

V.) Internal Standards Performance:

The Percent Recoveries (%R's) of 13C-2378TCDF and 13C-12378PeCDF for sample 121SB01201 RE were 37.9% and 39.4%, respectively, which were below the 40-135% QC limits. All sample results associated with these internal standards were flagged as estimated (J) and (UJ).

VI.) Spike/Spike Duplicates:

The RPD of OCDD for field sample spike/spike duplicate, 013CB02401MS/MSD, was 606%, which exceeded the 20% QC limit. Since the amount of OCDD spiked (2000 pg or 200 ng/Kg)

was 4X less than the OCDD detected in sample 013CB02401 (980 ng/Kg), no action was required.

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identifications:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

S/N Ratio:

All criteria were met, so no action was taken.

PCDPE (Polychlorinated Diphenyl Ether) Interferences:

All criteria were met, so no action was taken.

2nd Column Confirmation:

All criteria were met, so no action was taken.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualifications. Due to higher internal standard recoveries for the re-extracted sample 121SB01201 RE, the results of the re-extraction are considered to be of preferable data quality to the results of the original extract.

AATS/SWOK
PCDD/PCDF SPIKED SAMPLE SUMMARY

EPA SAMPLE NO.

Lab Name: SOUTHWEST LAB. OF OKLAHOMA Contract: _____
 Client: SWL Case No: _____ SAS No.: _____
 Matrix: solid (aqueous/solid/leachate) SDG No.: Navy/Ensafe.

CONCENTRATION UNITS: (pg/L or ng/Kg) ng/Kg

ANALYTE	SPIKE ADDED (PG)	SPIKED SAMPLE CONCENT.	SAMPLE CONCENTRAT.	% REC #	QC LIMITS
2378-TCDD	200	40.240	23.793	73.6	50-150
12378-PeCDD	1000	107.492	0.000	96.2	50-150
123478-HxCDD	1000	101.914	1.277	90.1	50-150
123678-HxCDD	1000	103.933	2.281	91.0	50-150
123789-HxCDD	1000	102.029	2.037	89.5	50-150
1234678-HpCDD	1000	161.388	86.375	67.1	50-150
OCDD	2000	869.888	980.811	-49.6	50-150
2378-TCDF	200	20.342	0.000	91.0	50-150
12378-PeCDF	1000	108.778	0.000	97.4	50-150
23478-PeCDF	1000	104.877	0.000	93.9	50-150
123478-HxCDF	1000	107.704	0.000	96.4	50-150
123678-HxCDF	1000	98.393	0.000	88.1	50-150
123789-HxCDF	1000	93.973	0.000	84.1	50-150
234678-HxCDF	1000	101.660	0.000	91.0	50-150
1234678-HpCDF	1000	115.541	4.396	99.5	50-150
1234789-HpCDF	1000	111.229	0.000	99.5	50-150
OCDF	2000	175.253	5.043	76.2	50-150

AATS/SWOK
PCDD/PCDF DUPLICATE SAMPLE SUMMARY

EPA SAMPLE NO.

Lab Name:	SOUTHWEST LAB. OF OKLAHOMA	Contract:	NBCH013CB02401MD
Lab Code:	SWL Case No: 21557	SAS No.:	#
Matrix:	solid (Soil/Water/Waste/Ash)		SDG No.: Navy/Ensafe.

CONCENTRATION UNITS:(pg/L or ng/Kg)

ng/Kg

ANALYTE	MS SAMPLE CONCENT.	MAD SAMPL CONCENT.	MSD SAMPLE % REC	RPD #	QC LIMITS
2378-TCDD	40.240	38.263	64.8	12.79	50
12378-PeCDD	107.492	101.588	90.9	5.65	50
123478-HxCDD	101.914	99.652	88.0	2.27	50
123678-HxCDD	103.933	105.693	92.6	1.72	50
123789-HxCDD	102.029	99.113	86.9	2.96	50
1234678-HpCDD	161.388	172.617	77.2	13.93	50
OCDD	869.888	1036.718	25.0	606.48 *	50
2378-TCDF	20.342	19.219	86.0	5.68	50
12378-PeCDF	108.778	109.392	97.9	0.56	50
23478-PeCDF	104.877	102.476	91.7	2.32	50
123478-HxCDF	107.704	99.861	89.4	7.56	50
123678-HxCDF	98.393	97.557	87.3	0.85	50
123789-HxCDF	93.973	88.289	79.0	6.24	50
234678-HxCDF	101.660	96.298	86.2	5.42	50
1234678-HpCDF	115.541	108.485	93.2	6.56	50
1234789-HpCDF	111.229	99.826	89.3	10.81	50
OCDF	175.253	166.198	72.1	5.47	50

If an analyte is not detected in either analysis, enter 0 (zero) as the concentration.

Column to be used to flag values outside QC limits.

QC limits are advisory.

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

NBCH013CB02401

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.09

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95

Initial Calibration Date: 12-19-94

Ext. Date: 02-17-95

Instrument ID: 705

Analysis Date: 20-FEB-95 Time: 13:21:57

GC Column ID: DB-5

Extract Volume (uL): 20.0

Sample Data Filename: S101251#3

Injection Volume (uL): 1.00

Blank Data Filename: S101250#1

Dilution Factor: 1

Cal. Ver. Data Filename: S101249#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

* Solids: 89.50

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	23.793	0.902	-	0.79	1.000
1,2,3,7,8-PeCDD	*	1.544	*	*	*
1,2,3,4,7,8-HxCDD	-	1.420	1.277	0.85	0.998
1,2,3,6,7,8-HxCDD	-	1.368	2.281	0.80	1.000
1,2,3,7,8,9-HxCDD	-	1.250	2.037	1.51	1.009
1,2,3,4,6,7,8-HpCDD	86.375	1.007	-	1.03	1.000
OCDD	980.811	1.039	-	0.88	1.000
2,3,7,8-TCDF	*	0.671	*	*	*
1,2,3,7,8-PeCDF	*	0.779	*	*	*
2,3,4,7,8-PeCDF	*	0.779	*	*	*
1,2,3,4,7,8-HxCDF	*	1.106	*	*	*
1,2,3,6,7,8-HxCDF	*	1.029	*	*	*
1,2,3,7,8,9-HxCDF	*	1.174	*	*	*
2,3,4,6,7,8-HxCDF	*	1.124	*	*	*
1,2,3,4,6,7,8-HpCDF	-	0.708	4.396	1.31	1.000
1,2,3,4,7,8,9-HpCDF	*	0.766	*	*	*
OCDF	5.043	1.021	-	0.82	1.003
Total Tetra-Dioxins	23.793	0.902			
Total Penta-Dioxins	*	1.544			
Total Hexa-Dioxins	39.779	1.342			
Total Hepta-Dioxins	215.837	1.007			
Total Tetra-Furans	*	0.671			
Total Penta-Furans	2.893	0.779			
Total Hexa-Furans	3.423	1.106			
Total Hepta-Furans	*	0.000			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290

82901

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.

NBCH121SB01201 RE

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.08RE

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95 Initial Calibration Date: 12-19-94

Ext. Date: 02-21-95 Instrument ID: 70S

Analysis Date: 22-FEB-95 Time: 13:45:02 GC Column ID: DB-5

Extract Volume (uL): 20.0 Sample Data Filename: S101266#2

Injection Volume (uL): 1.00 Blank Data Filename: S101266#1

Dilution Factor: 1 Cal. Ver. Data Filename: S101265#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg * Solids: 79.95

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	*	2.715	*	*	*
1,2,3,7,8-PeCDD	*	3.562	*	*	*
1,2,3,4,7,8-HxCDD	*	2.096	*	*	*
1,2,3,6,7,8-HxCDD	*	2.019	*	*	*
1,2,3,7,8,9-HxCDD	*	1.846	*	*	*
1,2,3,4,6,7,8-HpCDD	37.173	2.572	-	0.98	1.000
OCDD	274.995	2.160	-	0.93	1.000
2,3,7,8-TCDF	14.565 J	3.386	-	0.68	1.002
1,2,3,7,8-PeCDF	3.457 J	1.681	-	1.57	1.001
2,3,4,7,8-PeCDF	5.399 J	1.680	-	1.49	1.029
1,2,3,4,7,8-HxCDF	25.890	2.346	-	1.21	0.999
1,2,3,6,7,8-HxCDF	7.954	2.181	-	1.13	1.004
1,2,3,7,8,9-HxCDF	*	2.490	*	*	*
2,3,4,6,7,8-HxCDF	8.644	2.383	-	1.16	1.019
1,2,3,4,6,7,8-HpCDF	38.191	1.781	-	1.05	1.000
1,2,3,4,7,8,9-HpCDF	*	1.928	*	*	*
OCDF	-	2.110	12.978	0.73	1.003
Total Tetra-Dioxins	*	2.715			
Total Penta-Dioxins	*	3.562			
Total Hexa-Dioxins	8.948	1.981			
Total Hepta-Dioxins	90.850	2.572			
Total Tetra-Furans	45.883	3.386			
Total Penta-Furans	64.134	1.680			
Total Hexa-Furans	81.513	2.345			
Total Hepta-Furans	55.490	1.928			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290 8290F1S. L. J.
3-28-95

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.

NBCH121SB01201

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.08

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95 Initial Calibration Date: 12-19-94

Ext. Date: 02-17-95 Instrument ID: 70S

Analysis Date: 20-FEB-95 Time: 14:11:27 GC Column ID: DB-5

Extract Volume (uL): 20.0 Sample Data Filename: S101252#1

Injection Volume (uL): 1.00 Blank Data Filename: S101250#1

Dilution Factor: 1 Cal. Ver. Data Filename: S1001249#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Solids: 79.95

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	*	J 4.637	*	*	*
1,2,3,7,8-PeCDD	*	5.349	*	*	*
1,2,3,4,7,8-HxCDD	*	2.940	*	*	*
1,2,3,6,7,8-HxCDD	*	2.833	*	*	*
1,2,3,7,8,9-HxCDD	*	2.589	*	*	*
1,2,3,4,6,7,8-HpCDD	90.425	3.659	-	1.02	1.000
OCDD	712.298	4.110	-	0.89	1.000
2,3,7,8-TCDF	-	3.413	27.781	0.61	1.001
1,2,3,7,8-PeCDF	10.133	2.685	-	1.45	1.000
2,3,4,7,8-PeCDF	16.360	2.684	-	1.41	1.029
1,2,3,4,7,8-HxCDF	52.916	3.496	-	1.34	0.999
1,2,3,6,7,8-HxCDF	15.728	3.250	-	1.28	1.003
1,2,3,7,8,9-HxCDF	*	3.710	*	*	*
2,3,4,6,7,8-HxCDF	20.761	3.551	-	1.27	1.019
1,2,3,4,6,7,8-HpCDF	94.223	3.795	-	0.98	1.000
1,2,3,4,7,8,9-HpCDF	*	4.109	*	*	*
OCDF	36.251	4.431	-	0.78	1.004
Total Tetra-Dioxins	*	4.637			
Total Penta-Dioxins	*	0.000			
Total Hexa-Dioxins	22.898	2.779			
Total Hepta-Dioxins	220.281	3.659			
Total Tetra-Furans	121.246	3.413			
Total Penta-Furans	170.286	2.685			
Total Hexa-Furans	166.016	3.494			
Total Hepta-Furans	94.223	4.109			

(1) Reference Attributions for RRTs and ion abundance ratios are specified in Tables 11 and 8, respectively, Method 8290 8290F?

S.L.
3-28-95

162

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

NBCH019SB01401

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.07

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95 Initial Calibration Date: 12-19-94

Ext. Date: 02-17-95 Instrument ID: 70S

Analysis Date: 20-FEB-95 Time: 14:59:18 GC Column ID: DB-5

Extract Volume (uL): 20.0 Sample Data Filename: S101252#2

Injection Volume (uL): 1.00 Blank Data Filename: S101250#1

Dilution Factor: 1 Cal. Ver. Data Filename: S101249#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg. ‡ Solids: 89.05

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	8.154	0.683	-	0.76	1.000
1,2,3,7,8-PeCDD	-	1.235	32.629	1.88	1.000
1,2,3,4,7,8-HxCDD	*	0.630	*	*	*
1,2,3,6,7,8-HxCDD	33.193	0.607	-	1.21	1.000
1,2,3,7,8,9-HxCDD	2.208	0.555	-	1.16	1.009
1,2,3,4,6,7,8-HpCDD	152.802	1.236	-	1.08	1.000
OCDD	868.205	1.345	-	0.89	1.000
2,3,7,8-TCDF	8.643	0.611	-	0.76	1.002
1,2,3,7,8-PeCDF	27.440	0.537	-	1.60	1.001
2,3,4,7,8-PeCDF	-	0.537	1.261	1.94	1.029
1,2,3,4,7,8-HxCDF	-	0.931	26.334	1.25	0.999
1,2,3,6,7,8-HxCDF	42.456	0.866	-	1.24	1.003
1,2,3,7,8,9-HxCDF	*	0.988	*	*	*
2,3,4,6,7,8-HxCDF	6.412	0.946	-	1.32	1.019
1,2,3,4,6,7,8-HpCDF	361.028	0.783	-	1.03	1.000
1,2,3,4,7,8,9-HpCDF	6.130	0.847	-	1.05	1.037
OCDF	1082.536	1.022	-	0.88	1.003
Total Tetra-Dioxins	8.154	0.683			
Total Penta-Dioxins	*	0.000			
Total Hexa-Dioxins	65.273	0.595			
Total Hepta-Dioxins	309.890	1.236			
Total Tetra-Furans	11.595	0.611			
Total Penta-Furans	39.521	0.537			
Total Hexa-Furans	98.210	0.930			
Total Hepta-Furans	467.703	0.847			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290

8290F1

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.

NBCH653SB00502

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.06

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95 Initial Calibration Date: 12-19-94

Ext. Date: 02-17-95 Instrument ID: 70S

Analysis Date: 20-FEB-95 Time: 15:47:07 GC Column ID: DB-5

Extract Volume (uL): 20.0 Sample Data Filename: S101252#3

Injection Volume (uL): 1.00 Blank Data Filename: S101250#1

Dilution Factor: 1 Cal. Ver. Data Filename: S101249#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Solids: 69.99

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	*	1.038	*	*	*
1,2,3,7,8-PeCDD	4.249	1.187	-	1.44	1.000
1,2,3,4,7,8-HxCDD	*	1.257	*	*	*
1,2,3,6,7,8-HxCDD	3.018	1.211	-	1.38	1.000
1,2,3,7,8,9-HxCDD	*	1.107	*	*	*
1,2,3,4,6,7,8-HpCDD	10.297	1.457	-	0.94	1.000
OCDD	130.763	1.562	-	0.91	1.001
2,3,7,8-TCDF	*	1.071	*	*	*
1,2,3,7,8-PeCDF	-	0.743	2.355	1.84	1.001
2,3,4,7,8-PeCDF	*	0.742	*	*	*
1,2,3,4,7,8-HxCDF	*	0.539	*	*	*
1,2,3,6,7,8-HxCDF	2.607	0.501	-	1.21	1.003
1,2,3,7,8,9-HxCDF	*	0.572	*	*	*
2,3,4,6,7,8-HxCDF	*	0.548	*	*	*
1,2,3,4,6,7,8-HpCDF	-	0.619	2.089	1.32	1.000
1,2,3,4,7,8,9-HpCDF	*	0.670	*	*	*
OCDF	*	1.090	*	*	*
Total Tetra-Dioxins	*	1.038			
Total Penta-Dioxins	4.249	1.187			
Total Hexa-Dioxins	27.848	1.188			
Total Hepta-Dioxins	37.577	1.457			
Total Tetra-Furans	*	1.071			
Total Penta-Furans	*	0.743			
Total Hexa-Furans	2.607	0.539			
Total Hepta-Furans	*	0.670			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290 8290F1

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.

NBCH653SB00501

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.05

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95 Initial Calibration Date: 09-15-94

Ext. Date: 02-17-95 Instrument ID: AutoSpec

Analysis Date: 20-FEB-95 Time: 15:32:33 GC Column ID: DB-5

Extract Volume (uL): 20.0 Sample Data Filename: A100689#2

Injection Volume (uL): 1.00 Blank Data Filename: A100687#1

Dilution Factor: 1 Cal. Ver. Data Filename: A100686#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Solids: 82.53

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	*	0.799	*	*	*
1,2,3,7,8-PeCDD	*	0.982	*	*	*
1,2,3,4,7,8-HxCDD	*	0.519	*	*	*
1,2,3,6,7,8-HxCDD	1.105	0.324	-	1.18	1.000
1,2,3,7,8,9-HxCDD	1.304	0.326	-	1.06	1.010
1,2,3,4,6,7,8-HpCDD	19.354	0.404	-	1.05	1.000
OCDD	253.931	1.874	-	0.88	1.000
2,3,7,8-TCDF	2.300	0.498	-	0.75	1.002
1,2,3,7,8-PeCDF	-	0.615	1.043	3.80	1.001
2,3,4,7,8-PeCDF	-	0.583	1.337	1.81	1.046
1,2,3,4,7,8-HxCDF	8.756	0.947	-	1.21	1.000
1,2,3,6,7,8-HxCDF	-	0.602	4.614	1.28	1.004
1,2,3,7,8,9-HxCDF	*	0.815	*	*	*
2,3,4,6,7,8-HxCDF	1.297	0.804	-	0.65	1.024
1,2,3,4,6,7,8-HpCDF	44.058	0.838	-	1.07	1.000
1,2,3,4,7,8,9-HpCDF	-	1.006	0.688	1.33	1.036
OCDF	-	1.291	17.848	0.58	1.003
Total Tetra-Dioxins	2.125	0.799			
Total Penta-Dioxins	*	0.000			
Total Hexa-Dioxins	30.155	0.371			
Total Hepta-Dioxins	51.686	0.404			
Total Tetra-Furans	27.419	0.498			
Total Penta-Furans	48.870	0.599			
Total Hexa-Furans	36.922	0.771			
Total Hepta-Furans	55.204	0.914			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290

8290F1

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

NBCH017SB02602

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330
 Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.04
 Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g
 Sample Receipt Date: 02-17-95 Initial Calibration Date: 09-15-94
 Ext. Date: 02-17-95 Instrument ID: AutoSpec
 Analysis Date: 20-FEB-95 Time: 14:44:28 GC Column ID: DB-5
 Extract Volume (uL): 20.0 Sample Data Filename: A100689#1
 Injection Volume (uL): 1.00 Blank Data Filename: A100687#1
 Dilution Factor: 1 Cal. Ver. Data Filename: A100686#1
 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Solids: 82.98

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	*	1.087	*	*	*
1,2,3,7,8-PeCDD	*	2.447	*	*	*
1,2,3,4,7,8-HxCDD	*	2.522	*	*	*
1,2,3,6,7,8-HxCDD	*	1.572	*	*	*
1,2,3,7,8,9-HxCDD	*	1.584	*	*	*
1,2,3,4,6,7,8-HpCDD	6.623	0.493	-	1.00	1.000
OCDD	178.858	0.342	-	0.89	1.000
2,3,7,8-TCDF	*	0.423	*	*	*
1,2,3,7,8-PeCDF	*	0.318	*	*	*
2,3,4,7,8-PeCDF	1.574	0.301	-	1.55	1.045
1,2,3,4,7,8-HxCDF	-	0.380	4.140	1.23	1.000
1,2,3,6,7,8-HxCDF	0.638	0.241	-	1.29	1.004
1,2,3,7,8,9-HxCDF	*	0.327	*	*	*
2,3,4,6,7,8-HxCDF	0.836	0.323	-	1.26	1.023
1,2,3,4,6,7,8-HpCDF	4.165	0.244	-	1.11	1.000
1,2,3,4,7,8,9-HpCDF	2.094	0.293	-	1.01	1.037
OCDF	16.346	0.551	-	0.95	1.002
Total Tetra-Dioxins	*	1.087			
Total Penta-Dioxins	*	2.447			
Total Hexa-Dioxins	*	1.803			
Total Hepta-Dioxins	21.037	0.493			
Total Tetra-Furans	*	0.000			
Total Penta-Furans	1.574	0.309			
Total Hexa-Furans	3.116	0.309			
Total Hepta-Furans	14.190	0.266			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
 in Tables 11 and 8, respectively, Method 8290

8290F1

Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.

NBCH017SB02601

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330
 Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.03
 Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g
 Sample Receipt Date: 02-17-95 Initial Calibration Date: 09-15-94
 Ext. Date: 02-17-95 Instrument ID: AutoSpec
 Analysis Date: 20-FEB-95 Time: 13:52:46 GC Column ID: DB-5
 Extract Volume (uL): 20.0 Sample Data Filename: A100688#3
 Injection Volume (uL): 1.00 Blank Data Filename: A100687#1
 Dilution Factor: 1 Cal. Ver. Data Filename: A100686#1
 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Solids: 83.45

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	-	0.407	0.808	0.06	1.001
1,2,3,7,8-PeCDD	-	0.735	1.935	2.34	1.001
1,2,3,4,7,8-HxCDD	*	0.591	*	*	*
1,2,3,6,7,8-HxCDD	2.899	0.369	-	1.26	1.001
1,2,3,7,8,9-HxCDD	-	0.371	0.327	1.65	1.010
1,2,3,4,6,7,8-HpCDD	12.873	0.879	-	1.04	1.000
OCDD	405.735	0.614	-	0.89	1.000
2,3,7,8-TCDF	*	0.486	*	*	*
1,2,3,7,8-PeCDF	1.816	0.332	-	1.57	1.001
2,3,4,7,8-PeCDF	*	0.315	*	*	*
1,2,3,4,7,8-HxCDF	0.594	0.232	-	1.23	0.999
1,2,3,6,7,8-HxCDF	-	0.147	2.169	1.32	1.004
1,2,3,7,8,9-HxCDF	0.390	0.199	-	1.14	1.048
2,3,4,6,7,8-HxCDF	*	0.197	*	*	*
1,2,3,4,6,7,8-HpCDF	4.546	0.337	-	1.02	1.000
1,2,3,4,7,8,9-HpCDF	*	0.405	*	*	*
OCDF	6.778	0.531	-	0.83	1.002
Total Tetra-Dioxins	*	0.407			
Total Penta-Dioxins	*	0.735			
Total Hexa-Dioxins	2.899	0.423			
Total Hepta-Dioxins	34.201	0.879			
Total Tetra-Furans	*	0.000			
Total Penta-Furans	1.816	0.323			
Total Hexa-Furans	1.619	0.189			
Total Hepta-Furans	6.666	0.368			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290 8290F1

S.L.A.
3-28-95

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Form 1

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

CLIENT ID.

NBCH013SB02402

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuchem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.02

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95

Initial Calibration Date: 09-15-94

Ext. Date: 02-17-95

Instrument ID: AutoSpec

Analysis Date: 20-FEB-95 Time: 13:04:40

GC Column ID: DB-5

Extract Volume (uL): 20.0

Sample Data Filename: A100688#2

Injection Volume (uL): 1.00

Blank Data Filename: A100687#1

Dilution Factor: 1

Cal. Ver. Data Filename: A100686#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Solids: 79.78

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	*	0.596	*	*	*
1,2,3,7,8-PeCDD	*	0.594	*	*	*
1,2,3,4,7,8-HxCDD	*	0.300	*	*	*
1,2,3,6,7,8-HxCDD	*	0.187	*	*	*
1,2,3,7,8,9-HxCDD	*	0.188	*	*	*
1,2,3,4,6,7,8-HpCDD	2.438	0.296	-	0.98	1.000
OCDD	36.711	0.186	-	0.90	1.000
2,3,7,8-TCDF	*	0.418	*	*	*
1,2,3,7,8-PeCDF	*	0.212	*	*	*
2,3,4,7,9-PeCDF	*	0.200	*	*	*
1,2,3,4,7,8-HxCDF	*	0.182	*	*	*
1,2,3,6,7,8-HxCDF	*	0.116	*	*	*
1,2,3,7,8,9-HxCDF	0.597	0.157	-	1.30	1.048
2,3,4,6,7,8-HxCDF	*	0.155	*	*	*
1,2,3,4,6,7,8-HpCDF	-	0.159	0.171	4.12	1.000
1,2,3,4,7,8,9-HpCDF	*	0.191	*	*	*
OCDF	*	0.275	*	*	*
Total Tetra-Dioxins	*	0.596			
Total Penta-Dioxins	*	0.594			
Total Hexa-Dioxins	4.767	0.214			
Total Hepta-Dioxins	8.816	0.296			
Total Tetra-Furans	*	0.000			
Total Penta-Furans	*	0.206			
Total Hexa-Furans	0.597	0.148			
Total Hepta-Furans	*	0.174			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290

8290F:

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

NBCH013SB02401

Lab Name: Southwest Lab. of Oklahoma Episode No.: 21330

Client Name: Compuehem SDG NO.: Navy/Ensaf Lab Sample ID: 21330.01

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.0 g or mL: g

Sample Receipt Date: 02-17-95 Initial Calibration Date: 09-15-94

Ext. Date: 02-17-95 Instrument ID: AutoSpec

Analysis Date: 20-FEB-95 Time: 12:16:34 GC Column ID: DB-5

Extract Volume (uL): 20.0 Sample Data Filename: A100688#1

Injection Volume (uL): 1.00 Blank Data Filename: A100687#1

Dilution Factor: 1 Cal. Ver. Data Filename: A100686#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Solids: 88.77

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDD	36.949	0.867	-	0.75	1.001
1,2,3,7,8-PeCDD	*	0.920	*	*	*
1,2,3,4,7,8-HxCDD	1.745	0.652	-	1.25	0.997
1,2,3,6,7,8-HxCDD	3.158	0.406	-	1.36	1.000
1,2,3,7,8,9-HxCDD	3.185	0.409	-	1.40	1.010
1,2,3,4,6,7,8-HpCDD	91.391	0.375	-	1.01	1.000
OCDD	977.813	0.248	-	0.87	1.000
2,3,7,8-TCDF	*	0.475	*	*	*
1,2,3,7,8-PeCDF	*	0.433	*	*	*
2,3,4,7,8-PeCDF	*	0.410	*	*	*
1,2,3,4,7,8-HxCDF	*	0.299	*	*	*
1,2,3,6,7,8-HxCDF	-	0.190	0.831	1.24	1.004
1,2,3,7,8,9-HxCDF	*	0.258	*	*	*
2,3,4,6,7,8-HxCDF	*	0.254	*	*	*
1,2,3,4,6,7,8-HpCDF	4.898	0.440	-	1.14	1.000
1,2,3,4,7,8,9-HpCDF	*	0.528	*	*	*
OCDF	5.995	0.265	-	0.87	1.002
Total Tetra-Dioxins	38.635	0.867			
Total Penta-Dioxins	*	0.920			
Total Hexa-Dioxins	57.909	0.466			
Total Hepta-Dioxins	217.348	0.375			
Total Tetra-Furans	*	0.000			
Total Penta-Furans	5.383	0.421			
Total Hexa-Furans	5.273	0.244			
Total Hepta-Furans	10.464	0.480			

(1) Reference Attributions for RRTs and ion abundance ratios are specified
in Tables 11 and 8, respectively, Method 8290 8290r1

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT (DRAFT)

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE Inc.
EPA SOW/METHOD: EPA 8290
VALIDATION GUIDELINES: EPA 8290, Professional Judgement, Laboratory Statements
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: 2,3,7,8-substituted PCDD's and PCDF's

SDG NO: APX01

SAMPLES:

Client Sample #:	Lab Sample #:	Matrix	PCDD/ PCDF
656CB00201	IK1049-1	Soil	X
013CB00601	IK1049-2	Soil	X
013CB01202	IK1049-3	Soil	X
656CB00901	IK1049-4	Soil	X
013CB01602	IK1049-5	Soil	X
013CB02101	IK1049-6	Soil	X
662CB00201	IK1049-7	Soil	X
017CB00402	IK1049-8	Soil	X
013CB02201	IK1049-9	Soil	X
	LCS-SO-IK1049	Soil	X
	LCSD-SO-IK1049	Soil	X
017EB00402	IK1049-10	Water	X
	LCS-AQ-IK1049	Water	X
	LCSD-AQ-IK1049	Water	X
017DB00501	IK1054-01	Water	X
	LCS-AQ-IK1054	Water	X
	LCSD-AQ-IK1054	Water	X

E = EQUIPMENT BLANK, D = D.I. WATER SYSTEM BLANK

DATA REVIEWER(S): Linda H. Liu, Shawn S. Lin, Ph.D., Kevin C. Harmon

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE Inc. - APX01 2,3,7,8-substituted PCDD's and PCDF's

SAMPLES: 656CB00201, 013CB00601, 013CB01202, 656CB00901, 013CB01602, 013CB02101, 662CB00201, 017CB00402, 013CB02201, 017EB00402, 017DB00501, MB-SO-IK1049, LCS-SO-IK1049, LCSD-SO-IK1049, MB-AQ-IK1049, LCS-AQ-IK1049, LCSD-AQ-IK1049, MB-AQ-IK1054, LCS-AQ-IK1054, LCSD-AQ-IK1054

2,3,7,8-SUBSTITUTED PCDD'S AND PCDF'S

I.) Holding Times:

All criteria were met, so no action was taken.

II.) HRGC/HRMS System Performance:

GC Column Performance Check:

According to EPA method 8290, a column performance check must be run before the beginning routine calibration run.

The laboratory ran a column performance check after the beginning routine calibration run, which invalidated the beginning routine calibration results. Since the effects of this sequence deviation cannot be verified, all associated positive sample results are recommended to be flagged as estimated (J).

Mass Resolution Check:

According to EPA method 8290, a Mass Resolution Check must be performed immediately at the end of each analytical sequence and within a 12-hour time limit. Section 8.3.2.4 of the method also states that deviation from the method criteria specified for Mass Resolution Checks invalidates all positive sample results in the analytical sequence and all effected samples must be reanalyzed.

The following end of sequence Mass Resolution Checks were run outside the 12-hour QC limit:

<u>I.D.</u>	<u>Date and Time</u>	<u>Total Time</u>
End Mass Res. Check	9/14/94 07:07	19:47
End Mass Res. Check	9/16/94 06:44	13:53

Since the laboratory did not reanalyze the effected samples, all associated positive sample results are recommended to be flagged as estimated (J).

There were time "gaps" (more than two hours) between the End of the Calibration and the End of the Mass Resolution Check runs. The laboratory certified that there were no instrument adjustments or Resolution Check runs in the time "gaps", so no action was taken (see Section X).

Mass Verification Check:

Mass Verification was checked at the beginning of each analytical sequence. All criteria were met, so no action was taken.

Data Acquisition:

There were no Signal-to-Noise Ratios calculated. See Section VIII for data validation action.

III.) Calibration:

Calibration Range:

All criteria were met, so no action was taken.

Initial Calibration:

All criteria were met, so no action was required.

Calibration Verifications:

According to EPA method 8290, a new initial calibration is required immediately (within 2 hours) if the end-of-shift (End CS3) calibration exceeds the QC limits. Failure to perform a new initial calibration will automatically require reanalysis of all positive sample extracts.

The laboratory did not perform a new initial calibration and did not reanalyze all positive sample extracts after the end-of-shift calibration failed.

The Percent Differences (%D's) for End CS3 calibration standard run on 9/13/94 at 08:14 on instrument VG Autospec #2 exceeded the QC limits for the following compounds:

<u>Compound</u>	<u>%D</u>	<u>QC limit</u>
123478-HxCDD	-29	25
123789-HxCDF	-38	25
1234789-HpCDF	-38	25

All positive results for these compounds in the associated samples (IK1049-1, IK1049-2, IK1049-3, IK1049-4, IK1049-5, IK1049-6 and IK1049-7) are recommended to be flagged as estimated (J).

The Percent Differences (%D's) for End CS3 calibration standard run on 9/13/94 at 23:36 on instrument VG Autospec #2 exceeded the QC limits for the following compounds:

<u>Compound</u>	<u>%D</u>	<u>QC limit</u>
13C-1234678-HpCDD	103	35
13C-OCDD	97	35
13C-123478-HxCDF	111	35
13C-1234678-HpCDF	98	35
123478-HxCDD	98	25

<u>Compound</u>	<u>%d</u>	<u>QC limit</u>
123678-HxCDD	95	25
123789-HxCDD	126	25
2378-TCDF	-54	25
12378-PeCDF	-50	25
23478-PeCDF	-48	25
1234678-HpCDF	-28	25

All positive results for these compounds in the associated samples (IK1054-1, IK1049-8, IK1049-9 and IK1049-10) are recommended to be flagged as estimated (J).

IV.) Blanks:

According to EPA method 8290, a method blank must be analyzed immediately after a beginning calibration run to demonstrate freedom from contamination and freedom from carryover from the calibration run. Also according to EPA method 8000, the performance of the entire analytical system must be checked daily, using data gathered from analyses of blanks, standards, and replicated samples.

The laboratory ran a method blank after the beginning calibration run, a column performance check and a nonane blank. The addition of the nonane blank invalidated use of the method blanks in determining instrument carryover levels.

The laboratory did not submit nonane blank quantitation results, therefore, no blank results could be used to assess instrument carryover levels.

All associated low level (see Section IX) positive sample results are recommended to be flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample. Blank contaminants below the PQL should be raised to the PQL.

The raw data for method blank MB-AQ-IK1054 run on 9/13/94 was dated 9/15/94. The laboratory certified the reasons for the replacement of the 9/13/95 data by the 9/15/95 data (see Section X). The effects of the replacement were not clear, so no action was taken.

The following blank results were used to validate the high level (see Section IX) positive sample results:

Method Blanks:

A 2,3,7,8-substituted PCDD was detected in method blanks at the following concentrations:

<u>Method Blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Action Level</u>
		<u>pg/L</u>	<u>pg/L</u>
MB-AQ-IK1049	OCDD	55.1	550
MB-AQ-IK1054	OCDD	55.0	550

Because nonane blanks were run immediately before method blanks in the analytical sequence, it is believed that the method blank detections are biased low. For this reason, a 10X blank rule was used to qualify the data.

Detections of the above compound in all associated samples below 10X the blank amounts are recommended to be flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample. Blank contaminants below the PQL should be raised to the PQL.

Equipment Blanks:

No equipment blank was analyzed.

Field Blanks:

No field blank was analyzed.

V.) Internal Standards Performance:

The Percent Recovery (%R) of 13C-OCDD for sample IK1054-1 was 34.3%, which was below the 40-135% QC limits. All results associated with this IS (OCDD and OCDF) for sample IK1054-1 were recommended to be flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of 13C-OCDD for sample LCD-AQ-IK1054 was 36.2%, which was below the 40-135% QC limits. Since this was a QC sample, no data qualification action was taken.

VI.) Spike/Spike Duplicates:

No matrix spike/spike duplicates were analyzed for this batch.

Three sets of method blank spike/spike duplicates were analyzed. The Percent Recoveries (%R's) and Relative Percent Differences (RPD's) exceeded the QC limits for the following compounds:

	<u>Compound</u>	<u>MS</u> <u>%R</u>	<u>MSD</u> <u>%R</u>	<u>QC Limits</u> <u>%R</u>	<u>RPD</u>	<u>QC Limit</u> <u>RPD</u>
LCS-SO-IK1049 /						
LCSD-SO-IK1049	2378-TCDF	*50	112	60-140	*112	20
	12378-PeCDF	*35	78	60-140		20
	23478-PeCDF	*55	117	60-140		20

* = outside the QC limits.

All results for these compounds in the associated samples (IK1049-1, IK1049-2, IK1049-3, IK1049-4, IK1049-5, IK1049-6, IK1049-7, IK1049-8 and IK1049-9) are recommended to be flagged as estimated (J) and (UJ).

VII.) Duplicates:

No field duplicates were analyzed.

VIII.) PCDD/PCDF Identification:

Retention Times:

All criteria were met, so no action was taken.

Ion Abundance:

All criteria were met, so no action was taken.

Signal-to-Noise (S/N) Ratio:

There was no evidence in the raw data that the S/N was checked by the laboratory for all reported positive sample results. The S/N ratios were not printed on the quantitation reports. However, the laboratory certified that all reported positive sample results met method S/N criteria (greater than or equal to 2.5), so no action was taken (see Section X).

Polychlorinated Diphenyl Ether (PCDPE) Interferences:

There was no evidence in the raw data that PCDPE interferences were checked by the lab. The S/N ratios were not printed on the quantitation report. However, the laboratory certified that there were no signals detected having a S/N ratio greater than or equal to 2.5 at same retention time (+/- 2 seconds), in the corresponding PCDPE channel for all reported positive sample results, so no action was taken (see Section X).

Second Column Confirmation:

Second column confirmation was not run for all reported positive 2378-TCDF results. Since the laboratory cannot resolve the 2378-TCDF isomer from the 2347-TCDF isomer, all reported positive 2378-TCDF sample results are recommended to be rejected (R).

IX.) Overall Assessment of Data/General:

The laboratory did not follow the 12-hour analysis sequence and quality control (QC) procedures specified in EPA Method 8290 (Reversion 0, November 1990).

All reported positive 2378-TCDF sample results are recommended to be rejected (R).

Some reported positive and non-detected sample results are recommended to be flagged according to their QC problems.

For purposes of blank assessment, all other unflagged positive sample results are divided into low and high levels based on professional judgement as follows:

<u>Level</u>	<u>Matrix</u>	<u>TCDD</u>	<u>PeCDD/PeCDF</u> <u>HxCDD/HxCDF</u> <u>HpCDD/HpCDF</u>	<u>OCDD/OCDF</u>
Low	Soil	< 10 pg/g	< 25 pg/g	< 50 pg/g
Low	Water	< 100 pg/L	< 250 pg/L	< 500 pg/L
High	Soil	> 10 pg/g	> 25 pg/g	> 50 pg/g
High	Water	> 100 pg/L	> 250 pg/L	> 500 pg/L

All unflagged low-level sample results are recommended to be flagged as undetected (U), with the detection limit being raised to the level of contamination in each sample. Blank contaminants below the PQL should be raised to the PQL.

All unflagged high-level sample results are recommended to be flagged as estimated (J).

X.) Laboratory Certifications Concerning Data Validation Deliverables:

In the validation of the PCDD/PCDF data, several important informational items were not verifiable from the data packages. Pace, Inc. provided the following certifications concerning the procedures used in the laboratory and in data reporting which address these issues.

The following certifications were made by Pace, Inc.:

- 1.) Nonane blanks were run before method blanks in the analytical sequence to document instrument condition and integrity.
- 2.) Nonane blank quantitation reports were not generated because of software limitations.
- 3.) In the event data for an analysis are unacceptable due to instrumental problems or other unpredictable factors, the analyst will reanalyze the particular extract and include only information from the reanalysis in the data package. The original analysis data is removed and the reanalysis data is inserted in the position in the raw data that would normally be occupied by the original analysis. This causes the data to appear to be out of order chronologically. This procedure was used by Pace, Inc. to report SDG APX01 method blank raw data and LCSD-AQ-1K1409/1K1054 data in the analytical sequence beginning 09/13/94. This procedure is common laboratory practice within Pace's dioxin laboratory.
- 4.) All positive reported results met all S/N method criteria.
- 5.) For all positive reported results, there were no S/N ratios greater than 2.5 in the corresponding ether channel.
- 6.) Pace, Inc. did not perform any analyses, checks or instrument adjustments between the end of sequence Calibration Checks and Mass Resolution Checks in the cases where more than one hour separated the Calibration and Mass Resolution Checks.

Validata Chemical Services, Inc. has incorporated these certification into its data review as fact, and they have formed the basis for data validation of the unverifiable items. Validata Chemical Services, Inc. takes no responsibility for the validity of these certifications.

Client	Lab		VOA	SVO	P/PCB	OPest	Herb	Me/CN	HX	TRPH
Sample #:	Sample #:	Matrix								
6635B00101	TLB-002	Soil	X	X	X	X	X	X	X	X
6636B00101	TLB-003	Soil	X	X	X	X	X	X	X	X
6636B00101MS	TLB-003MS	Soil			X		X			
6636B00101MSD	TLB-003MSD	Soil			X		X			
663EB00101	TLB-005	Water	X	X	X	X	X	X	X	X
663CB00201	TLB-001	Soil	X	X	X	X	X	X	X	X
665CB00202	TJI-001	Soil	X	X	X	X	X	X	X	X
665CB00202MS	TJI-001MS	Soil			X	X				
665CB00202MSD	TJI-001MSD	Soil			X	X				
666CB00301	TJA-001	Soil	X	X	X	X	X	X	X	X
667CB00201	TJU-001	Soil	X	X	X	X	X	X	X	X
178TB00202	TJA-003	Water	X							
650TB00301	TGS-003	Water	X							
659TB00101	TLB-008	Water	X							
663TB00101	TLB-004	Water	X							
663TB00102	TLB-006	Water	X							
82508	TIH-002	Water	X							
82724	TJI-004	Water	X							
83004	TJU-004	Water	X							
SVTLBBS	BLKSPK	Water		X						
SVTLBBSD	BLKSPKD	Water		X						
ENBS090894A	BLKSPK	Water	X							
ENBS090894B	BLKSPKD	Water	X							
SVBSLO25B2	BLKSPK	Soil		X						
SVBSLO25B3	BLKSPKD	Soil		X						
PPPTLBBS	BLKSPK	Water			X					
PPTLBBSD	BLKSPKD	Water			X					
OPTLBBS	BLKSPK	Water				X				
OPTLBBSD	BLKSPKD	Water				X				
HTLBBS	BLKSPK	Water					X			
HTLBBSD	BLKSPKD	Water					X			
LS-C1134	LCSTRPH	Water								X
LS-C1135	LCSTRPH	Soil								X
41284D*	41284-1D	Water							X	
41284S*	41281-1S	Water							X	
41334D*	41334-1D	Soil							X	
LCS245	LCS1	Soil							X	
41292D*	41292-55D	Water						X		
41292S*	41292-55S	Water						X		
41332D*	41332-26	Soil						X		
41332S*	41332-26S	Soil						X		
82509D*	TIH-001D	Soil						X		
82509S*	TIH-001S	Soil						X		

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, RE = RE-ANALYSES / RE-EXTRACTIONS,
D* = MATRIX DUPLICATES, S* = MATRIX SPIKES, TB = TRIP BLANKS, EB = EQUIPMENT BLANKS,
LCS = LABORATORY CONTROL SPIKES

DATA REVIEWER(S):

Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Kevin C. Hammer". The signature is written in a cursive style with a large, stylized initial "K".

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - APX02 Organics and Inorganics

SAMPLES: 019CB00201, 121CB00201, 121CB00201RE, 138CB00202, 138CB00202RE, 178CB00202, 178EB00202, 178EB00202RE, 649CB00101, 649CB00101RE, 650CB00301, 653CB00301, 653CB00301RE, 659CB00101, 659CB00101MS, 659CB00101MSD, 660CB00501, 6635B00101, 6636B00101, 6636B00101MS, 6636B00101MSD, 663EB00101, 663CB00201, 665CB00202, 665CB00202MS, 665CB00202MSD, 666CB00301, 667CB00201, 178TB00202, 650TB00301, 659TB00101, 663TB00101, 663TB00102, 82508, 82724, 83004, SVTLBBS, SVTLBBSD, ENBS090894A, ENBS090894B, SVBSLO25B2, SVBSLO25B3, PPPTLBBS, PPTLBBSD, OPTLBBS, OPTLBBSD, HTLBBS, HTLBBSD, LS-C1134 LS-C1135, 41284D*, 41284S*, 41334D*, LCS245, 41292D*, 41292S*, 41332D*, 41332S*, 82509D*, 82509S*

VOLATILE ORGANICS

I.) Holding Times:

The holding time from sampling to analysis for 649CB00101RE was 28 days, which was twice the 14 day QC limit for soil samples. All associated positive results were flagged estimated (J), and non-detects were flagged estimated (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05, and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on Instrument E:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
dichlorodifluoromethane	0.035	32
trans-1,4-dichloro-2-butene		54
1,4-dioxane	0.014	
isobutyl alcohol	0.006	

Associated samples analyzed with these initial calibrations were qualified as follows:

Compounds with RRF's less than the 0.05 QC limit that were non-detect were rejected (R) and positive results were flagged as estimated (J). Positive results for compounds with %RSD's greater than the QC limit of 30% were flagged as estimated (J).

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05, and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on Instrument F:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
dichlorodifluoromethane	0.03	
methylene chloride		35
chloromethane		46
isobutyl alcohol	0.006	
1,4-dioxane	0.030	

Associated samples analyzed with these initial calibrations were qualified as follows:

Compounds with RRF's less than the 0.05 QC limit that were non-detect were rejected (R) and positive results were flagged as estimated (J). Positive results for compounds with %RSD's greater than the QC limit of 30% were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS090294A for the following compounds:

dichlorodifluoromethane	27 %
acetone	36 %
trichlorofluoromethane	30 %
acrylonitrile	46 %
2-hexanone	27 %
isobutyl alcohol	42 %
1,4-dioxane	48 %
trans-1,4-dichloro-2-butene	30 %

All associated positive and non-detect results for these compounds were qualified as estimated (J) and (UJ). In addition, dichlorodifluoromethane had a Relative Response Factor (RRF) of 0.026, which was below the QC limit of 0.05. Associated sample results for this compound, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS090394A for the following compounds:

chloroethane	28 %
trichlorofluoromethane	29 %
acrolein	45 %
acrylonitrile	34 %
2-hexanone	44 %
4-methyl-2-pentanone	35 %
1,4-dioxane	68 %
isobutyl alcohol	64 %
methacrylonitrile	31 %
1,2,3-trichloropropane	28 %
trans-1,4-dichloro-2-butene	50 %
1,2-dibromo-3-chloropropane	42 %

All associated samples with positive and non-detect results for these compounds were qualified as estimated (J) and (UJ). In addition, the RRF's for acrolein, dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol were 0.043, 0.038, 0.004 and 0.002, respectively, which were below the 0.005 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS090794A for the following compounds:

acetone	44 %
acrolein	41 %
acrylonitrile	38 %
2-hexanone	38 %
4-methyl-2-pentanone	31 %
dichlorodifluoromethane	27 %
isobutyl alcohol	75 %
1,4-dioxane	65 %
methacrylonitrile	44 %
1,2-dibromo-3-chloropropane	28 %

All associated positive or non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition acrolein, isobutyl alcohol and 1,4-dioxane had RRF's of 0.046, 0.001, and 0.005, respectively, which were below the QC limit of 0.05. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS090294 for the following compounds:

dichlorodifluoromethane	35 %
methylene chloride	29 %
2-hexanone	26 %
4-methyl-2-pentanone	26 %
1,2-dibromo-3-chloropropane	26 %

All associated positive and non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.019, 0.005 and 0.026, respectively, which were below the QC limit of 0.05. All associated sample results for these compounds were non-detects, and, therefore, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS090394 for the following compounds:

methylene chloride	29 %
2-hexanone	33 %
acetone	59 %

All associated positive and non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition, dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.029, 0.007, and 0.026, respectively, which were below the QC limit of 0.05. All associated sample results for these compounds were non-detects, and were, therefore, rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS090694 for the following compounds:

dichlorodifluoromethane	33 %
trichlorofluoromethane	28 %
methacrylonitrile	49 %

All associated sample results for these compounds were non-detects and were flagged as estimated (UJ). In addition, dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.040, 0.005 and 0.026, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds were non-detects, and were, therefore, rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS090794 for the following compounds:

acetone	26 %
acrylonitrile	27 %
2-hexanone	37 %
4-methyl-2-pentanone	37 %
isobutyl alcohol	31 %
1,4-dioxane	33 %
methylene chloride	26 %
trans-1,4-dichloro-2-butene	27 %

All associated positive and non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition, dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.022, 0.004 and 0.020, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds were non-detects, and, therefore, rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS090894 for the following compounds:

acetone	54 %
acetonitrile	70 %
2-hexanone	41 %
4-methyl-2-pentanone	27 %
trichlorofluoromethane	27 %
dichlorodifluoromethane	42 %
1,1,1-trichloroethane	27 %

All associated positive and non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition, dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.017, 0.007 and 0.025, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds were non-detects, and were, therefore, rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS091994 for the following compounds:

acetone	40 %
methylene chloride	29 %
vinyl acetate	42 %

All associated positive and non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition, dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.025, 0.006, and 0.026, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds were non-detects, and were, therefore, rejected (R).

IV.) Blanks:

Method Blanks:

Acetone was detected in soil method blanks VBLKS1, VBLKS2, VBLKS3, VBLKS4, VBLKS5 and VBLKS6 at 3.1 ug/kg, 13.6 ug/kg, 5.7 ug/kg, 17 ug/kg, 4.6 ug/kg and 9.0 ug/kg, respectively. Detections of acetone in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Acetone was detected in water method blanks VBLKW1, VBLKW2 and VBLKW3, at 7.9 ug/L, 15.1 ug/L and 10.6 ug/L, respectively. Since only field blanks were associated with these metho-? blanks, no action was required.

Methylene chloride was detected in soil method blanks VBLKS1, VBLKS2, VBLKS3, VBLKS4, VBLKS5 and VBLKS6 at 2.6 ug/kg, 2.8 ug/kg, 4.2 ug/kg, 5.0 ug/kg, 4.4 ug/kg and 1.1 ug/kg, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in water method blanks VBLKW1, VBLKW2, and VBLKW3 at 5.2 ug/L, 8.3 ug/L and 5.7 ug/L, respectively. Since only field blanks were associated with these blanks, no action was required.

Equipment Blanks:

Equipment Blank 178EB00202 had positive results for acetone and methylene chloride of 10.9 ug/L and 1.2 ug/L, respectively. Detections of these compounds in the associated samples below 10X these amounts were flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

Equipment Blank 663EB00101 had positive results for acetone and methylene chloride of 16 ug/L and 3 ug/L, respectively. Detections of these compounds in the associated samples below 10X these amounts were flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

Trip Blanks:

Trip blank 178TB00202 had positive results for acetone and methylene chloride of 11.6 ug/L and 2.6 ug/L, respectively. Detections of these compounds in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of the contamination in each sample.

Trip blank 650TB00301 had positive results for acetone and methylene chloride of 5.3 ug/L and 1.7 ug/L, respectively. Detections of these compounds in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of the contamination in each sample.

Trip blank 659TB00101 had positive results for methylene chloride of 2.8 ug/L. Detections of this compound in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of the contamination in each sample.

Trip blank 663TB00101 had positive results for acetone and methylene chloride of 5.5 ug/L and 3.2 ug/L, respectively. Detections of these compounds in the associated samples below 10X these amounts were flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

Trip blank 663TB00102 had a positive result for methylene chloride of 3 ug/L. Detections of this compound in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of the contamination in each sample.

TICs:

Samples 650CB00301, 666CB00301, 665CB00202 and 121CB00201 had an unknown hydrocarbon reported as a tentatively identified compound. This unknown hydrocarbon was also present in the associated blank. Data qualification was not required.

V.) Surrogate Recoveries:

The Percent Recovery (%R) for the surrogate bromofluorobenzene in sample TJU-002 was 54%, which

was below the QC limits of 74-121%. Reanalysis of this sample also had a %R for this surrogate of 64%, which was also below the QC limits of 74-121%. All associated positive or non-detect sample results were flagged as estimated (J) and (UJ).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recoveries (%R's) of trichloroethene were 128% for the MS and 127% for the MSD, which were above the 71-120% QC limits. Since there were no positive results for this compound in the associated samples, no action was taken. The Relative Percent Difference (RPD) for 1,1-dichloroethene was 27% for spiked samples 659CB00101MS and 659CB00101MSD, which exceeded the 22% QC limit. The results for this compound in the associated sample, which consisted entirely of non-detects, were flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

Internal Standards 1,4-difluorobenzene, and chlorobenzene in sample 138CB00202 were 43% and 32%, respectively, which were below the 50% QC limit. Reanalysis of this sample also exhibited a low area count, (45%), for the internal standard chlorobenzene. All associated sample results were qualified as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

There was no apparent reason for the reanalysis of sample 649CB00101. Since the reanalysis exceeded the holding time QC limit, the original analysis is considered of preferable data quality.

The original analysis of sample 121CB00201 is considered of preferable data quality since both the original and reanalyses exhibited low internal standard percent recoveries and the original analysis had a better holding time.

All soil and water sample results for dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane were rejected due to excessively low average Relative Response Factors (RRF's) in the initial calibrations for these compounds. All acrolein results in samples 650TB00301, 178EB00202, 82724, 83004, 663TB00101, 663EB00101 and 663TB00102 were rejected due to an excessively low RRF in the continuing calibration associated with these samples.

All remaining laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The following compounds had Percent Relative Standard Deviations (%RSD's) above the 30% QC limit for the Initial Calibration analyzed on Instrument B:

<u>Compound</u>	<u>%RSD</u>
2,4-dinitrophenol	44
3,3'-dichlorobenzidine	47
methyl methacrylate	36
3,3'-dimethylbenzidine	58

All positive results for these compounds in the associated samples were flagged as estimated (J).

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05, and Percent Relative Standard Deviations (%RSD's) that were above the 30% QC limit for the Initial Calibration analyzed on Instrument C:

<u>Compound</u>	<u>%RSD</u>
n-nitrosodimethylamine	62
aniline	37
4-nitroaniline	45
methyl methacrylate	34
methyl mathanesulfonate	35
2-naphthylamine	40
4-aminobiphenyl	32
4-nitroquinoline-1-oxide	40
3,3'-dimethylbenzidine	52

<u>Compound</u>	<u>%RSD</u>
p-phenylenediamine	50
	<u>RRF</u>
pentachloronitrobenzene	0.047

Associated samples analyzed with these initial calibrations were qualified as follows:

Associated pentachloronitrobenzene data, which consisted entirely of non-detects, were rejected (R).

Associated positive results for compounds with %RSD's greater than the 30% QC limit were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS090994 for the following compounds:

3-nitroaniline	63 %
4-chloroaniline	30 %
pyridine	26 %
n-nitrosodimethylamine	43 %
3,3'-dichlorobenzidine	51 %
ethyl methacrylate	41 %
n-nitrosomethylethylamine	31 %
methyl methane sulfonate	37 %
4-aminobiphenyl	26 %
4-nitroquinoline-1-oxide	37 %
aramite	48 %

There were no positive detections of these compounds in the associated samples. All associated non-detect results were flagged as estimated (UJ). In addition, RRF's for pentachloronitrobenzene and 4-nitroquinoline-1-oxide were 0.038 and 0.042, respectively, which were below the 0.05 QC limit. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS090894 for the following compounds:

3-nitroaniline	29 %
4-chloroaniline	34 %
n-nitrosodimethylamine	35 %
aniline	34 %
4-nitroaniline	30 %
2-naphthylamine	28 %
methyl methacrylate	30 %
ethyl methacrylate	30 %
2-picoline	28 %
4-aminobiphenyl	39 %

There were no positive results for these compounds in the associated samples. All associated non-detects were flagged as estimated (UJ). In addition, pentachloronitrobenzene had a Relative Response Factor (RRF) of 0.040, which was below the QC limit of 0.05. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS091394 for the following compounds:

aniline	32 %
n-nitrosodimethylamine	27 %
pyridine	36 %
4-chloroaniline	54 %
hexachlorocyclopentadiene	46 %
3-nitroaniline	73 %
3,3'-dichlorobenzidine	42 %
4-nitroaniline	67 %
methyl methacrylate	347 %
ethyl methacrylate	28 %
2-naphthylamine	38 %
1,3,5-trinitrobenzene	29 %
4-aminobiphenyl	44%
3,3'-dimethylbenzidine	92 %
p-phenylenediamine	217 %

There were no positive detections of these compounds in the associated samples. All associated non-detects were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS091494 for the following compounds:

3,3'-dimethylbenzidine	41 %
aniline	33 %
n-nitrosodimethylamine	27 %
pyridine	47 %
4-chloroaniline	52 %
3-nitroaniline	109 %
2,4-dinitroaniline	30 %
4-nitroaniline	70 %
4,6-dinitro-2-methylphenol	28 %
hexachloropropene	31 %
4-aminobiphenyl	47 %
4-nitroquinoline 1-oxide	65 %
3,3'-dimethylbenzidine	41 %
p-phenylenediamine	178 %

There were no positive detections of these compounds in the associated samples. All associated non-detects were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS091694 for the following compounds:

3,3'-dimethylbenzidine	41 %
aniline	36 %
n-nitrosodimethylamine	43 %
2,4,6-tribromophenol	27 %
pyridine	32 %
3-nitroaniline	26 %
2,4-dinitrophenol	50 %
2,3,4,6-tetrachlorophenol	27 %
4-nitrophenol	44 %
4,6-dinitro-2-methylphenol	42 %
benzo(k)fluoranthene	26 %
4-nitroquinoline 1-oxide	65 %
hexachloropropene	31 %
4-aminobiphenyl	47 %
3,3'-dimethylbenzidine	41 %
p-phenylenediamine	178 %

There were no positive detections of these compounds in the associated samples. All associated non-detects were flagged as estimated (UJ). In addition, pentachloronitrobenzene and 4-nitroquinoline-1-oxide had RRF's of 0.041 and 0.023, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 16.3 ug/kg in soil method blank SBLK1. Detections of this compound in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

Equipment blank 178EB00202 had no positive results, so no data qualification was necessary.

Bis(2-ethylhexyl)phthalate was detected at 1.8 ug/L in equipment blank 663EB0010. None of the associated samples had positive results for this compound less than 10X this amount, so no action was taken.

TIC's:

Samples 663CB00201, 6635B00101, 6636B00101, 659CB00101, 667CB00201, 138CB00202 and 019CB00201 had an unknown ketone reported as a tentatively identified compound. This unknown ketone was also present in the associated blank. Samples 138CB00202, 663EB00101 and 178EB00202 had an unknown acid ester reported as a tentatively identified compound. Equipment blank 663EB00101

had 2-cyclohexene-1-one reported as a tentatively identified compound. This compound was also present in the associated method blank. Data qualification for these compounds was not required.

V.) Surrogate Recoveries:

Surrogate Percent Recovery (%R) in sample 653CB00301 for nitrobenzene-d5 was 139%, which was above the 23-120% QC limits. Reanalysis of this sample extract had a %R for terphenyl-d14 of 138%, which was above the 18-137% QC limits. Associated sample results did not require qualification, since action is only taken if at least two %R's for base/neutral or acid surrogates are outside the QC limits.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

There were no MS/MSD analyses performed on samples from this SDG. Soil blank spike (BS) and blank spike duplicate (BSD) analyses were performed. The Percent Recovery (%R) was 34% for 1,4-dichlorobenzene in sample SVBSL025B3(BSD), which was below the 36-97% QC limits. There were no positive detections of this compound in the associated samples. All non-detects in associated soil samples were flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No qualification was necessary.

VIII.) Internal Standards Performance:

The Internal Standard area counts were 39% for chrysene-d12 and 22 % for perylene-d12 in sample 653CB00301, which were below the 50-200% QC limits. Reanalysis of this sample extract exhibited a low area count at 47% for perylene-d12, which was below the QC limit of 50-200%. All results, which consisted entirely of non-detects, for the compounds associated with this internal standard in sample 653CB00301 were flagged as estimated (UJ). The re-analysis results were considered to be of better data quality since only one internal standard was outside the QC limits.

IX) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

There was no apparent reason for the reanalysis of sample 178EB00202. Since the original analysis had a better holding time, it was considered of preferable data quality.

The original analysis of sample 653CB00301 was considered of preferable data quality since both the original and reanalysis exhibited low internal standard percent recoveries and the original analysis had a better holding time.

Pentachloronitrobenzene results in samples 019CB00201, 138CB00202, 663EB00101, 121CB00201, 178EB00202, 6636B00101, 653CB00301, 659CB00101, 6635B00101, 663CB00201, 665CB00202 and 667CB00201 were rejected (R) due to excessively low average Relative Response Factors (RRFs) in the initial calibration associated with these samples.

4-Nitroquinoline-1-oxide results were rejected (R) in the equipment blank 178EB00202 due to an excessively low RRF in the associated continuing calibration standard.

All remaining laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The initial calibration analyzed on 9/7/94 on the DB-1701 column had a Percent Relative Standard Deviation (%RSD) of 28.6% for chlorobenzilate, which was above the 20% QC limit. Since the %RSD was less than 30% and there was only one compound that exceeded the 20% limit, no data qualification was necessary.

Continuing Calibration:

The continuing calibration standard analyzed on 9/9/94 on the DB 1701 column had a Percent Difference (%D) of 26.2 % for chlorobenzilate, which was above the QC limit of 25%. There were no associated samples analyzed with this standard, so no qualification was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Blanks:

There were no positive detections in the equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

The soil matrix spike, sample TLB-003MS, had a Percent Recovery (%R) for heptachlor of 119%, which was above the QC limits of 34-114%. There was no positive detection of this compound in the associated sample, so no action was required.

The water blank spike PPTLBBS had a percent recovery for heptachlor of 123%, which was above the QC limits of 34-114%. There were no positive detections of this compound in any of the associated samples, so no action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

There was no apparent reason for the reanalysis of sample 121CB00201. Since the original analysis had

a better holding time, the original analysis was considered of preferable data quality.

All laboratory data were acceptable without qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks, so no action was required.

Equipment Rinsate Blanks:

There were no positive detections in the equipment blanks, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

The following Relative Percent Differences (RPD's) were above the 25% QC limit for MS/MSD pair OPTLBBS and OPTLBBSD:

o,o,o-triethylphosphorothioate	43 %
disulfoton	26 %
dimethoate	26 %

There were no other QA/QC problems, so no action was taken.

VII.) TCL Compound Identification:

Pesticide Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was required.

Equipment Rinsate Blanks:

There were no equipment rinsate blanks associated with this SDG, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

The soil matrix spike (MS), sample TLB-003MS had a Percent Recovery (%R) for 2,4,-D of 67%, which was below the 87-117% QC limits. In addition, the Relative Percent Difference for MS/MSD was 37% for 2,4-D, which was above the 35% QC limit. The associated sample result, which was non-detect for this compound, was flagged as estimated (UJ).

VII.) TCL Compound Identification:

Pesticide Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
PBS	antimony	1.650 mg/kg	8.250
EB	barium	334 ug/L	334
CCB	cadmium	1.8 ug/L	1.8
CCB	chromium	5.1 ug/L	5.1
CCB	cobalt	3.8 ug/L	3.8

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB	copper	11.0 ug/L	11.0
PBS	mercury	0.016 mg/kg	0.080
CCB	vanadium	4.7 ug/L	4.7
CCB	zinc	15.5 ug/L	15.5
CCB	nickel	8.5 ug/L	8.5
CCB	lead	21.3 ug/L	21.3
EB	silver	61.8 ug/L	61.8

PBS = Soil Preparation Blank, EB = Equipment Blank, CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank was an associated preparation blank, calibration blank or equipment blank were flagged as undetected (U).

The following analytes had a negative results with the absolute values greater than the IDL:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Negative Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB	lead	-17.9 ug/L	17.9
CCB	arsenic	-3.7 ug/L	3.7
CCB	thallium	-4.2 ug/L	4.2
CCB	selenium	-4.230 mg/kg	21.2

All associated non-detects and positive results less than 5X the absolute value of the blank were flagged as estimated (UJ) and (J).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met, so no action was taken.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) was 71% for arsenic in duplicate sample 82509D*, which exceeded the 35% QC limit. The sample result for this metal in the associated sample 660CB00501 was flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony, lead and zinc were 54%, 72%, and 73%, respectively, for spiked sample 82509S*, which were below the 75-125% QC limits. Positive and non-detect results were flagged as estimated (J) and (UJ) in the associated sample 660CB00501.

IX.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

X.) Furnace Atomic Absorption QC:

Graphite Furnace Analyses were not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

WET CHEMISTRY ANALYSES

HEXAVALENT CHROMIUM

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks, so no action was required.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike / Matrix Spike Duplicates (MS / MSD):

All MS / MSD criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was required

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (TRPH)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike / Matrix Spike Duplicates (MS / MSD):

All MS / MSD criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was required

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOC</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>OP</u>	<u>HERB</u>
BLANK1MSD	1-MSD	Soil	X	X	X	X	X
BLANK2MS	2-MS	Water	X	X	X	X	X
BLANK2MSD	2-MSD	Water	X	X	X	X	X

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Me/CN</u>	<u>TPH</u>	<u>HEXAC</u>
655CB00502	41448-001	Soil	X	X	X
654CB00101	41448-002	Soil	X	X	X
009N001001	41478-001	Soil	X	X	X
009N001501	41501-001	Soil	X	X	X
009E001501	41501-002	Water	X	X	X
009R001501	41501-003	Water	X	X	X
670CB01301	41519-001	Soil	X	X	X
015CB00401	41519-002	Soil	X	X	X
670CB00301	41532-001	Soil	X	X	X

RE = REANALYSIS, BLKMS/MSD = BLANK SPIKES, T/TB = TRIP BLANKS, R = RINSATE BLANK, E/EB = EQUIPMENT BLANKS

DATA REVIEWER(S): Robert Bartholomew, Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:



VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level IV
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Data Analyses, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile (VOC), Semivolatile Organics (SVOC), Organochlorine Pesticides/PCB's (P/PCB), Organophosphate Pesticides (OP), Herbicides (Herb), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbon (TPH), Hexavalent Chromium (HEXAC)

SDG NUMBER: APX03

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOC</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>OP</u>	<u>HERB</u>
655CB00502	TMS-001	Soil	X	X	X	X	X
654CB00101	TMS-002	Soil	X	X	X	X	X
655TB00502	TMS-003	Water	X				
009N001001	TNN-001	Soil	X	X	X	X	X
009T001001	TNN-002	Water	X				
009N001501	TOB-001	Soil	X	X	X	X	X
009T001501	TOB-002	Water	X				
009R001501	TOB-003	Water	X	X	X	X	X
009T001503	TOB-004	Water	X				
009E001501	TOB-005	Water	X	X	X	X	X
009T001502	TOB-006	Water	X				
670CB01301	TOI-001	Soil	X	X	X	X	X
670CB01301RE	TOI-001RE	Soil	X				
015CB00401	TOI-002	Soil	X	X	X	X	X
015CB00401RE	TOI-002RE	Soil	X				
670TB01301	TOI-003	Water	X				
670CB00301	TPM-001	Soil	X	X	X	X	X
670TB00301	TPM-002	Water	X				
BLANK1MS	1-MS	Soil	X	X	X	X	X

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

EnSafe/Allen & Hoshall - APX03 CLP Organics and Inorganics

SAMPLES: 655CB00502, 654CB00101, 655TB00502, 009N001001, 009T001001, 009N001501, 009T001501, 009R001501, 009T001503, 009E001501, 009T001502, 670CB01301, 670CB01301RE, 015CB00401, 015CB00401RE, 670TB01301, 670CB00301, 670TB00301, BLANK1MS, BLANK1MSD, BLANK2MS, BLANK2MSD

VOLATILE ORGANICS

I.) Holding Times:

All original samples were analyzed within the required holding times, so no action was taken. The holding time to reanalysis of sample 015CB00401 was 18 days, which exceeded the 14 day QC limit. All positive and non-detect results for this re-analysis were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 8/24/94 on instrument E for the following target compounds:

2-butanone	32%
trans-1,4-dichloro-2-butene	54%

All associated samples were blanks, so no data qualification was required.

The average Relative Response Factors (RRF's) for the following target compounds were below the 0.05 QC limit for the standards run on 8/24/94 on instrument E:

isobutyl alcohol	0.006
1,4-dioxane	0.014

Associated results for these compounds, which were all non-detects, were flagged as rejected (R).

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 9/01/94 on instrument F for the following target compounds:

chloromethane	46%
methylene chloride	35%
acetone	62%
2-butanone	31%

There were no associated positive results for these target compounds, so no action was necessary.

The average Relative Response Factors (RRF's) for the following target compounds were below the 0.05 QC limit for the standards run on 9/01/94 on instrument F:

isobutyl alcohol	0.006
1,4-dioxane	0.030

Associated positive results for these target compounds were flagged as estimated (J). Associated non-detect results for these target compounds were flagged as rejected (R).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/9/94 at 14:44 on instrument F for the following target compounds:

methylene chloride	27%
2-butanone	28%
2-hexanone	35%
4-methyl-2-pentanone	27%
acetonitrile	70%
isobutyl alcohol	32%

Results for isobutyl alcohol were previously rejected. All positive and non-detect results for the remaining compounds in the associated samples were flagged as estimated (J) and (UJ).

The average Relative Response Factors (RRF's) for the following target compounds were below the 0.05 QC limit on 9/9/94 at 14:44 on instrument F:

isobutyl alcohol	0.007
1,4-dioxane	0.027

These compounds were previously qualified, so no further action was taken.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/13/94 at 11:28 on instrument F for the following target compounds:

acetonitrile	92%
isobutyl alcohol	39%

Results for isobutyl alcohol were previously rejected. All positive and non-detect results for the remaining compound in the associated samples were flagged as estimated (J) and (UJ).

The average Relative Response Factor (RRF) for the following target compounds were below the 0.05 QC limit on 9/13/94 at 11:28 on instrument F:

isobutyl alcohol	0.003
1,4-dioxane	0.028

These compounds were previously rejected, so no further action was taken.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/13/94 at 10:41 on instrument E for the following target compounds:

acetone	79%
acrolein	43%
acrylonitrile	36%
2-butanone	41%
ethyl cyanide	46%
methacrylonitrile	35%
isobutyl alcohol	56%
1,4-dioxane	62%

Results for isobutyl alcohol and 1,4-dioxane were previously rejected. All associated samples were blanks, so no action was necessary for the remaining compounds.

The average Relative Response Factor (RRF) for the following compounds were below the 0.05 QC limit on 9/13/94 at 10:41 on instrument E:

acrolein	0.045
ethyl cyanide	0.044
isobutyl alcohol	0.003
1,4-dioxane	0.006

Results for 1,4-dioxane and isobutyl alcohol were previously rejected. All associated positive results for the remaining compounds were flagged as estimated (J) and non-detect results were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/14/94 at 10:53 on instrument E for the following target compounds:

acetone	76%
fluorotrichloromethane	29%
acrolein	57%
acrylonitrile	43%
2-butanone	42%
4-methyl-2-pentanone	34%
ethyl cyanide	35%
methacrylonitrile	44%
isobutyl alcohol	69%
1,4-dioxane	59%

Results for 1,4-dioxane and isobutyl alcohol were previously rejected. All associated samples were blanks so no action was necessary for the remaining compounds.

The average Relative Response Factor (RRF) for the following target compounds were below the 0.05 QC limit on 9/14/94 at 10:53 on instrument E:

acrolein	0.033
isobutyl alcohol	0.002
1,4-dioxane	0.006

All associated non-detect results for acrolein were flagged as unusable (R). The remaining compounds were previously rejected due to low RRF's.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/15/94 at 14:27 on instrument E for the following target compounds:

acetone	29%
acrolein	54%
acrylonitrile	51%
4-methyl-2-pentanone	36%
1,1,2,2-tetrachloroethane	31%
ethyl cyanide	54%
methacrylonitrile	46%
isobutyl alcohol	67%
1,4-dioxane	69%
1,2,3-trichloropropane	27%
trans-1,4-dichloro-2-butane	37%

Results for 1,4-dioxane and isobutyl alcohol were previously rejected. All associated samples were blanks, so no action was necessary for the remaining compounds.

The average Relative Response Factor (RRF) for the following target compounds were below the 0.05 QC limit on 9/15/94 at 14:27 on instrument E:

ethyl cyanide	0.038
isobutyl alcohol	0.002
1,4 dioxane	0.005

The associated non-detect result for ethyl cyanide was flagged as rejected (R). The results for 1,4-dioxane and isobutyl alcohol were previously rejected.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/16/94 at 11:49 on instrument F for the following target compounds:

acetone	37%
4-methyl-2-pentanone	29%
isobutyl alcohol	36%

Results for isobutyl alcohol were previously rejected. All positive and non-detect results for the remaining compounds in the associated samples were flagged as estimated (J) and (UJ).

The average Relative Response Factor (RRF) for the following target compounds were below the 0.05 QC limit on 9/16/94 at 11:49 on instrument F:

isobutyl alcohol	0.004
1,4-dioxane	0.025

These compounds were previously qualified, so no further action was taken.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/30/94 at 11:04 on instrument F for the following target compounds:

acetone	60%
1,2-dichloroethane	38%
2-butanone	27%
1,1,1-trichloroethane	29%
carbon tetrachloride	35%
bromodichloromethane	30%
2-hexanone	41%
4-methyl-2-pentanone	37%
methacrylonitrile	26%
isobutyl alcohol	44%
1,4-dioxane	30%
1,2,3-trichloropropane	28%
trans-1,4-dichloro-2-butene	27%

Results for 1,4-dioxane and isobutyl alcohol were previously rejected. All positive and non-detect results for the remaining compounds in the associated sample were previously flagged as estimated (J) and (UJ) due to holding time exceedance.

The average Relative Response Factor (RRF) for the following target compounds were below the 0.05 QC limit on 9/30/94 at 11:04 on instrument F:

isobutyl alcohol	0.003
1,4-dioxane	0.021

These compounds were previously qualified, so no further action was taken.

IV.) Blanks:

Method Blanks:

Methylene chloride and acetone were detected at low levels in water method blanks VBLKW1, VBLKW2 and VBLKW3. Since these blanks apply only to the equipment, rinsate and trip field blanks, no action was necessary.

Methylene chloride and acetone were detected in the soil method blanks at the following concentrations:

<u>Method</u> <u>Blank ID</u>	<u>Methylene</u> <u>Chloride</u>	<u>Acetone</u>
VBLK1	2.9 ug/kg	5.0 ug/kg
VBLK2	12.6 ug/kg	6.4 ug/kg
VBLK3	5.5 ug/kg	11.8 ug/kg
VBLK4	10.1 ug/kg	7.0 ug/kg

Detections of methylene chloride in the associated samples below 10X the amount of blank contamination were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. Acetone was qualified using the rinsate blank. No further action was necessary.

Rinsate Blanks:

Acetone and methylene chloride were detected at 34 ug/L and 6.7 ug/L, respectively, in rinsate blank 009R001501. Detections of acetone in the associated samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. Methylene chloride was qualified using the method and trip blanks. No further action was required.

Equipment Blanks:

Acetone and methylene chloride were detected at low levels in the equipment blanks. Since these compounds were qualified using the method, rinsate and trip blanks, no further action was taken.

Trip Blanks:

Methylene chloride and acetone were detected at 9 ug/L and 6.6 ug/L, respectively, in trip blank 009T001501. Detections of methylene chloride in the associated samples below 10X this amount were flagged as undetected (U). Acetone was qualified using the rinsate blank. No further action was required.

Methylene chloride and acetone were also detected in trip blanks 655TB00502, 670TB00301, 670TB01301, 009T001001, 009T001503 and 009T001502. Data qualification was performed using other rinsate and method blanks. No further action was necessary.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of toluene-d8 in sample 670CB01301RE was 119%, which exceeded the 81-117% QC limits. All positive results for this sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The area counts were below the 50-200% QC limits for the following internal standards and samples indicated:

<u>Sample ID</u>	<u>1,4-difluorobenzene</u>	<u>chlorobenzene-d5</u>
670CB01301	49%	38%
670CB01301RE	48%	31%
015CB00401		46%

Analytes associated with these internal standards were flagged as estimated (J) and (UJ) in these samples.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Non-detect results for 1,4-dioxane and isobutyl alcohol were rejected in all samples in this SDG due to low RRF's in initial calibration of the mass spectrometers.

Non-detect results for acrolein were rejected due to low RRF's in continuing calibration verifications for water samples 009T001001, 009R001501, 009T001501, 009E001501, 009T001503, 655TB00502, 670TB00301 and 670TB01301. The non-detect result for ethyl cyanide in sample 670TB01301 was rejected for the same reason.

The initial analysis of sample 670CB01301 was considered preferable to the re-analysis (670CB01301RE) because the internal standard area counts were closer to the QC limits, and because of a better holding time.

The initial analysis of sample 015CB00401 was considered preferable to the re-analysis (015CB00401RE) because the re-analysis was performed outside the holding time QC limit.

All other laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 9/28/94 on instrument C for the following compounds:

benzoic acid	52%
4-nitroaniline	53%
carbazole	58%

There were no positive detections of these compounds in the associated samples, so no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 9/29/94 on instrument C for the following compounds:

methyl methacrylate	36%
4-nitroquinoline-1-oxide	36%

There were no positive detections of these compounds in the associated samples, so no action was required.

The average Relative Response Factor (RRF) for the following compound was below the 0.05 QC limit:

4-nitroquinoline-1-oxide	0.018
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All positive results for this compound in the associated samples were flagged as estimated (J). All non-detect results for this compound were flagged as rejected (R).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/28/94 at 13:59 on instrument G for the following compounds:

4-nitroaniline	44%
carbazole	44%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The date had been manually changed by the laboratory for this calibration check.

The manually entered date was used for validation.

The Percent Difference (%D) for methyl methacrylate was 55% for the standard run on 9/29/94 at 14:46 on instrument C which exceeded the 25% QC limit. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ).

The average Relative Response Factor (RRF) for the following compound was below the 0.05 QC limit:

4-nitroquinoline-1-oxide	0.013
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This compound was previously rejected, so no further action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections in soil method blank SBLKL, so no data qualification was necessary.

Equipment Blanks:

Bis(2-ethylhexyl)phthalate was detected at 1.4 ug/L in equipment blank 009E001501. This compound was qualified using the rinsate blanks. No further action was taken.

Rinsate Blanks:

Bis(2-ethylhexyl)phthalate was detected at 2.1 ug/L in rinsate blank 009R001501. There were no detections of this compound in the associated samples below 10X this amount, so no action was required.

V.) Surrogate Recoveries:

The Surrogate Recovery for 2-fluorobiphenyl in sample 009R001501 was 38%, which was below the 43-116% QC limits for water samples. Only one surrogate was outside QC limits in the base/neutral fraction, so no action was required. The laboratory did not reanalyze this sample; it was a rinsate blank.

VI.) Matrix Spike / Matrix Spike Duplicate (MS/MSD):

All MS/MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met, so no action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOCHLORINE PESTICIDES AND PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for the standard run on 9/6/94 on instrument H exceeded the 20% QC limit for the following compounds:

aldrin	22%
4,4'DDE	21%

Since only two compounds exceeded the 20% QC limit and were less than 30%, no action was taken.

The Percent Relative Standard Deviation (%RSD) for the standard run on 9/6/94 on instrument H for chlorobenzilate was 29%, which exceeded the 20% QC limit. Since only one compound exceeded the QC limit with a %RSD less than 30%, no action was taken.

The Percent Relative Standard Deviation (%RSD) for the standard run on 9/27/94 on instrument H for

isodrin was 21%, which exceeded the 20% QC limit. Since only one compound exceeded the QC limit with a %RSD less than 30%, no action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/28/94 at 9:20 on instrument H for kepone (86.2%). All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 9/28/94 at 20:12 on instrument H for kepone (100%). All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections of any compound in the method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no positive detections of any compound in equipment blank 009E001501, so no further action was taken.

Rinsate Blanks:

There were no positive detections of any compound in rinsate blank 009R001501, so no further action was required.

V.) Surrogate Recoveries:

The Surrogate Recoveries of DCB (primary column) and TXC (confirmation column) were 155% and 153%, respectively, for sample 655CB00502, which exceeded the 30-150% QC limits. All positive sample results were flagged as estimated (J).

The Surrogate Recoveries for DCB on the primary and secondary columns were both 0% for sample 015CB00401, which were below the 30-150% QC limits. All positive sample results were flagged as estimated (J) and all non-detect results were rejected (R).

VI.) Matrix Spike/Matrix Spike Duplicate:

Analyses of sample MS/MSD's were not performed by the laboratory. Instead, two sets of blank spikes analyzed. The Percent Recovery of heptachlor was 119% in the Blank MS2 sample, which exceeded the 54-111% QC limits. All positive results for heptachlor in the associated samples were flagged as estimated (J).

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was taken.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All samples were extracted and analyzed within required holding times, so no action was taken.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met, so no action was required.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was taken.

Continuing Calibration:

All continuing calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

There were no positive detections of any compound in method blanks, so no data qualification was necessary.

Equipment Blanks:

There were no positive detections of any compound in equipment blank 009E001501, so no action was taken.

Rinsate Blanks:

Parathion was detected at 0.5 ug/L in rinsate blank 009R001501. All positive detections of parathion in the associated samples exceeded 5X this amount. Data qualification was not required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

Analyses of sample MS/MSD's were not performed by the laboratory. Instead, two sets of blank spikes were analyzed. All spike criteria for the method were met, so no action was required.

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

The Percent Difference (%D) of 2,4-DB was 17.6% for the standard run on 9/15/94 on instrument G, which exceeded the 15% QC limit. All positive results for this compound in the associated samples were flagged as estimated (J).

The Percent Difference (%D) for 2,4-DB was 18.4% for the standard run on 9/16/94 on instrument G, which exceeded the 15% QC limit. All positive results for this compound in the associated samples were flagged as estimated (J).

The Percent Difference (%D) for 2,4-DB was 29% for the standard run on 9/26/94 on instrument G, which exceeded the 29% QC limit. All positive results for this compound in the associated samples were flagged as estimated (J).

The Percent Difference (%D) for 2,4-DB was 36.8% for the Standard run on 9/28/94 on instrument G, which exceeded the 15% QC limit. All positive results for this compound in the associated samples were flagged as estimated (J).

IV.) Blanks:

Method Blank:

- 2,4,5-T and 2,4,5-TP were detected at 7.7 ug/kg and 8.5 ug/kg, respectively, in the soil method blank. Detection of these compounds in the associated samples below 5X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

There were no positive detections of any compound in equipment blank 009E001501, so no action was taken.

Rinsate Blanks:

There were no positive detections of any compound in rinsate blank 009R001501, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recoveries criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Analyses of sample MS/MSD's were not performed by the laboratory. Instead, two sets of blank spikes

were analyzed. The Percent Recovery for 2,4-D was 67% in soil Blank MS2, which was below the 87-117% QC limits. All positive and non-detect results were flagged as estimated (J) and (UJ).

VII.) TCL Compound Identification:

All criteria for the method were met, no action was required.

VIII.) Field Duplicate:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met. Data qualification was not necessary.

III.) Blanks:

The following blank results represent the highest detections associated with these samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max.Conc.</u> <u>ug/L</u>	<u>Action Level</u> <u>mg/kg</u>
RB	arsenic	9.1	9.1
CCB22	antimony	17.1	17.1
EB	barium	270	270
CCB16	beryllium	0.3	0.3
RB	chromium	6.2	6.2
CCB14	cobalt	5.6	5.6
RB	copper	9.2	9.2
CCB16	lead	24.6	24.6
CCB16	nickel	9.3	9.3
CCB10	mercury	0.1	0.1
EB	selenium	7.8	7.8
CCB1	silver	2.8	2.8
CCB20	tin	14.0	14.0
CCB6	thallium	3.8	3.8

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc. ug/L</u>	<u>Action Level mg/kg</u>
CCB10	zinc	20.2	20.2
EB	vanadium	9.9	9.9

CCB = Continuing Calibration Blank, ICB = Initial Calibration Blank,

EB = Equipment Blank 009E001501, RB = Rinsate Blank 009R001501

All results greater than the IDL but less than 5X the blank amount for which the contaminated blank is an associated laboratory calibration blank or field blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's:

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. mg/kg</u>
PBS	arsenic	-0.26 mg/kg	1.30
CCB21	lead	-33.0 ug/L	33.0
CCB5	mercury	-0.1 ug/L	0.1
CCB19	beryllium	-0.6 ug/L	0.6
CCB21	copper	-3.8 ug/L	3.8
ICB2	cadmium	-1.6 ug/L	1.6
CCB19	silver	-3 ug/L	3
CCB11	tin	-16.3 ug/L	16.3

CCB = Continuing Calibration Blank, ICB = Initial Calibration Blank

PBS = Soil Preparation Blank

All associated positive sample results less than 5X the absolute value of the negative blank results were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

Negative results with absolute values greater than IDL were observed for zinc (-17 ug/L) and tin (89 ug/L) in ICS Solution A. Since there were no aluminum, calcium, iron nor magnesium results comparable to or greater than their respective concentrations in ICS Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

All criteria for ICP Dilution was met, so no action was taken.

VI.) Laboratory Control Samples (LCS):

All soil LCS Percent Recovery (%R) was 78.5% for cyanide, which was below the 80-120% QC limits. All positive and non-detect results for this compound in the associated soil samples were flagged as

estimated (J) and (UJ).

VII.) Duplicate Sample Analysis:

No designated duplicate samples were provided for this SDG.

VIII.) Matrix Spike Recoveries:

There were no matrix spike samples associated with this SDG. No action was taken.

IX.) Field Duplicates:

No field duplicates were associated with this SDG.

X.) Furnace Atomic Absorption (GFAA) QC:

All GFAA criteria for the method were met, so no action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBON

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

Method Blanks:

All method blank criteria were met, so no action was taken.

Equipment Blanks:

There were no positive detections in equipment blank 009E001501, no action was taken.

Rinsate Blanks:

There were no positive detections in rinsate blank 009R001501, no action was taken.

IV.) Laboratory Control Sample (LCS):

All LCS criteria were met for the method, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

There were no MS/MSD samples associated with this SDG. No action was taken.

VI.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's):

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

HEXAVALENT CHROMIUM

I.) Holding Times:

All holding time criteria for the method were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All initial calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All continuing calibration criteria for the method were met, so no action was taken.

III.) Blanks:

Method Blanks:

All Method Blank criteria were met, so no action was taken.

Equipment Blanks:

There were no positive detections of any compound in equipment blank 009E001501, so no action was taken.

Rinsate Blanks:

There were no positive detections of any compound in equipment blank 009R001501, so no action was taken.

IV.) Laboratory Control Sample (LCS):

All LCS criteria were met for the method, so no action was taken.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

There were no MS/MSD's associated with this SDG, so no action was required.

VI.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was necessary.

VII.) Compound Quantitation and Reported Practical Quantitation Limits (PQL's):

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.04
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: *Appendix IX SW846: 8240, 8270, 8080, 8140, 8150, 6010, 7196, 9012, 418.1, 7040*
VALIDATION GUIDELINES: *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data USEPA Contract Laboratory Program National Functional Guidelines for Evaluating Inorganics Data, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics(VOA), Semivolatile Organics(SVO), Organochlorine Pesticides/PCB's(P/PCB), Organophosphorus Pesticides(OPest), Herbicides(Herb), Total Metals and Cyanide(ME/CN), Hexavalent Chromium (HX), Total Recoverable Petroleum Hydrocarbons (TRPH), Dioxins (DOX)
SDG NUMBER: APX04

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>OPest</u>	<u>Herb</u>	<u>Me/CN</u>	<u>HX</u>	<u>TRPH</u>
670SB01501	TQD001	Soil	X	X	X	X	X	X	X	X
670SB01501D*	TQD002	Soil						X	X	X
670SB01501S*	TQD003	Soil						X	X	X
670SB01501MS	TQD002	Soil	X	X	X	X	X			
670SB01501MSD	TQD003	Soil	X	X	X	X	X			
670SB01501MSRE	TQD002RE	Soil		X						
670SB01501MSRE1	TQD002RE1	Soil		X						
670SB01501MSDRE	TQD003RE	Soil		X						
670TB01501	TQD012	Water	X							
670SB01501RE	TQD001RE	Soil	X	X						
670SB01502	TQD005	Soil	X	X	X	X	X	X	X	X
670SB01502RE	TQD005RE	Soil		X						
670TB01502	TQD008	Water	X							
670SB01901	TQD009	Soil	X	X	X	X	X	X	X	X
670SB01901RE	TQD009RE	Soil	X							

Client Sample #:	Lab Sample #:	Matrix	VOA	SVO	P/PCB	OPest	Herb	Me/CN	HX	TRPH
670SB01902	TQD011	Soil	X	X	X	X	X	X	X	X
670SB02001	TQD004	Soil	X	X	X	X	X	X	X	X
670SB02001RE	TQD004RE	Soil	X							
670SB02002	TQD010	Soil	X	X	X	X	X	X	X	X
670SB02301	TQD006	Soil	X	X	X	X	X	X	X	X
670SB02301RE	TQD006RE	Soil	X	X						
670SB02302	TQD007	Soil	X	X	X	X	X	X	X	X
684SB00101	TSC001	Soil	X	X	X	X	X	X	X	X
684TB00101	TSC010	Water	X							
684SB00102	TSC002	Soil	X	X	X	X	X	X	X	X
684SB00102RE	TSC002RE	Soil		X						
684SB00201	TSC003	Soil	X	X	X	X	X	X	X	X
684SB00202	TSC004	Soil	X	X	X	X	X	X	X	X
684SB00301	TSC005	Soil	X	X	X	X	X	X	X	X
684SB00301RE	TSC005RE	Soil	X							
684SB00302	TSC006	Soil	X	X	X	X	X	X	X	X
684SB00401	TSC007	Soil	X	X	X	X	X	X	X	X
684SB00401RE	TSC007RE	Soil	X							
684SB00501	TSC008	Soil	X	X	X	X	X	X	X	X
684SB00502	TSC009	Soil	X	X	X	X	X	X	X	X
684SB00502RE	TSC009RE	Soil	X							
684SB00601	TSC011	Soil	X	X	X	X	X	X	X	X
684SB00601D*	TSC011D*	Soil						X		
684SB00601S*	TSC011S*	Soil						X		
VOTSB03MS	BLKSMS	Soil	X							
VOTSB03MSD	BLKSMSD	Soil	X							
684SB00602	TSC012	Soil	X	X	X	X	X	X	X	X
684SB00701	TSC013	Soil	X	X	X	X	X	X	X	X
684SB00701RE	TSC013RE	Soil	X	X	X					
VOTRB01MS	BLKWMS	Water	X							
VOTRB01MSD	BLKWMSD	Water	X							
VOTRW01MS	BLKWMS	Water	X							
VOTRW01MSD	BLKWMSD	Water	X							

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, RE = RE-ANALYSED / RE-EXTRACTIONS, D* = MATRIX DUPLICATES, S* = MATRIX SPIKES, TB = TRIP BLANKS, EB = EQUIPMENT BLANKS, LCS = LABORATORY CONTROL SPIKES

DATA REVIEWER(S): Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - APX04 Organics and Inorganics

SAMPLES: 670SB01501, 670SB01501D*, 670SB01501S*, 670SB01501MS, 670SB01501MSD, 670SB01501MSRE, 670SB01501MSRE1, 670SB01501MSDRE, 670TB01501, 670SB01501RE, 670SB01502, 670SB01502RE, 670TB01502, 670SB01901, 670SB01901RE, 670SB01902, 670SB02001, 670SB02001RE, 670SB02002, 670SB02301, 670SB02301RE, 670SB02302, 684SB00101, 684TB00101, 684SB00102, 684SB00102RE, 684SB00201, 684SB00202, 684SB00301, 684SB00301RE, 684SB00302, 684SB00401, 684SB00401RE, 684SB00501, 684SB00502, 684SB00502RE, 684SB00601, 684SB00601D*, 684SB00601S*, VOTSB03MS, VOTSB03MSD, 684SB00602, 684SB00701, 684SB00701RE, VOTRB01MS, VOTRB01MSD, VOTRW01MS, VOTRW01MSD

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was needed.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05 and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on instrument E:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
dichlorodifluoromethane		32
trans-1,4-dichloro-2-butene		54
1,4,-dioxane	0.014	
isobutyl alcohol	0.006	
2-butanone		32

Associated samples analyzed with these initial calibrations were qualified as follows:

Compounds with RRF's less than the 0.05 QC limit with non-detect results in the associated samples were rejected (R).

Compounds with RRF's less than the 0.05 QC limit with positive results in the associated samples were flagged estimated (J).

Compounds with %RSD's greater than the QC limit of 30% with positive results in the associated samples were flagged estimated (J).

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05 and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on instrument F:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
dichlorodifluoromethane	0.03	
methylene chloride		35
chloromethane		46
isobutyl alcohol	0.006	
1,4-dioxane	0.030	

Associated samples analyzed with these initial calibrations were qualified as follows:

Compounds with RRF's less than the 0.05 QC limit with non-detect results in the associated samples were rejected (R).

Compounds with RRF's less than the 0.05 QC limit with positive results in the associated samples were flagged estimated (J).

Compounds with %RSD's greater than the QC limit of 30% with positive results in the associated samples were flagged estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS092094A for the following compounds:

dichlorodifluoromethane	52 %
acetone	188 %
methylene chloride	28 %
acrolein	59 %
2-butanone	30 %
acrylonitrile	59 %
vinyl acetate	87 %
isobutyl alcohol	70 %
1,4-dioxane	60 %
trans-1,4-dichloro-2-butene	31 %
4-methyl-2-pentanone	33 %
1,1,2,2-tetrachloroethane	33 %
methacrylonitrile	52 %
1,2,3-trichloropropane	29 %
1,2-dibromochloropropane	44 %

All associated samples with positive or non-detect results for these compounds were qualified as estimated (J) or (UJ). In addition, isobutyl alcohol and 1,4-dioxane had Relative Response Factors (RRF's) of 0.002 and 0.006, which were below the QC limit of 0.05. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS092294A for the following compounds:

acetone	29 %
acrolein	43 %
acrylonitrile	50 %
vinyl acetate	84 %
1,4-dioxane	64 %
isobutyl alcohol	50 %
methacrylonitrile	37 %
dibromochloromethane	84 %

All positive and non-detect results for any of these compounds in the associated samples were qualified as estimated (J) or (UJ). In addition, the RRF's for acrolein, dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol were 0.045, 0.041, 0.005 and 0.003, respectively, which were below the QC limit of 0.05. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS091694A for the following compounds:

acetone	37 %
vinyl acetate	44 %
4-methyl-2-pentanone	29 %
isobutyl alcohol	36 %

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). In addition, dichlorodifluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.025, 0.004 and 0.025, respectively, which were below the QC limit of 0.05. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS091994 for the following compounds:

acetone	40 %
methylene chloride	29 %
vinyl acetate	42 %

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). In addition, dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.025, 0.006, and 0.026, respectively, which were below the QC limit of 0.05. All associated sample results for these compounds were non-detects, and therefore were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS092094 for the following compounds:

vinyl acetate	37 %
2-hexanone	32 %
1,1,1-trichloroethane	31 %

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). In addition dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.024, 0.006, and 0.029, respectively, which were below the QC limit of 0.05. All associated sample results for these compounds were non-detects, and therefore were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS092294 for the following compounds:

chloromethane	52 %
2-butanone	44 %
vinyl acetate	37 %
dichlorodifluoromethane	68 %
isobutyl alcohol	26 %
methacrylonitrile	73 %

All results for these compounds in the associated samples were non-detects, and were flagged as estimated (UJ). In addition dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.010, 0.004, and 0.028, respectively, which were below the QC limit of 0.05. All associated sample results for these compounds were non-detects, and therefore were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS092394 for the following compounds:

chloromethane	44 %
acetone	26 %
vinyl acetate	28 %
dichlorodifluoromethane	70 %
isobutyl alcohol	46 %
2-hexanone	26 %
1,1,1-trichloroethane	44 %
carbon tetrachloride	30 %

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). In addition dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.009, 0.008 and 0.032, respectively, which were below the QC limit of 0.05. All associated sample results for these compounds were non-detects, and therefore were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS092694 for the following compounds:

vinyl acetate	31 %
dichlorodifluoromethane	57 %
1,1,1-trichloroethane	40 %
carbon tetrachloride	33 %

All positive and non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition dichlorodifluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.013, 0.005 and 0.024, respectively, which were below the QC limit of 0.05. All associated sample results for these compounds were non-detects, and therefore were rejected (R).

IV.) Blanks:

Method Blanks:

Acetone was detected in soil method blanks VBLKS1, VBLKS2, VBLKS3, VBLKS4, VBLKS5 and VBLKS6, at 11.8 ug/kg, 9.0 ug/kg, 23.9 ug/kg, 11.0 ug/kg, 13.1 ug/kg and 15.7 ug/kg, respectively. Detections of acetone in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Acetone was detected in water method blanks VBLKW1 and VBLKW2 at 2.2 ug/L, and 10.2 ug/L, respectively. Since all associated samples were field blanks, data qualification was not necessary.

Methylene chloride was detected in soil method blanks VBLKS1, VBLKS2, VBLKS3, VBLKS5, and VBLKS6, at 5.5 ug/kg, 1.1 ug/kg, 7.4 ug/kg, 2.5 ug/kg, and 3.6 ug/kg, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in water method blanks VBLKW1, and VBLKW2 at 4.6 ug/L, and 5.8 ug/L, respectively. Since all associated samples were field blanks, data qualification was not necessary.

Toluene was detected in soil method blank VBLKS6 at 2.3 ug/kg. Detections of toluene in the associated samples below 10 X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

Trip Blanks:

Trip Blanks 670TB01501, 670TB01502, and 684TB00101 had positive results for methylene chloride of 1.4 ug/L, 1.1 ug/L and 1.9 ug/L, respectively. Detections of methylene chloride in the associated samples below 10 X these amounts were flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

The Percent Recovery (%R) of internal standard chlorobenzene-d5 in sample 670SB01501 was 49%, which was below the lower limit established at 50% of the standard area counts. All associated sample results were qualified as estimated (J) and (UJ).

The Percent Recovery (%R) of internal standard chlorobenzene-d5 in sample 670SB02001 was 46%, which was below the lower limit established at 50% of the standard area counts. Reanalysis of this sample also exhibited low area counts for chlorobenzene (35%), 1,4-difluorobenzene (44%), and bromochloromethane (22%). All associated sample results were qualified as estimated (J) and (UJ).

The Percent Recoveries (%R's) of internal standards chlorobenzene-d5, 1,4-difluorobenzene and bromochloromethane in sample 670SB02301 were 36%, 48%, and 45%, respectively, which were below the lower limit established at 50% of the standard area counts. Reanalysis of this sample also exhibited low area counts, for internal standards chlorobenzene (33%), 1,4-difluorobenzene (46%) and bromochloromethane (48%). All associated sample results were qualified as estimated (J) and (UJ).

The Percent Recoveries (%R's) of internal standards chlorobenzene-d5 and bromochloromethane in sample 670SB01901 were 39% and 43%, respectively, which were below the lower limit established at 50% of the standard area counts. Reanalysis of this sample also exhibited low area counts, for internal standards chlorobenzene (38%), 1,4-difluorobenzene (49%), and bromochloromethane (47%). All associated sample results were qualified as estimated (J) and (UJ).

The Percent Recovery (%R) of the internal standard chlorobenzene-d5 in sample 684SB00502 at 42% was below the lower limit established at 50% for the standard area counts. Reanalysis of this sample also exhibited low area counts, for internal standard chlorobenzene (47%). All associated sample results were qualified as estimated (J) and (UJ).

The Percent Recoveries (%R's) of internal standards chlorobenzene-d5, 1,4-difluorobenzene and bromochloromethane in sample 670SB01701 were 29%, 42%, and 39%, respectively, which were below the lower limit established at 50% of the standard area counts. Reanalysis of this sample also exhibited low area counts, for internal standards chlorobenzene (32%), 1,4-difluorobenzene (43%), and bromochloromethane (40%). All associated sample results were qualified as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

All soil and water sample results for isobutyl alcohol and 1,4-dioxane were rejected due to excessively low average Relative Response Factors (RRF's) in the initial calibrations for these compounds. All soil sample results for dichlorodifluoromethane were rejected due to excessively low RRF's in the continuing calibrations for this compound. The acrolein result in sample 684TB00101 was rejected due to an excessively low RRF in the continuing calibration standard associated with this sample.

Samples 670SB01901, 670SB02001, 670SB02301, 684SB00502, 670SB01701, 684SB00502, 670SB01701, 670SB01501, 684SB00301 and 684SB00401 were reanalyzed.

The initial analyses of samples 670SB01901, 670SB02001, 670SB02301, 684SB00502, and 670SB01701 are of preferable data quality to the reanalyses since both original and reanalyses exhibited low internal standard percent recoveries, and the original sample analyses had better holding times.

The reanalysis of sample 670SB01501 is of preferable data quality to the original analysis since the original exhibited low internal standard percent recoveries and the reanalysis had acceptable recoveries for the internal standards.

There was no apparent reason for the reanalyses of samples 684SB00301 and 684SB00401, therefore; the original analyses are of preferable data quality due to better holding times.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The following compounds had Relative Response Factors (RRF's) below the QC limit of 0.05 and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on 9/28/94 on instrument C:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
4-nitroaniline		53
methyl methacrylate		36
4-nitroquinoline-1-oxide	0.18	36
pentachloronitrobenzene	0.33	

Associated samples analyzed with these initial calibrations were qualified as follows:

Results for compounds with RRF's below the QC limit of 0.05, which consisted entirely of non-detects, were rejected (R) in the associated samples.

Positive results for compounds with %RSD's greater than 30% were flagged as estimated (J) in the associated samples.

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05 and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on 10/5/94 on instrument C:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
4-nitroaniline		36
hexachloropropene		33
pentachloronitrobenzene	0.032	

Associated samples analyzed with these initial calibrations were qualified as follows:

Results for compounds with RRF's below the QC limit of 0.05, which consisted entirely of non-detects, were rejected (R) in the associated samples.

Results for compounds with %RSD's greater than the QC limit of 30% that were positive were flagged as estimated (J) in the associated samples.

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05, and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on 10/10/94 on instrument C:

<u>Compound</u>	<u>%RSD</u>
2&4-nitrophenol	35
hexachloropropene	34
2-picoline	36
alpha, alpha-dimethylphenethylamine	61

<u>Compound</u>	<u>RRF</u>
4-nitroquinoline-1-oxide	0.020
pentachloronitrobenzene	0.032

Associated samples analyzed with these initial calibrations were qualified as follows:

Results for compounds with RRF's below the QC limit of 0.05, which consisted entirely of non-detects, were rejected (R) in the associated samples.

Results for compounds with %RSD's greater than the QC limit of 30% that were positive were flagged as estimated (J) in the associated samples.

The following compounds had Relative Response Factors (RRF's) less than the QC limit of 0.05 and Percent Relative Standard Deviations (%RSD's) above the QC limit of 30% for the Initial Calibration analyzed on 10/13/94 on instrument C:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
2&4-nitrophenol		50
4-nitroaniline		57
n-nitrosomethylethylamine		40
4-nitroquinoline-1-oxide	0.016	47
3,3'-dimethylbenzidine		34

Associated samples analyzed with these initial calibrations were qualified as follows:

Results for compounds with RRF's below the QC limit of 0.05, which consisted entirely of non-detects, were rejected (R) in the associated samples.

Results for compounds with %RSD's greater than the QC limit of 30% that were positive were flagged as estimated (J) in the associated samples.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS093094 for the following compounds:

hexachlorocyclopentadiene	37 %
4-nitrophenol	39 %
methyl methacrylate	35 %

There were no positive detections of these compounds in the associated samples. The results were flagged as estimated (JJ). In addition, RRF's for pentachloronitrobenzene and 4-nitroquinoline-1-oxide were 0.032 and 0.022, respectively, which were below the QC limit of 0.05. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS100794

for the following compounds:

butylbenzylphthalate	26 %
hexachloropropene	48 %
alpha, alpha-dimethylphenethylamine	53 %
1-naphthylamine	32 %
2-naphthylamine	30 %
pentachloronitrobenzene	27 %
4-nitroquinoline-1-oxide	44 %
3,3'-dimethylbenzidine	29 %
p-phenylenediamine	39 %

There were no positive results for these compounds in the associated samples. The results were flagged as estimated (UJ). In addition, pentachloronitrobenzene had a Relative Response Factor (RRF) of 0.041, which was below the QC limit of 0.05. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard CS101094 for the following compounds:

aniline	27 %
pyridine	32 %
4-nitroaniline	32 %
alpha, alpha-dimethylphenethylamine	32 %

There were no positive detections of these compounds in the associated samples. All non-detects were flagged as estimated (UJ). In addition, the RRF for 4-nitroquinoline-1-oxide was 0.026, which was below the QC limit of 0.05. All associated sample results, which consisted entirely of non-detects, were rejected (R).

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks associated with this SDG, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was taken.

V.) Surrogate Recoveries:

The surrogate Percent Recovery (%R) of 2,4,6-tribromophenol in sample 670SB01501 was 153%, which was above the QC limits of 19-122%. Reanalysis of this sample extract met %R QC criteria for all surrogates. The associated sample results did not require qualification, since action is only taken if at least two %R's for base/neutral or acid surrogates are outside the QC limits.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD Percent Recoveries (%R's) and Relative Percent Differences (RPD's) were within QC limits, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No qualification was not necessary.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of the internal standard area count for perylene d-12 in samples 670SB01502RE, 670SB02301RE and 684SB00102RE were 39%, 37%, and 35%, respectively, which were below the 50-200% QC limits. All results for the compounds associated with this internal standard in these samples were flagged as estimated (J) and (UJ).

IX) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

Pentachloronitrobenzene results in samples 670SB01501, 670SB01502, 670SB01501MS, 670SB01501MSD, 670SB01901, 670SB01902, 670SB02001, 670SB02002, 670SB02301, 670SB02302, 684SB00102, 684SB00201, 684SB00202, 684SB00301, 684SB00302, 684SB00401, 684SB00501, 684SB00502, 684SB00601, 684SB00602, and 684SB00701 were rejected (R) due to excessively low average Relative Response Factors (RRF's) in the initial calibration associated with these samples. Samples 670SB01902, 670SB02002, 684SB00101, 684SB00102, 684SB00201, 684SB00202, 684SB00301, 684SB00302, 684SB00401, 684SB00501, 684SB00502, 684SB00601, 684SB00602, and 684SB00701 had 4-nitroquinoline-1-oxide results rejected (R) due to excessively low average RRF's in the initial calibration associated with these samples. All remaining laboratory data were acceptable with qualification.

Samples 670SB01501 670SB01502, 670SB00701, 670SB02301 and 670SB00102 were reanalyzed.

The reanalysis of sample 670SB01501 was of preferable data quality to the original analysis since all QC criteria were met, and the original analysis had one surrogate percent recovery above the QC limits. There was no apparent reason to reanalyze samples 670SB01502, 670SB00701, 670SB02301, and 670SB00102, therefore; the original analysis is of preferable data quality due to better holding times.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

The soil matrix spike (MS), sample TQD-002MS, had Percent Recoveries (%R's) for heptachlor of 133%, which was above the QC limits of 34-111%, aldrin of 133%, which was above the QC limits of 42-122%, and endrin of 150%, which was above the QC limits of 30-147%. There were no positive detections of these compounds in the associated samples, so no action was required.

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

The method blank OPBLKS1 had parathion detected at 19.2 ug/kg. Detections of parathion in the

associated samples below 5X this amount was flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

Equipment Rinsate Blanks:

There were no equipment blanks associated with this SDG, so no qualification was needed.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met, so no action was taken

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Rinsate Blanks:

There were no equipment rinsate blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All Ms and MSD criteria for the method were met, so no action was required.

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was necessary.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

Blank Type/ID#	Element	Max Conc.	Action Level mg/kg
CCB	antimony	14.1 ug/L	14.1
CCB	barium	7.43 ug/L	7.43
CCB	cadmium	1.27 ug/L	1.27
CCB	chromium	2.93 ug/L	2.93
CCB	cobalt	4.88 ug/L	4.88
CCB	copper	31.4 ug/L	31.4
CCB	mercury	0.35 ug/L	0.35
CCB	vanadium	4.7 ug/L	4.7
CCB	zinc	71.3 ug/L	71.3
CCB	nickel	11.9 ug/L	11.9
CCB	silver	1.84 ug/L	1.84
CCB	selenium	3.4 ug/L	3.4
CCB	tin	17.9 ug/L	17.9
CCB	thallium	6.95 ug/L	6.95
CCB	arsenic	3.76 ug/L	3.76
CCB	beryllium	0.30 ug/L	0.30

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated continuing calibration blank were flagged as undetected (U).

The following analytes had a negative result with the absolute value of this negative result greater than the IDL:

Blank Type/ID#	Element	Negative Conc.	Action Level mg/kg
CCB	antimony	-7.0 ug/L	7.0
CCB	arsenic	-1.88 ug/L	1.88
CCB	cadmium	-1.55 ug/L	1.55
CCB	chromium	-2.86 ug/L	2.86
CCB	cobalt	-0.67 ug/L	0.67
CCB	thallium	-3.2 ug/L	3.2
CCB	copper	-4.34 ug/L	4.34
CCB	mercury	-0.05 ug/L	0.05
CCB	nickel	-8.63 ug/L	8.63
CCB	selenium	-2.6 ug/L	2.6
CCB	silver	-1.62 g/L	1.62
CCB	thallium	-3.2 ug/L	3.2

All associated positive results less than 5 X the absolute value of the blank were flagged as estimated (J), and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Percent Recovery criteria for the method were met, so no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

The Laboratory Control Sample (LCS) for QC batch 21693 had a Percent Recovery (%R) for silver of 74%, which was below the QC limits of 80-120%. All associated sample results for silver, which consisted entirely of non-detects, were flagged as estimated (UJ).

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) was 53% for selenium and 40% for cobalt in duplicate sample 670SB01501D*, which exceeded the 35% QC limit. All sample results for these metals in the associated sample 670SB01501 were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony, lead, and silver were 35%, 72% and 46%, respectively, for spiked sample 670SB01501S*, which were below the 75-125% QC limits. All positive results and non-detects were flagged as estimated (J) and (UJ) in the associated sample.

IX.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

X.) Furnace Atomic Absorption QC:

Graphite Furnace analyses were not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

WET CHEMISTRY ANALYSES

HEXAVALENT CHROMIUM

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike / Matrix Spike Duplicates (MS / MSD):

All MS / MSD criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was required.

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (TRPH)

I.) Holding Times:

All Holding Time criteria were met, so no action was required.

II.) Calibration:

All Initial and Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

There were no positive detections in the blanks.

IV.) Laboratory Check Samples:

All Percent Recovery criteria for the method were met, so no action was necessary.

V.) Matrix Spike / Matrix Spike Duplicates (MS / MSD):

All MS / MSD criteria for the method were met, so no action was taken.

VI.) Field Duplicates:

There were no field duplicates associated with this SDG, so no action was required.

VII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level IV
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH), Herbicides (HERB), Hexavalent Chromium (HEXAC), Organophosphorus Pesticides (OP PE)
SDG NUMBER: APX06

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
684CB00201	092021	Soil	X	X	X	X	X
684EB01101	092101	Water	X	X	X	X	X
684EB01101MS	092101MS	Water				X	
684EB01101MD	092101MD	Water				X	
684TB01102	092102	Water	X				
014DB00101	092301	Water	X	X	X	X	X
014TB00103	092302	Water	X				
014CB00401	092304	Soil	X	X	X	X	X
014TB00102	092305	Water	X				
GDHCB00701	092801	Soil	X	X	X	X	X
GDHCB01101	092802	Soil	X	X	X	X	X
GDHCB01101MS	092802MS	Soil			X		
GDHCB01101MSD	092802MSD	Soil			X		
GDHCB00901	092803	Soil	X	X	X	X	X
GDHTB00198	092804	Water	X				

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
GDHEB00101	093001	Water	X	X	X	X	X
GDHIB001AB	093002	Water	X			X	

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
 TB = TRIP BLANKS, EB = EQUIPMENT BLANKS, DB = RINSATE WATER BLANK

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>HEXCR</u>	<u>HERB</u>	<u>OP PEST</u>
684CB00201	092021	Soil	X	X	X
684EB01101	092101	Water	X	X	X
014DB00101	092301	Water	X	X	X
014CB00401	092304	Soil	X	X	X
GDHCB00701	092801	Soil	X	X	X
GDHCB01101	092802	Soil	X	X	X
GDHCB01101MS	092802MS	Soil		X	X
GDHCB01101MSD	092802MSD	Soil		X	X
GDHCB00901	092803	Soil	X	X	X
GDHEB00101	093001	Water	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, EB = EQUIPMENT BLANKS
 DB = RINSATE WATER BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - APX06 Organics and Inorganics

SAMPLES: 684CB00201, 684EB01101, 684EB01101MS, 684EB01101MD, 684TB01102,
014DB00101, 014TB00103, 014CB00401, 014TB00102, GDHCB00701, GDHCB01101,
GDHCB01101MS, GDHCB01101MSD, GDHCB00901, GDHTB00198, GDHEB00101,
GDHTB0001AB

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria were met, so no action was taken.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The average Relative Response Factor (RRF) of isobutyl alcohol (0.006) was below the QC limit of 0.05 for the standards run on 8/24/94. All results for this compound in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviation (%RSD) of 2-butanone (32.3%) exceeded the 30% QC limit for the standards run on 8/24/94. Since there were no positive results for this compound in the associated samples, no action was taken.

The average Relative Response Factors (RRF's) of isobutyl alcohol (0.006) and 1,4-dioxane (0.03⁰) were below the 0.05 QC limit for the standards run on 9/01/94. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of chloromethane (46.0%), methylene chloride (34.8%), acetone (62.5%) and 2-butanone (30.5%) exceeded the 30% QC limit for the standards run on 9/01/94. All results for acetone and methylene chloride, which consisted entirely of positive results, in the associated samples were flagged as estimated (J). All results for chloromethane and 2-butanone in the associated samples consisted entirely of non-detects, so no further action was taken.

The average Relative Response Factors (RRF's) of ethyl cyanide (0.041), isobutyl alcohol (0.004) and 1,4-dioxane (0.011) were below the 0.05 QC limit for the standards run on 10/03/94. All results for these

compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of chloroethane (31.2%), methylene chloride (47.3%), acetone (52.5%), 2-butanone (31.6%), ethyl cyanide (39.9%) and isobutyl alcohol (36.4%) exceeded the 30% QC limit for the standards run on 10/03/94. The associated results for ethyl cyanide and isobutyl alcohol were previously qualified. Since there were no positive results for the other compounds in the associated samples, no further action was required.

The average Relative Response Factors (RRF's) of isobutyl alcohol (0.006) and 1,4-dioxane (0.049) were below the 0.05 QC limit for the standards run on 10/05/94. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of the compounds listed below exceeded the 30% QC limit for the standards run on 10/05/94:

methylene chloride	31.8%
acetone	45.7%
acrolein	31.1%
acrylonitrile	36.3%
2-butanone	37.9%
acetonitrile	43.6%
isobutyl alcohol	34.2%
1,4-dioxane	57.2%

The results for isobutyl alcohol and 1,4-dioxane in the associated samples were previously qualified. All results for methylene chloride and acetone in the associated samples, which consisted entirely of positives results, were flagged as estimated (J). There were no positive detections of the remaining compounds in the associated compounds, so no further action was necessary.

Continuing Calibration:

The Relative Response Factors (RRF's) of isobutyl alcohol (0.005) and 1,4-dioxane (0.029) were below the 0.05 QC limit for the standard run on 9/21/94. The results for these compounds were previously qualified using the associated Initial Calibration.

The Percent Difference (%D) of vinyl acetate (29.6%) exceeded the 25% QC limit for the standard run on 9/21/94. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.034), ethyl cyanide (0.025), isobutyl alcohol (0.001) and 1,4-dioxane (0.004) were below the 0.05 QC limit for the standard run on 9/26/94. The results for isobutyl alcohol were previously qualified using the associated Initial Calibration. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 9/26/94:

acetone	51.0%
acrolein	56.4%
acrylonitrile	61.4%
2-butanone	63.0%
vinyl acetate	89.2%
dibromochloromethane	69.0%
2-hexanone	43.0%
4-methyl-2-pentanone	39.5%
tetrachloroethane	26.2%
1,1,2,2-tetrachloroethene	30.5%
ethyl cyanide	69.7%
methacrylonitrile	50.7%
isobutyl alcohol	76.4%
1,4-dioxane	69.2%

The results for acrolein, ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously qualified. The results for acetone, which consisted entirely of positives, in the associated samples were flagged as estimated (J). All results for the remaining compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.030), ethyl cyanide (0.028), isobutyl alcohol (0.001) and 1,4-dioxane (0.004) were below the 0.05 QC limit for the standard run on 9/29/94. The results for isobutyl alcohol were previously qualified using the associated Initial Calibration. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 9/29/94:

acetone	50.4%
acrolein	61.2%
acrylonitrile	56.0%
2-butanone	30.4%
carbon tetrachloride	37.7%
dibromochloromethane	89.5%
4-methyl-2-pentanone	25.7%
acetonitrile	27.0%
ethyl cyanide	65.2%
methacrylonitrile	49.2%
isobutyl alcohol	75.3%
1,4-dioxane	71.3%

The results for acrolein, ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously qualified. The results for acetone, which consisted entirely of positives, in the associated samples were flagged as estimated (J). All results for the remaining compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.040), ethyl cyanide (0.034), isobutyl alcohol (0.001) and 1,4-dioxane (0.004) were below the 0.05 QC limit for the standard run on 9/30/94. The results for

isobutyl alcohol were previously qualified using the associated Initial Calibration. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 9/30/94:

chloroethane	28.1%
acetone	65.6%
acrolein	47.2%
acrylonitrile	56.6%
2-butanone	58.1%
carbon tetrachloride	40.9%
ethyl cyanide	58.7%
dibromochloromethane	83.6%
2-hexanone	46.9%
4-methyl-2-pentanone	43.4%
methacrylonitrile	51.0%
isobutyl alcohol	78.7%
1,4-dioxane	71.4%

The results for acrolein, ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously qualified. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.046), ethyl cyanide (0.046), isobutyl alcohol (0.002) and 1,4-dioxane (0.009) were below the 0.05 QC limit for the standard run on 10/04/94. The results for ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously qualified using the associated Initial Calibration. The results for the other compound, which consisted entirely of non-detects, in the associated samples were rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/04/94:

methylene chloride	29.7%
bromoform	26.9%
isobutyl alcohol	41.6%

All results for isobutyl alcohol were previously qualified in the associated samples. All results for methylene chloride in the associated samples, which consisted entirely of positives results, were flagged as estimated (J). All results for bromoform in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of isobutyl alcohol (0.004) and 1,4-dioxane (0.025) were below the 0.05 QC limit for the standard run on 10/07/94. All results for these compounds in the associated samples were previously qualified based on the Initial Calibration.

The Percent Differences (%D's) of acetonitrile (34.1%), ethyl cyanide (35.2%), isobutyl alcohol (28.0%) and 1,4-dioxane (50.2%) exceeded the 25% QC limit for the standard run on 10/07/94. The associated

results for isobutyl alcohol and 1,4-dioxane were previously qualified. All results for the other compounds, which consisted entirely of non-detects, in the associated samples were flagged as estimated (U).

IV.) Blanks:

Method Blanks:

Acetone was detected at 7.1 ug/L in the water method blank for 9/26/94. Since all the associated samples were field blanks, no action was required.

Acetone and methylene chloride were detected at 27.7 ug/L and 12.0 ug/L, respectively, in the water method blank for 9/29/94. Since all the associated samples were field blanks, no action was necessary.

Acetone and methylene chloride were detected at 17.2 ug/kg and 9.0 ug/kg, respectively, in the soil method blank for 9/21/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 8.8 ug/kg and 9.9 ug/kg, respectively, in the soil method blank for 10/04/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 11.9 ug/kg and 13.0 ug/kg, respectively, in the soil method blank for 10/07/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone, methylene chloride and 2-butanone were detected at 24.3 ug/L, 7.3 ug/L and 7.3 ug/L, respectively, in the water method blank for 9/30/94. Since all the associated samples were field blanks, no action was required.

Acetone and methylene chloride were detected at 7.1 ug/L and 10.8 ug/L, respectively, in the water method blank for 10/07/94. Since all the associated samples were field blanks, no action was required.

Trip Blanks:

Methylene chloride was detected at 2.40 ug/L in trip blank 014TB00102. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 2.50 ug/L in trip blank 014TB00103. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 7.8 ug/L and 2.0 ug/L, respectively, in trip blank 684TB01102. Detections of these compounds in the associated samples below 10X the blank amount

were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 9.8 ug/L and 3.4 ug/L, respectively, in trip blank GDHTB00198. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Methylene chloride was detected at 3.8 ug/L in trip blank GDHTB001AB. Detections of this compound in the associated samples below 10X the blank amount were flagged as undetected with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

Acetone and methylene chloride were detected at 7.4 ug/L and 1.4 ug/L, respectively, in equipment blank 684EB01101. This contamination is believed to be the same as the trip blank and all data qualification for the associated samples was performed using the trip blank data.

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met. No action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Non-detect sample results for isobutyl alcohol, 1,4-dioxane, ethyl cyanide and acrolein were rejected in most samples due to low Relative Response Factors. All remaining laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for 3,3'-dimethylbenzide (41.8%), p-phenylenediamine (35.6%), 3-nitroaniline (46.7) and 4-nitroaniline (46.7%) exceeded the QC limit of 30% for the initial calibration run on 10/11/94. Since all results for these compounds consisted entirely of non-detects, no action was necessary.

The average Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.035) was below the 0.05 QC limit for the initial calibration run on 10/19/94. All results for this compound in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of 4-nitroquinoline-1-oxide (35.2%) and 4-nitroquinone (32.9%) exceeded the 30% QC limit for the initial calibration run on 10/19/94. The results for 4-nitroquinoline -1-oxide were previously qualified. There were no positive detections of 4-nitroquinone in the associated samples, so no action was required.

Continuing Calibration:

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.029) was below the 0.05 QC limit for the continuing calibration run on 10/21/94. All results for this compound were previously rejected.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 10/21/94 for the following compounds:

aniline	35.5%
benzyl alcohol	30.2%
4-chloroaniline	34.9%
3-nitroaniline	47.8%
methyl methacrylate	49.5%
ethyl methacrylate	37.3%
n-nitrosodiethylamine	33.8%
isosafrole	27.7%
1,4-naphthaquinone	280%
1-naphthylamine	35.3%
2-naphthylamine	37.3%
4-aminobiphenyl	77.6%
4-nitroquinoline 1-oxide	72.8%
aramite	43.2%
p-dimethylaminobenzene	30.5%
7,12-dimethylbenz(a)anthracene	29.6%
3-methylcholanthrene	66.6%
p-phenylenediamine	44.4%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 10/27/94 for the following compounds:

methyl methacrylate	32.5%
methyl methane sulfonate	84.0%
n-nitrosopyrrolidine	25.8%
a,a-dimethylphenethylamine	34.9%
1,4-naphthaquinone	390%
1-naphthylamine	30.2%
2-naphthylamine	48.9%
pentachloronitrobenzene	28.3%
4-aminobiphenyl	51.9%
p-phenylenediamine	58.4%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 1.8 ug/L in water method blank BW045B3. Since all the associated samples were field blanks, no action was required.

Equipment Blanks:

All criteria for the method were met, so no action was required.

V.) Surrogate Recoveries:

All Surrogate recovery criteria for the method were met. No action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All Matrix Spike / Matrix Spike Duplicate criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Relative Standard Deviations (%RSD's) of aldrin (22.9%) and isodone (20.5%) exceeded the QC limit of 20% for the initial calibration run on 9/27/94, instrument H. Since only two analytes exceeded the QC limit with %RSD's less than 30%, no action was necessary.

The Percent Relative Standard Deviations (%RSD's) of diallate #1 (22.9%), diallate #2 (30.6%) and chlorobenzilate (24.8%) exceeded the QC limit of 20% for the initial calibration run on 10/21/94, instrument H. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Relative Standard Deviations (%RSD's) of diallate #1 (24.1%), diallate #2 (32.0%) and kepone (96.2%) exceeded the QC limit of 20% for the initial calibration run on 10/22/94, instrument F. All results for these compounds, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

All criteria for the method were met, so no action was taken.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of the surrogate listed below exceeded the 30-150% QC limits for the associated sample:

<u>Client</u>	<u>DCB</u>	<u>DCB</u>
<u>Sample #:</u>	<u>Quant. %R</u>	<u>Conf. %R</u>
GDHCB01101	186	192

All positive results for this sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recoveries (%R's) of the compounds listed below exceeded the QC limits for samples GDHCB01101MS and GDHCB01101MSD:

<u>Compound</u>	<u>MS (%R)</u>	<u>MSD(%R)</u>	<u>QC Limit</u>
heptachlor	127	142	34-111
aldrin		125	42-122

Since the high recoveries of these compounds and the high percent recoveries of the surrogates for these samples do not extend to any of the other samples, it is believed that they are the result of a matrix effect. Data qualification was previously performed based on high Surrogate Recoveries. No further action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

Parathion was detected at 0.6 ug/L in water method blank OPW008B1. Since all the associated samples were field blanks, no action was required.

Parathion was detected at 0.6 ug/L in water method blank OPW008B2. Since all the associated samples were field blanks, no action was required.

Parathion was detected at 23.8 ug/kg in soil method blank OPS007B1. Detections of this compound in the associated samples below 5X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Parathion was detected at 32.5 ug/kg in soil method blank OPS007B2. Detections of this compound in the associated samples below 5X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Parathion was detected at 0.7 ug/L in water method blank OPW008B3. Since all the associated samples were field blanks, no action was required.

Equipment Blanks:

Parathion was detected at 0.6 ug/L in both equipment blanks 684EB01101 and GDHEB0010. All results for this compound were previously qualified based on the method blanks. No further action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

The Relative Percent Difference (RPD) of 200% for dimethoate exceeded the 25% QC limit for samples GDHCB01101MS and GDHCB01101MSD.

The Percent Recovery (%R) of dimethoate (12%) was below the 40-150% QC limits for sample GDHCB01101MS. Based on this low recovery and the RPD exceedence for the MS / MSD pair, the results for this compound, which consisted of a non-detect, in the sample GDHCB01101 was flagged as estimated (UJ).

The Percent Recoveries (%R's) of thionazin (152%) in the blank spike and famphur (154%) in the blank spike duplicate exceeded the 40-150% QC limits. Since there were no positive results for these compounds in the associated samples, no action was required.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

2,4,5-T was detected at 5.6 ug/kg in soil method blank HS011B1. Detections of this compound in the associated samples below 5X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Equipment Blanks:

All criteria for the method were met, so no action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

The Percent Recoveries (%R's) of 72% in GDHCB01101MS and 86% in GDHCB01101MSD for 2,4-D were below the 87-117% QC limits. Based on these low recoveries, the result for this compound, which was a non-detect, in sample GDHCB01101 was flagged as estimated (UJ).

VII.) TCL Compound Identification:

All TCL Compound Identification criteria were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS , CYANIDE, and HEXAVALENT CHROMIUM

I.) Holding Times:

The 48 hours between sample arrival and analysis for 684CB00201 and the 72 hours for sample 014CB00401 exceeded the 24 hour technical holding time for hexavalent chromium. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

II.) Calibration:

The Percent Recoveries (%R's) of chromium (77%), silver (67%) and zinc (132%) were outside the 80-120% QC limits for the CRDL standard run on 10/5/94. All non-detect results for these analytes in the associated samples were flagged as estimated (UJ). All positive results for these analytes greater than the IDL and less than 3X the CRDL are flagged as estimated (J).

The Percent Recoveries (%R's) of antimony (126%), lead (125%) and zinc (128%) exceeded the 80-120% QC limits for the CRDL standard on 10/6/94. All non-detect results for these analytes in the associated samples were flagged as estimated (UJ). All positive results for these analytes greater than the IDL and less than 3X the CRDL are flagged as estimated (J).

II.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB5	zinc	220 ug/L	220
EB	barium	391 ug/L	391
CCB2	copper	8.4 ug/L	8.4

CCB = Continuing Calibration Blank, EB = Equipment Blank (684EB01101)

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples) for which the contaminated blank is an associated calibration or field blank were flagged as undetected (U).

The following analyte had a negative result with an absolute value greater than the IDL:

<u>Blank</u>		<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
<u>Type/ID#</u>	<u>Analyte</u>		
CCB1	arsenic	-0.9 ug/L	0.9

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

All Duplicate Sample Analysis criteria for the method were met. No action was required.

VIII.) Matrix Spike Recoveries:

The Percent Recovery criteria for the method were met. No action was required.

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

All Graphite Furnace QC criteria for the method were met. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: *Appendix IX, SW846: 8240, 8270, 8080, 8140, 8150, 6010, 7196, 9012, 418.1, 7040*
VALIDATION GUIDELINES: *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data USEPA Contract Laboratory Program National Functional Guidelines for Evaluating Inorganics Data, 1994*
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides/PCB's (P/PCB), Organophosphorus Pesticides (OPest), Herbicides (Herb), Total Metals and Cyanide (Me/CN), Hexavalent Chromium (HEXCR), Total Recoverable Petroleum Hydrocarbons (TRPH)
SDG NUMBER: APX07

SAMPLES:

<u>Client</u>	<u>Lab</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOA</u>	<u>P/PCB</u>	<u>OPest</u>	<u>Herb</u>
<u>Sample #:</u>	<u>Sample #:</u>						
014TB00101	TUB011	Water	X				
014SB00601	TUB007	Soil	X	X	X	X	X
014SB00602	TUB008	Soil	X	X	X	X	X
014SB00602MS	TUB009	Soil	X	X	X	X	X
014SB00602MSD	TUB010	Soil	X	X	X	X	X
014SB00701	TUB001	Soil	X	X	X	X	X
014SB00702	TUB002	Soil	X	X	X	X	X
014SB00801	TUB003	Soil	X	X	X	X	X
014SB00802	TUB004	Soil	X	X	X	X	X
014SB00901	TUB005	Soil	X	X	X	X	X
014SB00902	TUB006	Soil	X	X	X	X	X
684TB01701	TTP014	Water	X				
684SB01901	TTP001	Soil	X	X	X	X	X
684SB01902	TTP002	Soil	X	X	X	X	X
684SB02001	TTP003	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>OPest</u>	<u>Herb</u>
684SB02101	TTP004	Soil	X	X	X	X	X
684SB02201	TTP006	Soil	X	X	X	X	X
684SB02202	TTP005	Soil	X	X	X	X	X
684SB02301	TTP007	Soil	X	X	X	X	X
684TB02301	TTP013	Water	X				
684SB02302	TTP008	Soil	X	X	X	X	X
684SB02401	TTP009	Soil	X	X	X	X	X
684SB02402	TTP011	Soil	X	X	X	X	X
684SB02501	TTP010	Soil	X	X	X	X	X
684SB02502	TTP012	Soil	X	X	X	X	X
684SB02202RE	TTP005RE	Soil		X			

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, RE = RE-ANALYSES / RE-EXTRACTIONS, TB = TRIP BLANKS

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Me/CN</u>	<u>HEXCR</u>	<u>TRPH</u>
014SB00601	TUB007	Soil	X	X	X
014SB00602	TUB008	Soil	X	X	X
014SB00701	TUB001	Soil	X	X	X
014SB00702	TUB002	Soil	X	X	X
014SB00801	TUB003	Soil	X	X	X
014SB00802	TUB004	Soil	X	X	X
014SB00901	TUB005	Soil	X	X	X
014SB00902	TUB006	Soil	X	X	X
684SB01901	TTP001	Soil	X	X	X
684SB01902	TTP002	Soil	X	X	X
684SB02001	TTP003	Soil	X	X	X
684SB02101	TTP004	Soil	X	X	X
684SB02201	TTP005	Soil	X	X	X
684SB02202	TTP006	Soil	X	X	X
684SB02301	TTP007	Soil	X	X	X
684SB02302	TTP008	Soil	X	X	X
684SB02401	TTP009	Soil	X	X	X
684SB02402	TTP011	Soil	X	X	X
684SB02501	TTP010	Soil	X	X	X
684SB02502	TTP012	Soil	X	X	X
014SB00602D*	TUB008D*	Soil	X	X	
014SB00602S*	TUB008S*	Soil	X	X	
014SB00602MS	TUB008MS	Soil			X
014SB00602MSD	TUB008MSD	Soil			X

D* = MATRIX DUPLICATE, S* = MATRIX SPIKE, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE

DATA REVIEWER(S):

Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Kevin C. Harmon". The signature is written in a cursive style with a long horizontal flourish at the end.

Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated. - APX07 Organics and Inorganics

SAMPLES: 014TB00101, 014SB00601, 014SB00602, 014SB00602MS, 014SB00602MSD,
014SB00701, 014SB00702, 014SB00801, 014SB00802, 014SB00901, 014SB00902,
684TB01701, 684SB01901, 684SB01902, 684SB02001, 684SB02101, 684SB02201,
684SB02202, 684SB02301, 684TB02301, 684SB02302, 684SB02401, 684SB02402,
684SB02501, 684SB02502, 684SB02202RE

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was required.

III.) Calibration:

Initial Calibration:

The following table summarizes compounds with Relative Response Factors (RRF's) that were less than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) that were above the 30% QC limit for the Initial Calibration analyzed on Instrument E on 6/28/94:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
chloroethane		31
methylene chloride		47
acetone		53
dichlorodifluoromethane		89
1,4,-dioxane	0.011	
isobutyl alcohol	0.004	36
2-butanone		32
ethyl cyanide	0.041	40

Associated samples analyzed with these initial calibrations had results qualified as follows:

Non-detect compound results with RRF's less than 0.05 were rejected (R) in the associated samples. Positive compound results with RRF's less than 0.05 were flagged as estimated (J). Compounds with %RSD's greater than 30% that were positive were flagged as estimated (J). In addition, the %RSD for dichlorodifluoromethane exceeded 70%, and the non-detect results for this compound in the associated

samples were flagged as estimated (UJ).

The following Relative Response Factors (RRF's) were less than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) were above the 30% QC limit for the Initial Calibration analyzed on Instrument E on 8/24/94:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
dichlorodifluoromethane		32
1,4,-dioxane	0.014	
isobutyl alcohol	0.006	
2-butanone		32
trans-1,4-dichloro-2-butene		54

Associated samples analyzed with these initial calibrations were qualified as follows:

Compounds with RRF's less than the 0.05 QC limit that were non-detect were rejected (R). Compounds with RRF's less than the 0.05 QC limit that had positive results were flagged estimated (J). Compounds with %RSD's greater than the 30% QC limit that were positive were flagged estimated (J).

The following Relative Response Factors (RRF's) were less than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) were above the 30% QC limit, for the Initial Calibration analyzed on Instrument F on 9/1/94:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
dichlorodifluoromethane	0.03	
methylene chloride		35
chloromethane		46
2-butanone		31
isobutyl alcohol	0.006	
1,4-dioxane	0.030	

Associated samples analyzed with these initial calibrations were qualified as follows:

Compounds with RRF's less than the 0.05 QC limit that were non-detects were rejected (R). Compounds with RRF's less than the 0.05 QC limit that had positive results were flagged as estimated (J). Compounds with %RSD's greater than the 30% QC limit that were positive were flagged as estimated (J).

The following Relative Response Factors (RRF's) were less than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) were above the 30% QC limit for the Initial Calibration analyzed on instrument F on 10/3/94:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
dichlorodifluoromethane	0.043	
methylene chloride		40
chloromethane		46
2-butanone		31
isobutyl alcohol	0.022	76
1,4-dioxane	0.031	

Associated samples analyzed with these initial calibrations were qualified as follows:

Compounds with RRF's less than the 0.05 QC limit that were non-detect were rejected (R). Compounds with RRF's less than the 0.05 QC limit that had positive results were flagged estimated (J). Compounds with %RSD's greater than the 30% QC limit that were positive were flagged estimated (J). In addition, the %RSD for isobutyl alcohol exceeded 70%. Since this compound was rejected due to a low RRF, no further action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the continuing calibration standard ENS100594A for the following compounds:

dichlorodifluoromethane	57 %
acrolein	26 %
isobutyl alcohol	59 %
1,2-dibromochloropropane	27 %

All associated samples with positive or non-detect results for these compounds were qualified as estimated (J) and (UJ). In addition, isobutyl alcohol, 1,4 dioxane and dichlorodifluoromethane had Relative Response Factors (RRF's) of 0.002, 0.009 and 0.029, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the continuing calibration standard ENS092994A for the following compounds:

acetone	50 %
acrolein	61 %
acrylonitrile	56 %
2-butanone	30 %
1,4-dioxane	71 %
isobutyl alcohol	75 %
methacrylonitrile	49 %
dibromochloromethane	89 %
carbon tetrachloride	38 %
4-methyl-2-pentanone	26 %
dichlorodifluoromethane	152%
acetonitrile	27 %
allyl chloride	27 %
ethyl cyanide	65 %
methacrylonitrile	49 %

All associated samples with positive or non-detect results for these compounds were qualified as estimated (J) or (UJ). In addition, the RRF's for acrolein, dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol of 0.045, 0.041, 0.005 and 0.003, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the continuing calibration standard FNS093094A for the following compounds:

acetone	60 %
1,2-dichloroethane	38 %
2-butanone	27 %
1,4-dioxane	30 %
isobutyl alcohol	44 %
4-methyl-2-pentanone	37 %
1,1,1-trichloroethane	29 %
carbon tetrachloride	35 %
vinyl acetate	57 %
bromodichloromethane	30 %
2-hexanone	41 %
1,2,3-trichloropropane	28 %
trans-1,4-dichloro-2-butene	27 %
1,2-dibromochloropropane	46 %
methacrylonitrile	26 %

All associated samples with positive or non-detect results for these compounds were qualified as estimated (J) and (UJ). In addition, the RRF's for dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol of 0.028, 0.021 and 0.003, respectively, were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the continuing calibration standard FNS100494A for the following compounds:

1,2-dichloroethane	32 %
2-butanone	38 %
isobutyl alcohol	68 %
1,2-dibromochloropropane	38 %
dichlorodifluoromethane	31 %
methacrylonitrile	28 %

All associated samples with positive or non-detect results for these compounds were qualified as estimated (J) and (UJ). In addition, the RRF's for dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol of 0.041, 0.035 and 0.007, respectively, were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

IV.) Blanks:

Method Blanks:

Acetone was detected in soil method blanks VBLKS1, VBLKS2, VBLKS3 and VBLKS4 at 7.0 ug/kg, 6.8 ug/kg, ug/kg, 5.4 ug/kg and 17.3 ug/kg, respectively. Detections of acetone in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Acetone was detected in water method blank VBLKW1 27.7 ug/L. Since all associated samples consisted of trip blanks, no action was taken.

Methylene chloride was detected in soil method blanks VBLKS1, VBLKS2, VBLKS3 and VBLKS4 at 10.2 ug/kg, 8.0 ug/kg, 8.1 ug/kg and 14.2 ug/kg, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in water method blank VBLKW1 at 12.0 ug/L. Since all associated samples consisted of trip blanks, no action was taken.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

Trip Blanks:

Trip Blanks 684TB02301, 684TB01701 and 014TB00101 had positive results for methylene chloride of 2.8 ug/L, 2.8 ug/L and 3.5 ug/L, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

Trip Blanks 684TB02301 and 014TB00101 had positive results for acetone of 6.0 ug/L, and 5.9 ug/L, respectively. Detections of acetone in the associated samples below 10X these amounts were flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met, so no action was necessary.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

All non-detect soil sample results for isobutyl alcohol, dichlorodifluoromethane, ethyl cyanide and 1,4-dioxane were rejected due to excessively low Relative Response Factors (RRF's) in the initial and/or continuing calibrations. All non-detect water sample results for isobutyl alcohol, 1,4-dioxane, and acrolein rejected due to excessively low RRF's in the initial and/or continuing calibrations. All remaining laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

The holding time to extraction for sample 684SB02202RE was 29 days, which exceeded the 14 day QC limit by greater than two times. Associated positive results were flagged as estimated (J), and non-detects were rejected (R).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The compounds had Relative Response Factors (RRF's) that were below the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) that were above the 30% QC limit for the Initial Calibration analyzed on Instrument B:

<u>Compound</u>	<u>RRE</u>	<u>%RSD</u>
pentachloronitrobenzene	0.044	
3,3'-dimethylbenzidine		42 %
p-phenylenediamine		36 %
3-nitroaniline		47 %
4-nitroaniline		47 %

Associated samples analyzed with these initial calibrations had results qualified as follows:

Compounds with RRF's below the 0.05 QC limit, which consisted entirely of non-detects, were rejected (R). Compounds with %RSD's that were greater than the 30% QC limit that were positive, were flagged as estimated (J).

The following table summarizes compounds with Relative Response Factors (RRF's) that were less than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) that were above the 30% QC limit, for the Initial Calibration analyzed on Instrument H:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
1,4-naphthoquinone		33 %
4-nitroquinoline-1-oxide	0.032	

Associated samples analyzed with these initial calibrations had results qualified as follows:

Compounds with RRF's below the 0.05 QC limit, which consisted entirely of non-detects, were rejected (R). Compounds with %RSD's greater than the 30% QC limit that were positive, were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard BS101594 for the following compounds:

methyl methacrylate	63 %
ethyl methacrylate	38 %
n-nitrosomethylethylamine	33 %
n-nitrosodiethylamine	35 %
n-nitrosomorpholine	37 %
hexachloropropene	55 %
alpha, alpha-dimethylphenethylamine	45 %
1,4-naphthoquinone	121 %
1-naphthylamine	40 %
2-naphthylamine	50 %
4-aminobiphenyl	56 %
4-nitroquinoline-1-oxide	31 %
3,3'-dimethylbenzidine	46 %
p-phenylenediamine	27 %

There were no positive detections of these compounds in the associated samples, and all non-detects were flagged as estimated (UJ). In addition, the RRF for pentachloronitrobenzene was 0.038, which was below the 0.05 QC limit. All associated sample results for this compound, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard BS101794 for the following compounds:

4-chloroaniline	31 %
3-nitroaniline	55 %
butylbenzylphthalate	43 %
bis(2-ethylhexyl)phthalate	41 %
hexachloropropene	158 %
1,4-naphthoquinone	60 %
alpha, alpha-dimethylphenethylamine	44 %
1-naphthylamine	64 %
2-naphthylamine	88 %
4-aminobiphenyl	88 %
4-nitroquinoline-1-oxide	47 %
3,3'-dimethylbenzidine	77 %
p-phenylenediamine	92 %
methapyrilene	29 %

There were no positive detections of these compounds in the associated samples, and all non-detects were flagged as estimated (UJ). In addition, the RRF's for pentachloronitrobenzene and hexachloropropene were 0.032 and 0.046, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard BS101994 for the following compounds:

benzyl alcohol	32 %
2,2-oxybis(1-chloropropane)	27 %
4-methylphenol	26 %
2-nitroaniline	26 %
methyl methacrylate	57 %
n-nitrosodiethylamine	34 %
benzo(a)anthracene	31 %
hexachloropropene	61 %
alpha, alpha-dimethylphenethylamine	63 %
1,4-naphthoquinone	92 %
1-naphthylamine	60 %
2-naphthylamine	64 %
4-aminobiphenyl	71 %
pentachloronitrobenzene	27 %
4-nitroquinoline-1-oxide	66 %
3,3'-dimethylbenzidine	48 %
p-phenylenediamine	48 %

Positive results for these compounds in the associated samples were flagged as estimated (J) and non-detects were flagged as estimated (UJ). In addition, the RRF's for pentachloronitrobenzene, 4-nitroquinoline-1-oxide and hexachloropropene were 0.032, 0.036 and 0.045, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard HS102694 for the following compounds:

alpha, alpha-dimethylphenethylamine	35 %
4-nitroquinoline-1-oxide	49 %

Positive results for these compounds in the associated samples were flagged as estimated (J) and non-detects were flagged as estimated (UJ). In addition, the RRF for 4-nitroquinoline-1-oxide was 0.017, which was below the 0.05 QC limit. All associated sample results for this compound, which consisted entirely of non-detects, were rejected (R).

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks associated with this SDG, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was taken.

V.) Surrogate Recoveries:

The Surrogate Percent Recovery (%R) in sample 684SB02202 for nitrobenzene-d5 was 18%, which was below the QC limits of 23-120%, 2-fluorobiphenyl was 19%, which was below the QC limits of 30-115%, phenol-d6 was 21%, which was below the QC limits of 24-113%, 2-fluorophenol was 23%, which was below the QC limits of 25-121%, and 2,4,6-tribromophenol was 18%, which was below the QC limits of 19-122%. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ). Re-analysis of this sample extract met %R QC criteria for all surrogates, however, all results, which consisted entirely of non-detects, were rejected (R) due to excessive holding time exceedances.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD Percent Recoveries (%R's) and Relative Percent Differences (RPD's) were within QC limits, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No qualification was not necessary.

VIII.) Internal Standards Performance:

The Internal Standard area counts for perylene d-12 and naphthalene d-8 in sample 684SB02101 were 47%, and 201%, respectively, which were outside the 50-200% QC limits. All associated results for the compounds associated with internal standard perylene d-12 in this sample, were flagged as estimated (J) and (UJ). All associated positive results for the compounds associated with the internal standard naphthalene d-8 in this sample, were flagged as estimated (J).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

Pentachloronitrobenzene results were rejected (R) in all samples due to excessively low Relative Response Factors (RRF's) in the initial calibration associated with these samples. Samples 014SB00601, 014SB00602, 684SB01902, 684SB02201, 684SB02301, 684SB02302, 684SB02401, 684SB02402, 684SB02501, 684SB02502, 684SB02001 and 684SB02101 had hexachloropropene results rejected (R) due to an excessively low RRF in the continuing calibration associated with these samples. Samples 684SB02001, 684SB02101, 684SB02402 and 684SB02502 had 4-nitroquinoline-1-oxide results rejected (R) due to an excessively low RRF in the continuing calibration associated with these samples.

Five surrogate recoveries were below the QC limits for sample 684SB02202. This sample was re-extracted 29 days after sample collection. The re-analysis of sample 684SB02202RE was rejected due to excessive holding time exceedance. The initial analysis is considered to be of preferable data quality and was acceptable with qualification.

All remaining laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was necessary.

IV.) Blanks:

Method Blanks:

Methoxychlor was detected at 8.7 ug/kg in the method blank analyzed with this SDG. Detections of methoxychlor in the associated samples below 5X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was necessary.

IV.) Blanks:

Method Blanks:

The method blank OPBLKS1 had parathion detected at 22.2 ug/kg. Detections of parathion in the associated samples below 5X this amount was flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

Equipment Rinsate Blanks:

There were no equipment blanks associated with this SDG, so no qualification was needed.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Rinse Blanks:

There were no equipment rinse blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All Ms and MSD criteria for the method were met, so no action was required.

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

All Calibration criteria for the method were met, so no action was required.

III.) Blanks:

The following blank results represent the highest detections associated with these samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc., ug/L</u>	<u>Action Level</u> <u>mg/kg</u>
CCB19	antimony	33.1	33.1
CCB10	arsenic	27.3	27.3
CCB2	barium	7.29	7.29
CCB6	beryllium	0.29	0.29
CCB1	cadmium	2.13	2.13
CCB2	chromium	3.99	3.99
CCB19	cobalt	5.12	5.12
CCB6	copper	8.42	8.42
CCB17	lead	25.2	25.2
CCB1	mercury	0.03	0.03
CCB3	nickel	22.8	22.8
CCB4	silver	1.87	1.87
CCB2	thallium	2.10	2.10
CCB2	tin	19.6	19.6

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc. ug/L</u>	<u>Action Level mg/kg</u>
CCB2	vanadium	5.24	5.24
CCB13	zinc	27.3	27.3

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Limit, mg/kg for soil samples) for which the contaminated blank was an associated laboratory calibration blank were flagged as undetected (U).

Negative results with absolute values greater than the IDL were observed in the initial (ICB) and continuing (CCB) calibration blanks for the following metals:

<u>Blank Type, ID#</u>	<u>Element</u>	<u>Neg. Conc. ug/L</u>	<u>Action Limit mg/kg</u>
CCB7	antimony	-8.96	8.96
ICB1	arsenic	-5.70	5.70
CCB16	barium	-0.68	0.68
ICB2	beryllium	-0.16	0.16
CCB16	cadmium	-1.20	1.20
ICB1	cobalt	-0.64	0.64
ICB1	copper	-3.17	3.17
CCB1	lead	-8.35	8.35
ICB1	mercury	-0.04	0.04
CCB16	nickel	-6.51	6.51
CCB7	silver	-2.69	2.69
ICB1	tin	-3.57	3.57
CCB8	vanadium	-2.90	2.90
ICB2	zinc	-5.36	5.36

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All ICP Interference Check Sample criteria for the method were met, so no action was necessary.

V.) ICP Serial Dilution Analysis:

Data for Serial Dilution Analysis was not included. No action was taken.

VI.) Laboratory Control Samples (LCS):

All LCS Percent Recovery criteria for the method were met, so no action was taken.

VII.) Duplicate Sample Analysis:

All Duplicate Sample criteria were met, so no action was taken.

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) were 14.1%, 69.0% and 65.4% for antimony, cyanide and selenium, respectively, in soil spiked sample 014SB00602S*, which were below the 75-125% QC limits. The positive detections of selenium in samples 014SB00602 and 014SB00602D* were flagged as estimated (J) and the non-detect results for antimony were rejected (R) in the two samples. The non-detect result for cyanide in sample 014SB00602 was flagged as estimated (UJ).

IX.) Field Duplicates:

No field duplicate were associated with this SDG.

X.) Furnace Atomic Absorption QC:

All criteria for the method were met, so no action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The non-detect results for antimony were rejected in samples 014SB00602 and 014SB00602D* due to a matrix spike recovery of less than 30%. All other remaining laboratory data were acceptable with qualification.

HEXAVALENT CHROMIUM

I.) Holding Times:

The Holding Times to analyses were 2 days for all samples associated with this SDG, which exceeded the 24 hour QC limit. All results for hexavalent chromium in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no action was required.

IV.) Laboratory Control Sample (LCS):

All LCS criteria were met for the method, so no action was taken.

V.) Duplicate Sample Analysis:

All Duplicate Sample criteria for the method were met, so no action was necessary.

VI.) Spike Recovery:

The Percent Recovery (%R) was 51.0% for hexavalent chromium in soil spiked sample 014SB00602S*, which was below the 80-120% QC limits. The non-detect result in sample 014SB00602 was flagged as estimated (UJ).

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was necessary.

VIII.) Compound Quantitation and Reported Contract Required Detection Limits (CRDL's):

All criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (TRPH)

I.) Holding Times:

All Holding Times criteria for the method were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Sample (LCS):

All LCS criteria were met for the method, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD Recovery criteria for the method were met, so no action was required.

VI.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Contract Detection Limits (CRDL's):

All PQL criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: EnSafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Incorporated
QA/QC LEVEL: CLP Level III
EPA SOW/METHOD: *Appendix IX SW846: 8240, 8270, 8080, 8140, 8150*
VALIDATION GUIDELINES: *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994; Laboratory Data USEPA Contract Laboratory Program National Functional Guidelines for Evaluating Inorganics Data, 1994*

SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOA), Organochlorine Pesticides/PCB's (P/PCB), Organophosphorus Pesticides (OPest), Herbicides (Herb), Total Metals and Cyanide (Me/CN), Hexavalent Chromium (HEXCR), Total Recoverable Petroleum Hydrocarbons (TRPH)

SDG NUMBER: APX08

SAMPLES:

Client Sample #:	Lab Sample #:	Matrix	VOA	SVOA	P/PCB	OPest	Herb
014SB00101	TUD001	Soil	X	X	X	X	X
014SB00102	TUD002	Soil	X	X	X	X	X
014SB00201	TUD003	Soil	X	X	X	X	X
014SB00202	TUD004	Soil	X	X	X	X	X
014SB00301	TUD005	Soil	X	X	X	X	X
014SB00302	TUD006	Soil	X	X	X	X	X
014SB00401	TUD007	Soil	X	X	X	X	X
014SB00402	TUD008	Soil	X	X	X	X	X
014SB00501	TUD009	Soil	X	X	X	X	X
014SB00502	TUD010	Soil	X	X	X	X	X
014SW00114	TUD011	Soil	X	X	X	X	X
684SB02801	TUU001	Soil	X	X	X	X	X
684SB02801RE	TUU001RE	Soil	X				
684SB02901	TUU002	Soil	X	X	X	X	X
684SB02902	TUU003	Soil	X	X	X	X	X
684SB03001	TUU004	Soil	X	X	X	X	X
684SB03002	TUU005	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVO</u>	<u>P/PCB</u>	<u>OPest</u>	<u>Herb</u>
684SB03101	TUU006	Soil	X	X	X	X	X
BLKD092413	TUU007	Water	X				
684SB02801MS	TUU008MS	Soil	X		X	X	X
684SB02801MSD	TUU009MSD	Soil	X		X	X	X
684SB02901MS	TUU010MS	Soil		X			
684SB02901MSD	TUU011MSD	Soil		X			

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, RE = RE-ANALYSIS / RE-EXTRACTION, BLKD = REAGENT BLANK

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>Me/CN</u>	<u>HEXCR</u>	<u>TRPH</u>
014SB00101	TUD001	Soil	X	X	X
014SB00102	TUD002	Soil	X	X	X
014SB00201	TUD003	Soil	X	X	X
014SB00202	TUD004	Soil	X	X	X
014SB00301	TUD005	Soil	X	X	X
014SB00302	TUD006	Soil	X	X	X
014SB00401	TUD007	Soil	X	X	X
014SB00402	TUD008	Soil	X	X	X
014SB00501	TUD009	Soil	X	X	X
014SB00502	TUD010	Soil	X	X	X
014SW00114	TUD011	Soil	X	X	X
684SB02501	TUU007	Soil	X	X	X
684SB02502	TUU008	Soil	X	X	X
684SB02801	TUU001	Soil	X	X	X
684SB02901	TUU002	Soil	X	X	X
684SB02902	TUU003	Soil	X	X	X
684SB03001	TUU004	Soil	X	X	X
684SB03002	TUU005	Soil	X	X	X
684SB03101	TUU006	Soil	X	X	X
684SB02801D*	TUU001D*	Soil	X	X	
684SB02801S*	TUU001S*	Soil	X	X	

D* = MATRIX DUPLICATE, S* = MATRIX SPIKE

DATA REVIEWER(S): Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - APX07 Organics and Inorganics

SAMPLES: 014SB00101, 014SB00102, 014SB00201, 014SB00202, 014SB00301, 014SB00302, 014SB00401, 014SB00402, 014SB00501, 014SB00502, 014SW00114, 684SB02801, 684SB02801RE, 684SB02901, 684SB02901, 684SB03001, 684SB03002, 684SB03101, BLKD092413, 684SB02801MS, 684SB02801MSD, 684SB02901MS, 684SB02901MSD

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was needed.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The following table summarizes compounds with Relative Response Factors (RRF's) that were less than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) that were above the 30% QC limit for the Initial Calibration analyzed on Instrument E :

<u>Compound</u>	<u>RRE</u>	<u>%RSD</u>
acetone		53
dichlorodifluoromethane		88
1,4,-dioxane	0.011	
isobutyl alcohol	0.004	36

Associated samples analyzed with these initial calibrations had results qualified as follows:

Compounds with RRF's that were less than the 0.05 QC limit that were non-detect were rejected (R). Compounds with RRF's that were less than the 0.05 QC limit that had positive results were flagged estimated (J). Compounds with %RSD's that were greater than the 30% QC limit that were positive were flagged estimated (J). In addition, the %RSD for dichlorodifluoromethane exceeded 70% and the non-detect results for this compound in the associated samples were flagged as estimated (UJ).

Continuing Calibration:

The Percent Difference (%D) exceeded the 25% QC limit for continuing calibration standard ENS100394A for the following compound:

trans-1,4-dichloro-2-butene	34 %
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All associated samples with positive or non-detect results for this compound were qualified as estimated (J) or (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS100494A for the following compounds:

methylene chloride	30 %
bromoform	27 %
dichlorodifluoromethane	56 %
isobutyl alcohol	42 %
1,2-dibromo-3-chloropropane	27 %

All associated samples with positive or non-detect results for any of these compounds were qualified as estimated (J) or (UJ). In addition, the RRF's for acrolein, dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol of 0.046, 0.030, 0.009 and 0.002, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS100694A for the following compounds:

2-hexanone	26 %
dichlorodifluoromethane	68 %
2-propanol	30 %
isobutyl alcohol	50 %

All associated samples with positive or non-detect results for any of these compounds were qualified as estimated (J) or (UJ). In addition, the RRF's for acrolein, dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol of 0.040, 0.021, 0.012 and 0.002, respectively, were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS100794A for the following compounds:

trichlorofluoromethane	45 %
carbon tetrachloride	28 %
vinyl acetate	26 %
dibromochloromethane	98 %
2-hexanone	29 %
dichlorodifluoromethane	55 %
2-propanol	37 %
trichlorotrifluoroethane	45 %

methacrylonitrile	27 %
isobutyl alcohol	29 %

All associated samples with positive or non-detect results for any of these compounds were qualified as estimated (J) or (UJ). In addition, the RRF's for dichlorodifluoromethane, 1,4-dioxane and isobutyl alcohol of 0.016, 0.014 and 0.004, respectively, were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

IV.) Blanks:

Method Blanks:

Acetone was detected in soil method blanks VBLKS1, VBLKS2, and VBLKS3 at 18.7 ug/kg, 8.8 ug/kg, ug/kg and 7.3 ug/kg, respectively. Detections of acetone in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Acetone was detected in water method blank VBLKW1 at 7.1 ug/L. The associated sample was a field blank, so no action was required.

Methylene chloride was detected in soil method blanks VBLKS1, VBLKS2 and VBLKS3 at 13.3 ug/kg, 9.9 ug/kg and 11.3 ug/kg, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in water method blank VBLKW1 10.8 ug/L. The associated sample was a field blank, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

Trip Blanks:

Trip Blank BLKD092413 had a positive result for methylene chloride of 2.4 ug/L. Detections of methylene chloride in the associated samples below 10X this amount were flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

Internal standard, chlorobenzene-d5, in sample 684SB02801 had Percent Recovery (%R) of 48% for the area counts, which was below the 50-200% QC limits. All sample results associated with this internal standard were flagged as estimated (J) and (UJ).

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

There was no apparent reason for the reanalysis of sample 684SB02801RE, therefore, the original analysis of this sample was of preferable data quality since the original analysis had a better holding time.

All sample results for isobutyl alcohol and 1,4-dioxane were rejected due to excessively low average Relative Response Factors (RRF's) in the initial calibration for these compounds. Samples 014SB00501, 014SB0002, 014SW00114, 684SB02801, 684SB02901, 684SB2902, 684SB03001, 684SB03002 and 684SB03101 had acrolein and dichlorodifluoromethane results rejected due to excessively low RRF's in the continuing calibrations for these compounds. Sample BLKD092413 had the dichlorodifluoromethane result rejected due to an excessively low RRF in the continuing calibration for this sample. All remaining laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The following table summarizes compounds with Percent Relative Standard Deviations (%RSD's) that were above the 30% QC limit for the Initial Calibration analyzed on instrument B:

3,3'-dimethylbenzidine	40 %
p-phenylenediamine	36 %
3-nitroaniline	47 %
4-nitroaniline	47 %

All positive results for these compounds in the associated samples were flagged as estimated (J).
Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard BS101994 for the following compounds:

benzyl alcohol	32 %
2-nitroaniline	26 %
3,3'-dichlorobenzidine	31 %
methyl methacrylate	57 %
n-nitrosodiethylamine	34 %
hexachloropropene	61 %
alpha, alpha-dimethylphenethylamine	62 %
1,4-naphthoquinone	92 %
1-naphthylamine	60 %
2-naphthylamine	64 %
4-aminobiphenyl	71 %
pentachloronitrobenzene	27 %
4-nitroquinoline-1-oxide	66 %
3,3'-dimethylbenzidine	48 %
p-phenylenediamine	48 %

There were no positive detections of these compounds in the associated samples, and all non-detects were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard BS102094 for the following compounds:

aniline	62 %
benzyl alcohol	27 %
4-chloroaniline	37 %
3-nitroaniline	64 %

4-nitroaniline	38 %
3,3'dichlorobenzidine	37 %
methyl methacrylate	89 %
ethyl methacrylate	52 %
n-nitrosomethylethylamine	62 %
n-nitrosodiethylamine	71 %
n-nitrosomorpholine	37 %
n-nitrosopiperdine	41 %
hexachloropropene	71 %
1,4-naphthoquinone	82 %
1-naphthylamine	58 %
2-naphthylamine	66 %
4-aminobiphenyl	70 %
4-nitroquinoline-1-oxide	81 %
3,3'-dimethylbenzidine	56 %

There were no positive detections of these compounds in the associated samples, and all non-detects were flagged as estimated (UJ). In addition, the RRF's for pentachloronitrobenzene, 4-nitroquinoline-1-oxide and hexachloropropene were 0.044, 0.020 and 0.033, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard BS102194 for the following compounds:

aniline	35 %
benzyl alcohol	30 %
benzoic acid	62 %
4-chloroaniline	35 %
hexachlorocyclopentadiene	33 %
3-nitroaniline	48 %
methyl methacrylate	49 %
ethyl methacrylate	37 %
n-nitrosomethylethylamine	34 %
benzo(a)anthracene	31 %
1,4-naphthoquinone	279 %
1-naphthylamine	35 %
2-naphthylamine	37 %
4-aminobiphenyl	78 %
4-nitroquinoline-1-oxide	73 %
aramite	43 %
3,3'-dimethylbenzidine	48 %
p-phenylenediamine	44 %

Positive results for these compounds in the associated samples were flagged as estimated (J), and non-detects were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks associated with this SDG, so no action was required.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent recoveries (%R's) for pentachlorophenol in the MS and MSD for 648SB02901 were 2%, and 6%, respectively, which were below the 17-109% QC limits. The pentachlorophenol result in associated sample 684SB02901 was rejected (R).

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No qualification was not necessary.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met, so no action was required.

IX) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

Pentachloronitrobenzene, hexachloropropene, 3-nitroaniline and 4-nitroquinoline-1-oxide results were

rejected (R) in samples 014SB00302, 014SB00401, 014SB00402, 014SB00501 and 684SB02902 due to excessively low Relative Response Factors (RRF's) in the continuing calibration associated with these samples. The non-detect result for pentachlorophenol in sample 684SB02901 was rejected due to low %R's in the MS/MSD samples. All remaining laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blank analyzed with this SDG, so no action was taken.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was taken.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

The method blank OPBLKS1 had parathion detected at 18.8 ug/kg. Detections of parathion in the associated samples below 5X this amount was flagged as undetected (U), with the detection limit being raised to the amount of the contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG, so no qualification was needed.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

All MS and MSD criteria for the method were met, so no action was necessary.

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

The method blank analyzed with this SDG had 2,4-D detected at 33.6 ug/kg and 2,4,5-TP detected at 7.7 ug/kg. Detections of these compounds in the associated samples below 5X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

There were no equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

The MS and MSD both had Percent Recoveries (%R's) for 2,4-D of 79%, which were below the 87-117% QC limits. The positive result for this compound in associated sample 684SB02801 was flagged as estimated (J).

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL METALS AND CYANIDE

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was taken.

II.) Calibration:

The Percent Recoveries (%R's) were 111%, 111% and 113% for arsenic, selenium and silver, respectively, for the Continuing Calibration run on 9/28/94, which were above the 90-110% QC limits. All positive results for these metals in the associated samples were flagged as estimated (J).

The Percent Recoveries (%R's) were 87% and 85% for tin and thallium, respectively, for the Continuing Calibration run on 9/29/94, which were below the 90-110% QC limits. All positive and non-detect results for these metals in the associated samples were flagged as estimated (J) and (UJ).

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc., ug/L</u>	<u>Action Level</u> <u>mg/kg</u>
CCB3	antimony	39.2	39.2
CCB5	arsenic	22.7	22.7
CCB3	barium	48.3	48.3
CCB36	beryllium	1.62	1.62
CCB21	cadmium	1.04	1.04
CCB21	chromium	6.09	6.09
CCB3	cobalt	13.5	13.5
CCB3	copper	13.0	13.0
CCB3	lead	56.6	56.6
CCB1	mercury	0.03	0.03
CCB18	nickel	22.8	22.8
CCB2	silver	1.87	1.87
CCB5	thallium	43.5	43.5
CCB21	tin	33.9	33.9
CCB3	vanadium	15.9	15.9
CCB3	zinc	45.8	45.8

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Limit, mg/kg for soil samples) for which the contaminated blank was an associated laboratory calibration blank were flagged as undetected (U).

Negative results with absolute values greater than the IDL were observed in the initial (ICB) and continuing (CCB) calibration blanks for the following metals:

<u>Blank</u> <u>Type, ID#</u>	<u>Element</u>	<u>Neg. Conc., ug/L</u>	<u>Action Limit</u> <u>mg/kg</u>
CCB24	antimony	-8.96	8.96
ICB2	arsenic	-5.70	5.70
ICB4	barium	-0.68	0.68

<u>Blank</u> <u>Type ID#</u>	<u>Element</u>	<u>Neg. Conc. ug/L</u>	<u>Action Limit</u> <u>mg/kg</u>
ICB3	beryllium	-0.16	0.16
CCB13	cadmium	-1.11	1.20
ICB2	cobalt	-0.64	0.64
ICB3	copper	-3.17	3.17
CCB14	lead	-8.35	8.35
ICB1	mercury	-0.04	0.04
ICB4	nickel	-6.51	6.51
ICB3	selenium	-13.2	13.2
ICB4	silver	-2.36	2.36
CCB11	tin	-8.14	8.14
CCB26	vanadium	-2.90	2.90
ICB3	zinc	-5.36	5.36

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All ICP Interference criteria for the method were met, so no action was necessary.

V.) ICP Serial Dilution Analysis:

Data for Serial Dilution Analysis was not included. No action was taken.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) of silver was 72% in the soil LCS, which was below the 80-120% QC limits. All results for silver in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

VII.) Duplicate Sample Analysis:

The Relative Percent Differences (RPD's) were above the 35% QC limit for soil duplicates 684SB02801 and 684SB02801D* for the following metals:

arsenic	35.8 %
copper	40.6 %
selenium	100 %
thallium	59.7 %
zinc	26.9 %

All positive and non-detect results for these metals in the associated samples were flagged as estimated (J) and (UJ).

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) of antimony was 21.7% in soil spiked sample 684SB02801S*, which was below the 75-125% QC limits. Since the %R was less than 30%, the non-detect results for antimony in samples 684SB02801 and 684SB02801D* were rejected (R).

IX.) Field Duplicates:

No field duplicate were associated with this SDG.

X.) Furnace Atomic Absorption QC:

All criteria for the method were met, so no action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

The non-detect results for antimony were rejected in samples 684SB02801 and 684SB02801 due to an excessively low recovery in the matrix spike sample. All remaining laboratory data were acceptable with qualification.

HEXA VALENT CHROMIUM

I.) Holding Times:

The Holding Times to analyses were 4 days for all samples in this SDG, which exceeded the 24 hour QC limit. All sample results, which consisted entirely of non-detects, were flagged as estimated (UJ).

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks.

IV.) Laboratory Control Sample (LCS):

All LCS criteria were met for the method, so no action was taken.

V.) Duplicate Sample Analysis:

All Duplicate Sample criteria for the method were met, so no action was necessary.

VI.) Spike Recovery:

All Percent Recovery criteria for the method were met, so no action was required.

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was necessary.

VIII.) Compound Quantitation and Reported Contract Required Detection Limits (CRDL's):

All criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (TRPH)

I.) Holding Times:

All Holding Times criteria for the method were met, so no action was taken.

II.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was taken.

III.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

IV.) Laboratory Control Sample (LCS):

All LCS criteria were met for the method, so no action was necessary.

V.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

No MS/MSD analyses were performed for this SDG. Instead, three Laboratory Control Samples were analyzed with an average Percent Recovery (%R) of 105%. Data qualification was not required.

VI.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was taken.

VII.) Compound Quantitation and Reported Contract Required Detection Limits (CRDL):

All criteria for the method were met, so no action was taken.

VIII.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 830422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level III
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH), Herbicides (HERB), Hexavalent Chromium (HEXCR), Organophosphorus Pesticides (OPPE)
SDG NUMBER: APX09

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
670SB02601	092407	Soil	X	X	X	X	X
670SB02601MS	092407MS	Soil	X	X	X	X	X
670SB02601MSD	092407MSD	Soil	X	X	Y	X	X
670SB02601MD	092407MD	Soil				X	
670SB02601RE	092407RE	Soil			X		
670SB02602	092408	Soil	X	X	X	X	X
684SB02601	092409	Soil	X	X	X	X	X
684SB02701	092410	Soil	X	X	X	X	X
684SB02702	092414	Soil	X	X	X	X	X
670TB02401	092415	Water	X				
670M00101	092601	Soil	X	X	X	X	X
670M00201	092602	Soil	X	X	X	X	X
684M00101	092603	Soil	X	X	X	X	X
684M00101DL	092603DL	Soil			X		
684M00201	092604	Soil	X	X	X	X	X

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
684M00201RE	092604RE	Soil	X				
670SB02701	092605	Soil	X	X	X	X	X
670SB02702	092606	Soil	X	X	X	X	X
670TB00101	092607	Water	X				

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE,
TB = TRIP BLANKS, RE = REANALYSIS, DL = DILUTION

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>HEXCR</u>	<u>HERB</u>	<u>OPPE</u>
670SB02601	092407	Soil	X	X	X
670SB02601MS	092407MS	Soil	X	X	X
670SB02601MSD	092407MSD	Soil	X	X	X
670SB02602	092408	Soil	X	X	X
684SB02601	092409	Soil	X	X	X
684SB02701	092410	Soil	X	X	X
684SB02702	092414	Soil	X	X	X
670M00101	092601	Soil	X	X	X
670M00201	092602	Soil	X	X	X
684M00101	092603	Soil	X	X	X
684M00201	092604	Soil	X	X	X
670SB02701	092605	Soil	X	X	X
670SB02702	092606	Soil	X	X	X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - APX09 Organics and Inorganics

SAMPLES: 670SB02601, 670SB02601MS, 670SB02601MSD, 670SB02601MD, 670SB02601RE, 670SB02602, 684SB02601, 684SB02701, 684SB02702, 670TB02401, 670M00101, 670M00201, 684M00101, 684M00101DL, 684M00201, 684M00201RE, 670SB02701, 670SB02702, 670TB00101

VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The average Relative Response Factors (RRF's) for dichlorodifluoromethane (0.035), isobutyl alcohol (0.006) and 1,4-dioxane (0.014) were below the QC limit of 0.05 for the standards run on 8/24/94 on instrument E. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of the compounds listed below exceeded the 30% QC limit for the standards run on 8/24/94 on instrument E:

dichlorodifluoromethane	31.8%
2-butanone	32.3%
trans-1,4-dichloro-2-butene	53.7%

Since the only samples associated with this calibration were blanks, no action was taken.

The average Relative Response Factors (RRF's) for dichlorodifluoromethane (0.030), isobutyl alcohol (0.006) and 1,4-dioxane (0.030) were below the 0.05 QC limit for the standards run on 9/01/94 on instrument F. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) for the compounds listed below exceeded the 30%

QC limit for the standards run on 9/01/94 on instrument F:

chloromethane	46.0%
methylene chloride	34.8%
acetone	62.5%

Since there were no positive results for these compounds in the associated samples, no action was required.

The average Relative Response Factors (RRF's) for dichlorodifluoromethane (0.042), isobutyl alcohol (0.006) and 1,4-dioxane (0.049) were below the 0.05 QC limit for the standards run on 10/05/94 on instrument F. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of the compounds listed below exceeded the 30% QC limit for the standards run on 10/05/94 on instrument F:

acetone	45.7%
acetonitrile	43.6%
acrolein	31.1%
acrylonitrile	36.3%
ethyl cyanide	41.5%
isobutyl alcohol	34.1%
1,4-dioxane	57.2%
methylene chloride	31.8%
2-butanone	37.9%
1,2-dibromo-3-chloropropane	27.0%

The associated results for 1,4-dioxane and isobutyl alcohol were previously rejected. Since there were no positive results for the other compounds in the associated samples, no further action was required.

The average Relative Response Factors of ethyl cyanide (0.041), isobutyl alcohol (0.004) and 1,4-dioxane (0.011) were below the 0.05 QC limit for the initial calibration run on 6/28/94 on instrument F. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations of the compounds listed below exceeded the 30% QC limit for the initial calibration run in 6/28/94 on instrument E :

chloroethane	31.2%
methylene chloride	47.3%
acetone	52.5%
dichlorodifluoromethane	88.7%
2-butanone	31.6%
ethyl cyanide	39.9%
isobutyl alcohol	36.4%

The associated results for ethyl cyanide and isobutyl alcohol were previously rejected. Since there were

no positive results for the other compounds listed, no action was taken.

Continuing Calibration:

The Relative Response Factors (RRF's) of acrolein (0.046), ethyl cyanide (0.046), isobutyl alcohol (0.002), dichlorodifluoromethane (0.030) and 1,4-dioxane (0.009) were below the 0.05 QC limit for the standard run on 10/4/94 at 17:40 on instrument E. The results for ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously qualified using the associated Initial Calibration. The associated results for acrolein and dichlorodifluoromethane in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/04/94 at 17:40:

methylene chloride	29.7%
bromoform	26.9%
1,2-dibromo-3-chloropropane	27.0%
dichlorodifluoromethane	56.0%
isobutyl alcohol	41.5%

The results for isobutyl alcohol and dichlorodifluoromethane were previously rejected. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.041), ethyl cyanide (0.034), isobutyl alcohol (0.001), trans-1,4-dichloro-2-butene (0.048) and 1,4-dioxane (0.004) were below the 0.05 QC limit for the standard run on 9/30/94 at 10:33 on instrument E. The results for ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously rejected using the associated Initial Calibration. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were also rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 9/30/94 at 10:33:

acrolein	47.2%
isobutyl alcohol	78.6%
1,4-dioxane	71.3%
chloroethane	28.1%
acetone	65.6%
acrylonitrile	56.6%
carbon tetrachloride	40.9%
2-butanone	58.1%
dibromochloromethane	83.6%
2-hexanone	46.9%
4-methyl-2-pentanone	43.4%
dichlorodifluoromethane	332%
methacrylonitrile	51.0%
trans-1,4-dichloro-2-butene	34.3%
1,2-dibromo-3-chloropropane	35.0%

The results for acrolein, isobutyl alcohol and 1,4-dioxane were previously qualified. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.040), dichlorodifluoromethane (0.021), isobutyl alcohol (0.002) and 1,4-dioxane (0.012) were below the 0.05 QC limit for the continuing calibration run on 10/06/94 at 12:17. The results for isobutyl alcohol and 1,4-dioxane were previously rejected based on the associated Initial Calibration. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 10/06/94 at 12:17:

dichlorodifluoromethane	68.5%
isobutyl alcohol	50.2%
2-hexanone	26.1%
ethyl cyanide	36.6%

The results for dichlorodifluoromethane and isobutyl alcohol were previously rejected. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of dichlorodifluoromethane (0.028), isobutyl alcohol (0.003) and 1,4-dioxane (0.021) were below the 0.05 QC limit for the Continuing Calibration run on 9/30/94 at 11:04 on instrument F. The results for these compounds were previously rejected based on the associated Initial Calibration. No further action was required.

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the Continuing Calibration run on 9/30/94 at 11:04 on instrument F:

isobutyl alcohol	43.6%
1,4-dioxane	30.5%
acetone	60.4%
1,2-dichloroethane	37.7%
1,1,1-trichloroethane	28.7%
carbon tetrachloride	34.7%
vinyl acetate	57.2%
bromodichloromethane	29.7%
2-hexanone	41.0%
4-methyl-2-pentanone	37.3%
methacrylonitrile	25.5%
1,2,3-trichloropropane	27.9%
2-butanone	26.5%
trans-1,4-dichloro-2-butene	26.7%
1,2-dibromo-3-chloropropane	45.6%

The results for isobutyl alcohol and 1,4-dioxane were previously rejected. All associated results for the other compounds in the samples were flagged as estimated (J) and (UJ).

The Relative Response Factors (RRF's) of dichlorodifluoromethane (0.012), isobutyl alcohol (0.005) and 1,4-dioxane (0.03) were below the 0.05 QC limit for the continuing calibration run on 10/06/94 at 13:17 on instrument F. The results for these compounds were previously rejected based on the associated initial calibration.

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the continuing calibration run on 10/06/94 at 13:17:

dichlorodifluoromethane	71.1%
1,4-dioxane	39.1%
2-butanone	29.9%
ethyl cyanide	30.9%

The results for dichlorodifluoromethane and 1,4-dioxane were previously rejected. All results for the other compounds in the associated samples were flagged as estimated (J) and (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 7.3 ug/kg and 11.3 ug/kg, respectively, in the soil method blank on 10/06/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 8.8 ug/kg and 9.9 ug/kg, respectively, in the soil method blank on 10/04/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone, methylene chloride and methyl ethyl ketone were detected at 24.3 ug/L, 7.3 ug/L and 10.5 ug/L, respectively, in the water method blank for 9/30/94. Since all the associated samples were trip blanks, no action was necessary.

Acetone and methylene chloride were detected at 7.9 ug/kg and 8.0 ug/kg, respectively, in the soil method blank on 10/06/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 7.0 ug/kg and 10.1 ug/kg, respectively, in the soil method blank on 9/30/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 7.1 ug/kg and 7.2 ug/kg, respectively, in the soil method blank on 10/05/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks and Equipment Blanks:

Acetone and methylene chloride were detected at 9.2 ug/L and 3.1 ug/L, respectively, in trip blank 670TB02401. All results for these compounds in the associated samples were previously qualified based on the method blanks.

Acetone and methylene chloride were detected at 10.0 ug/L and 7.2 ug/L, respectively, in trip blank 670TB00101. All results for these compounds in the associated samples were previously qualified based on the method blanks.

TIC's:

There were no TIC's reported in the blanks for this SDG. No action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

The Percent Recoveries (%R's) of bromochloromethane (44.6%), 1,4-difluorobenzene (41.9%) and chlorobenzene-d5 (33.8%) were below the 50-200% QC limits for sample 670M00101. The sample was reanalyzed with all Internal Standard criteria met. The reanalysis is considered by the validator to be of preferable data quality. No further action was necessary.

The Percent Recoveries (%R's) of bromochloromethane (40.2%), 1,4-difluorobenzene (38.6%) and chlorobenzene-d5 (32.9%) were below the 50-200% QC limits for sample 670M00201. The sample was reanalyzed with all Internal Standard criteria met. The reanalysis is considered by the validator to be of preferable data quality. No further action was necessary.

The Percent Recovery (%R) of chlorobenzene-d5 (48.8%) was below the 50-200% QC limits for sample 684M00201. The %R for this Internal Standard was 49.5% in the reanalysis, which was also slightly below the QC limits. The initial analysis is considered to be of preferable data quality due to better holding times. All compounds quantitated using this Internal Standard in this sample, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Recoveries (%R's) of bromochloromethane (41.7%), 1,4-difluorobenzene (38.7%) and chlorobenzene-d5 (35.0%) were below the 50-200% QC limits for sample 670SB02701. The sample was reanalyzed with all Internal Standard criteria met. The reanalysis is considered by the validator to be of preferable data quality. No further action was necessary.

The Percent Recoveries (%R's) of 1,4-difluorobenzene (44.9%) and chlorobenzene-d5 (40.4%) were below the 50-200% QC limits for sample 670SB02702. The sample was reanalyzed with all Internal Standard criteria met. The reanalysis is considered by the validator to be of preferable data quality. No further action was necessary.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Non-detect sample results for isobutyl alcohol, 1,4-dioxane, ethyl cyanide, dichlorodifluoromethane and acrolein were rejected in most samples due to low Relative Response Factors. All remaining laboratory data were acceptable with qualification.

The reanalyses were considered to be of preferable data quality for samples 670M00101, 670M00201, 670SB02701 and 670SB02702 due to Internal Standard recoveries. The initial analysis of sample 684M00201 was preferred.

SEMIVOLATILE ORGANICS

I.) Holding Times:

The 17 days between sampling date and extraction date exceeded the 14 day QC limit for sample 670SB02601. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.034) was below the QC limit of 0.05

for the standards run on 10/19/94. All results for this compound in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) for 1,4-nitroquinone (32.9%) and 4-nitroquinoline-1-oxide (35.2) exceeded the QC limit of 30% for the initial calibration run on 10/19/94. All results for these compounds consisted entirely of non-detects. No action was necessary for 1,4-nitroquinone. All results for 4-nitroquinoline-1-oxide were previously rejected due to a low RRF.

Continuing Calibration:

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.028) was below the 0.05 QC limit for the continuing calibration run on 10/19/94. All results for this compound were previously rejected.

The Percent Difference (%D) for 1,4-naphthaquinone (34.7%) exceeded the 25% QC limit for the standard run on 10/19/94 at 19:26. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.037) was below the 0.05 QC limit for the continuing calibration run on 10/20/94 at 14:38. All results for this compound were previously rejected.

IV.) Blanks:

Method Blanks:

Pentachloroethane was detected at 62.9 ug/kg in the soil method blank extracted on 10/07/94 and at 69.3 ug/kg in the soil method blank extracted on 10/10/94. All results for this compound less than 5X the blank concentration were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All results for 4-nitroquinilone-1-oxide were rejected due to low RRF's in the calibrations. All other laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

The 27 days between sample date and extraction date exceeded the 14 day QC limit for sample 670SB02601RE. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

II.) Instrument Performance:

The Percent Breakdown (%B) for endrin (24.1%) exceeded the 20% QC limit for the PEM analyzed on 10/20/94. The combined %B for this PEM (32.0%) exceeded the 30% QC limit. No samples were associated with this PEM, so no action was required.

The Percent Breakdown (%B) for endrin (35.1%) exceeded the 20% QC limit for the PEM analyzed on 10/21/94. The combined %B for this PEM (46.4%) exceeded the 30% QC limit. No samples were associated with this PEM, so no action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of diallate #1 (24.1%), diallate #2 (32.0%) and kepone (96.2%) exceeded the QC limit of 20% for the initial calibration run on 10/22/94. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

Continuing Calibration:

The Percent Differences (%D's) of the standards listed below exceeded the 25% QC limit:

<u>Date</u>	<u>Time</u>	<u>Compound</u>	<u>%D</u>
10/21/94	05:32	kepone	31.3
10/23/94	01:26	chlorobenzilate	38.3
		kepone	104
10/23/94	15:55	kepone	140
10/24/94	10:55	endrin ketone	100
10/24/94	12:08	kepone	100
10/24/94	09:58	endosulfan II	30.0
		endosulfan sulfate	45.0
		g-chlordane	43.6
10/24/94	11:12	kepone	132
10/24/94	21:22	endosulfan sulfate	33.2
		g-chlordane	152
10/25/94	13:14	endosulfan sulfate	30.1
10/25/94	14:58	kepone	65.5
10/26/94	12:21	endrin	26.2

All associated results were previously flagged. No further action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of the following surrogates exceeded the 30-150% QC limits for the samples indicated:

<u>Client</u>	<u>DCB</u>	<u>DCB</u>
<u>Sample #:</u>	<u>Quant. %R</u>	<u>Conf. %R</u>
670M00101	152	211
684M00101DL		17

All positive results for these samples were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for the method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification. Since the original analysis for sample 670SB02601 was not submitted on a Form I, the reanalysis was used, even though its holding time QC limit was exceeded.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

The 17 days between sample date and extraction date exceeded the 14 day QC limit for sample 684SB02601. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

Parathion was detected at 17.1 ug/kg in the soil method blank extracted on 10/07/94 and at 17.8 ug/kg in the soil method blank on 10/10/94. All positive results for this compound in the associated samples less than 5X the blank amount were flagged as undetected (U) with the detection limit being raised to the

level of contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Laboratory Control Sample

The Percent Recovery (%R) of disulfoton (28%) was below the 40-150% QC limits for the blank spike sample for batch 10459. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

VII.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was required.

VIII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

IX.) Field Duplicates:

There were no field duplicates associated with this SDG.

X.) Overall Assessment of Data/General:

All data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was required.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of 2,4-dichlorophenylacetic acid in sample 684M00201 (174%) exceeded the 37-152% QC limits. All positive results for this sample were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

The Percent Recoveries (%R's) of 2,4-D in samples 670SB02601MS (75%) and 670SB02601MSD (72%) were below the 87-117% QC limits. The positive result for this compound in the associated sample (670SB02601) was flagged as estimated (J).

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

TOTAL METALS, CYANIDE, and HEXAVALENT CHROMIUM

I.) Holding Times:

The samples listed below exceeded the 24 hour technical holding time limit for hexavalent chromium. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

<u>Client</u> <u>Sample #:</u>	<u>Days between</u> <u>sampling and analysis</u>
670SB02601	4
670SB02602	4
684SB02601	4
684SB02701	4
684SB02702	4

<u>Client</u> <u>Sample #:</u>	<u>Days between</u> <u>sampling and analysis</u>
670M00101	3
670M00201	3
684M00101	3
684M00201	3
670SB02701	3
670SB02702	3

II.) Calibration:

All Calibration criteria for the method were met. No action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB9	aluminum	35.3 ug/L	35.3
CCB9	antimony	18.3 ug/L	18.3
CCB9	barium	19.0 ug/L	19.0
CCB2	calcium	31.3 ug/L	31.3
CCB7	chromium	6.10 ug/L	6.10
CCB9	cobalt	6.88 ug/L	6.88
CCB8	iron	86.5 ug/L	86.5
CCB8	magnesium	50.2 ug/L	50.2
CCB3	potassium	1407 ug/L	1407
CCB5	thallium	39.9 ug/L	39.9
CCB9	vanadium	5.30 ug/L	5.30
CCB9	zinc	31.8 ug/L	31.8

CCB = Continuing Calibration Blank

All results greater than the IDL but less than 5X the blank amount (Action Level mg/kg for soil samples) for which the contaminated blank was associated were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL's

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB5	arsenic	-25.1 ug/L	25.1
CCB5	copper	-1.50 ug/L	1.50
CCB6	lead	-5.90 ug/L	5.90
CCB6	nickel	-0.06 ug/L	0.06
CCB3	selenium	-11.2 ug/L	11.2
CCB4	silver	-1.80 ug/L	1.80

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB6	sodium	-2.80 ug/L	2.80
CCB4	cadmium	-1.10 ug/L	1.10

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were

flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All ICP Interference criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

The Relative Percent Differences (RPD's) of antimony (133%) and lead (182%) exceeded the 35% QC limit for duplicate sample 670SB02601MD. The positive results for these analytes in the associated sample (670SB02601) were flagged as estimated (J).

VIII.) Matrix Spike Recoveries:

The Percent Recoveries (%R's) of antimony (41.9%), selenium (52.2%) and thallium (54.3%) for sample 670SB02601MS were below the 75-125% QC limits. The results for these analytes in the associated sample 670SB02601 were flagged as estimated (J) and (UJ).

IX.) Field Duplicates:

No designated field duplicates were associated with this SDG.

X.) Furnace Atomic Absorption QC:

All Graphite Furnace QC criteria for the method were met. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within the required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

VALIDATA

Chemical Services, Inc.

P. O. Box 930422 Norcross, Ga. 30093

DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe/Allen & Hoshall
SITE NAME: Charleston Naval Base
PROJECT NUMBER: 8500.014
CONTRACTED LAB: PACE, Inc.
QA/QC LEVEL: Level IV
EPA SOW/METHOD: EPA 1990 SOW
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 1994, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRIX: Soil, Water
TYPES OF ANALYSES: Volatile Organics (VOA), Semivolatile Organics (SVOC), Pesticides/PCB's (P/PCB), Total Metals and Cyanide (Me/CN), Total Petroleum Hydrocarbons (TPH), Herbicides (HERB), Hexavalent Chromium (HEXAC), Organophosphorus Pesticides (OPPE)
SDG NUMBER: APX10

SAMPLES:

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
GDHTB00101	100619	Water	X				
GDHEB00101	100801	Water	X	X	X	X	X
GDHDB00101	100802	Water	X	X	X	X	X
GDHTB00199	100806	Water	X				
GDHTB001AA	101202	Water	X				
GDHEB001AA	101501	Water	X	X	X	X	X
GDHEB001AAMS	101501AA	Water				X	
GDHEB001AAMD	101501MD	Water				X	
GDHTB001BB	101502	Water	X				
GDHTB00202	100523	Water	X				
GDHTB00299	100805	Water	X				
GDHTB00303	100804	Water	X				
GDHCB02501	100524	Soil	X	X	X	X	X
GDHCB04401	100620	Soil	X	X	X	X	X
GDHCB04401MS	100620MS	Soil				X	
GDHCB04401MD	100620MD	Soil				X	

<u>Client</u>	<u>Lab</u>						
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>VOA</u>	<u>SVOC</u>	<u>P/PCB</u>	<u>Me/CN</u>	<u>TPH</u>
GDHCB05701	100803	Soil	X	X	X	X	X
GDHCB06702	101201	Soil	X	X	X	X	X
GDHCB06702MS	101201MS	Soil			X		
GDHCB06702MSD	101201MSD	Soil			X		
SGCTB00101	101102	Water	X				
SGCCB00302	101101	Soil	X	X	X	X	X
SGCCB00302MS	101101MS	Soil	X				
SGCCB00302MS	101101MSD	Soil	X				

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE, TB = TRIP BLANKS, EB = EQUIPMENT BLANKS, DB = RINSATE WATER BLANK

<u>Client</u>	<u>Lab</u>				
<u>Sample #:</u>	<u>Sample #:</u>	<u>Matrix</u>	<u>HEXCR</u>	<u>HERB</u>	<u>OPPE</u>
GDHEB00101	100801	Water	X	X	X
GDHEB00101MS	100801MS	Water	X		
GDHEB00101MD	100801MD	Water	X		
GDHDB00101	100802	Water	X	X	X
GDHEB001AA	101501	Water	X	X	X
GDHCB02501	100524	Soil	X	X	X
GDHCB04401	100620	Soil	X	X	X
GDHCB05701	100803	Soil	X	X	X
GDHCB06702	101201	Soil	X	X	X
SGCCB00302	101101	Soil	X	X	X
SGCCB00302MS	101101MS	Soil			X
SGCCB00302MSD	101101MSD	Soil			X

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, MD = MATRIX DUPLICATE, EB = EQUIPMENT BLANKS, DB = RINSATE WATER BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Inc. - APX10 Organics and Inorganics

SAMPLES: GDHTB00101, GDHEB00101, GDHDB00101, GDHTB00199, GDHTB001AA, GDHEB001AA, GDHTB001BB, GDHTB00202, GDHTB00299, GDHTB00303, GDHCB02501, GDHCB04401, GDHCB05701, GDHCB06702, SGCTB00101, SGCCB00302, SGCCB00302MS, SGCCB00302MSD

VOLATILE ORGANICS

I.) Holding Times:

The 10 days between sample date and analysis date exceeded the 7 day QC limit for unpreserved water samples for sample GDHTB00303. The 8 days between sample date and analysis date exceeded the 7 day QC limit for unpreserved water sample GDHTB00202. The positive and non-detect results for the aromatic volatile compounds in these samples were flagged as estimated (J) and (UJ).

II.) GC/MS Tuning:

All Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The average Relative Response Factors (RRF's) of isobutyl alcohol (0.006) and 1,4-dioxane (0.014) were below the QC limit of 0.05 for the standards run on 8/24/94. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviation (%RSD) of 2-butanone (32.3%) exceeded the 30% QC limit for the standards run on 8/24/94. Since there were no positive results for this compound in the associated samples, no action was taken.

The average Relative Response Factors (RRF's) of isobutyl alcohol (0.006) and 1,4-dioxane (0.049) were below the 0.05 QC limit for the standards run on 10/05/94. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of the compounds listed below exceeded the 30% QC limit for the standards run on 10/05/94:

methylene chloride	31.8%
acetone	45.7%
acrolein	31.1%
acrylonitrile	36.3%
2-butanone	37.9%
acetonitrile	43.6%
ethyl cyanide	41.5%
isobutyl alcohol	34.2%
1,4-dioxane	57.2%

All the positive results for acetone and methylene chloride were flagged as estimated (J) in the associated samples. The non-detect results for isobutyl alcohol and 1,4-dioxane were previously rejected. All results for the other compounds consisted entirely of non-detects, so no action was required.

The average Relative Response Factors (RRF's) of ethyl cyanide (0.040), isobutyl alcohol (0.003) and 1,4-dioxane (0.009) were below the 0.05 QC limit for the standards run on 10/14/94. All results for these compounds in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Relative Standard Deviations (%RSD's) of the compounds listed below exceeded the 30% QC limit for the standards run on 10/14/94:

acetone	52.3%
acetonitrile	34.7%
ethyl cyanide	50.9%
isobutyl alcohol	38.9%

The associated results for ethyl cyanide and isobutyl alcohol were previously rejected. All positive results for acetone were flagged as estimated (J) in the associated samples. Since there were no positive results for the other compounds in the associated samples, no further action was required.

Continuing Calibration:

The Relative Response Factors (RRF's) of acrolein (0.032), ethyl cyanide (0.029), isobutyl alcohol (0.002) and 1,4-dioxane (0.005) were below the 0.05 QC limit for the standard run on 10/12/94. The results for isobutyl alcohol and 1,4-dioxane were previously qualified using the associated Initial Calibration. The results for acrolein and ethyl cyanide in the associated samples, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/12/94:

acetone	36.8%
acrolein	58.4%
acrylonitrile	61.5%
2-butanone	45.9%
carbon tetrachloride	36.4%
dibromochloromethane	86.1%
4-methyl-2-pentanone	44.6%
chloroethane	25.3%
1,1,2,2-tetrachloroethane	25.3%
acetonitrile	29.3%
ethyl cyanide	64.3%
methacrylonitrile	59.1%
isobutyl alcohol	68.9%
1,4-dioxane	63.3%

The results for acrolein, ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously rejected. The positive and non-detect results for acetone were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.028), ethyl cyanide (0.015), methacrylonitrile (0.048), isobutyl alcohol (0.002) and 1,4-dioxane (0.005) were below the 0.05 QC limit for the standard run on 10/13/94. The results for isobutyl alcohol and 1,4-dioxane were previously rejected using the associated Initial Calibration. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were also rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/13/94:

chloroethane	30.7%
methylene chloride	28.0%
acetone	71.8%
acrolein	64.4%
acrylonitrile	70.2%
2-butanone	65.2%
carbon tetrachloride	35.7%
vinyl acetate	46.8%
dibromochloromethane	73.8%
2-hexanone	49.4%
4-methyl-2-pentanone	51.9%
1,1,2,2-tetrachloroethane	33.7%
acetonitrile	35.9%
ethyl cyanide	81.6%
methacrylonitrile	61.9%
isobutyl alcohol	69.7%
1,4-dioxane	65.5%
1,2,3-trichloropropane	35.1%

The results for acrolein, ethyl cyanide, methacrylonitrile, isobutyl alcohol and 1,4-dioxane were previously rejected. The positive and non-detect results for acetone and methylene chloride in the associated samples were flagged as estimated (J) and (UJ). All results for the remaining compounds in the associated samples which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.030), ethyl cyanide (0.026), isobutyl alcohol (0.002) and 1,4-dioxane (0.007) were below the 0.05 QC limit for the standard run on 10/14/94. The results for isobutyl alcohol and 1,4-dioxane were previously rejected using the associated Initial Calibration. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were also rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/14/94:

methylene chloride	34.4%
acetone	67.6%
1,1-dichloroethane	25.9%
acrolein	61.0%
acrylonitrile	65.4%
2-butanone	62.4%
carbon tetrachloride	31.5%
vinyl acetate	45.6%
dibromochloromethane	77.8%
2-hexanone	44.8%
4-methyl-2-pentanone	45.5%
1,1,2,2-tetrachloroethane	27.7%
acetonitrile	38.6%
ethyl cyanide	68.7%
methacrylonitrile	57.7%
isobutyl alcohol	61.7%
1,4-dioxane	49.7%
1,2,3-trichloropropane	31.0%

The results for acrolein, ethyl cyanide, isobutyl alcohol and 1,4-dioxane were previously rejected. The positive and non-detect results for acetone and methylene chloride were flagged as estimated (J) and (UJ) in the associated samples. All results for the remaining compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.024), ethyl cyanide (0.026), methacrylonitrile (0.044), isobutyl alcohol (0.002) and 1,4-dioxane (0.006) were below the 0.05 QC limit for the standard run on 10/17/94. The results for isobutyl alcohol and 1,4-dioxane were previously rejected using the associated Initial Calibration. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were also rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/17/94:

chloroethane	35.8%
methylene chloride	25.9%
acetone	73.3%
acrolein	69.5%
acrylonitrile	67.8%
2-butanone	67.5%
carbon tetrachloride	29.0%
vinyl acetate	45.4%
ethyl cyanide	67.7%
dibromochloromethane	62.1%
1,1,2-trichloroethane	27.9%
2-hexanone	55.6%
4-methyl-2-pentanone	51.5%
1,1,2,2-tetrachloroethane	33.8%
acetonitrile	29.3%
methacrylonitrile	64.5%
isobutyl alcohol	65.9%
1,4-dioxane	58.1%
1,2,3-trichloropropane	34.7%
trans 1,4-dichloro-2-butene	31.4%

The results for acrolein, ethyl cyanide, methacrylonitrile, isobutyl alcohol and 1,4-dioxane were previously rejected. The positive and non-detect results for acetone and methylene chloride in the associated samples were flagged as estimated (J) and (UJ). All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of isobutyl alcohol (0.004) and 1,4-dioxane (0.022) were below the 0.05 QC limit for the standard run on 10/10/94. The results for these compounds were previously rejected using the associated Initial Calibration. No further action was necessary.

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/10/94:

acetone	38.5%
acrylonitrile	26.6%
2-butanone	42.3%
vinyl acetate	27.5%
2-hexanone	31.9%
4-methyl-2-pentanone	32.2%
acetonitrile	35.2%
ethyl cyanide	36.9%
1,4-dioxane	55.3%

All results for isobutyl alcohol and 1,4-dioxane were previously rejected in the associated samples. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of isobutyl alcohol (0.004) and 1,4-dioxane (0.023) were below

the 0.05 QC limit for the standard run on 10/13/94. All results for these compounds in the associated samples were previously rejected based on the Initial Calibration.

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/13/94:

methylene chloride	40.1%
carbon disulfide	28.2%
acrolein	41.4%
acrylonitrile	37.1%
acetonitrile	46.6%
ethyl cyanide	41.8%
isobutyl alcohol	26.9%
1,4-dioxane	54.2%

The associated results for isobutyl alcohol and 1,4-dioxane were previously qualified. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factors (RRF's) of acrolein (0.038), ethyl cyanide (0.046), isobutyl alcohol (0.001) and 1,4-dioxane (0.005) were below the 0.05 QC limit for the standard run on 10/20/94. The results for isobutyl alcohol and 1,4-dioxane were previously rejected using the associated initial calibration. The results for acrolein and ethyl cyanide in the associated samples, which consisted entirely of non-detects, were also rejected (R).

The Percent Difference (%D) of isobutyl alcohol (41.3%) exceeded the 25% QC limit for the standard run on 10/20/94. The results for this compound in the associated samples were previously rejected.

The Relative Response Factors (RRF's) of acrolein (0.034), ethyl cyanide (0.039), isobutyl alcohol (0.001) and 1,4-dioxane (0.005) were below the 0.05 QC limit for the standard run on 10/21/94. The results for isobutyl alcohol and 1,4-dioxane were previously rejected using the associated initial calibration. The results for acrolein and ethyl cyanide in the associated samples, which consisted entirely of non-detects, were also rejected (R).

The Percent Differences (%D's) of the compounds listed below exceeded the 25% QC limit for the standard run on 10/21/94:

acetone	28.0%
acrolein	31.9%
2-hexanone	35.8%
4-methyl-2-pentanone	38.3%
methacrylonitrile	31.7%
isobutyl alcohol	47.8%
1,4-dioxane	39.3%
trans 1,4-dichloro-2-butene	28.3%

All results for acrolein, isobutyl alcohol and 1,4-dioxane were previously rejected. The positive and non-detect results for acetone in the associated samples were flagged as estimated (J) and (UJ). The results

for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone and methylene chloride were detected at 8.3 ug/L and 9.6 ug/L, respectively, in the water method blank for 10/12/94. Since all the associated samples were field blanks, no action was required.

Acetone and methylene chloride were detected at 8.1 ug/L and 7.8 ug/L, respectively, in the water method blank for 10/14/94. Since all the associated samples were field blanks, no action was necessary.

Acetone and methylene chloride were detected at 13.1 ug/L and 8.3 ug/L, respectively, in the water method blank for 10/13/94. Since all the associated samples were field blanks, no action was necessary.

Acetone was detected at 7.3 in the water method blank for 10/20/94. Since all the associated samples were field blanks, no action was necessary.

Acetone and methylene chloride were detected at 20.6 ug/L and 2.3 ug/L, respectively, in the water method blank for 10/21/94. Since all the associated samples were field blanks, no action was necessary.

Acetone and methylene chloride were detected at 13.7 ug/kg and 16.0 ug/kg, respectively, in the soil method blank for 10/10/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Acetone and methylene chloride were detected at 9.3 ug/kg and 3.5 ug/kg, respectively, in the soil method blank for 10/13/94. Detections of these compounds in the associated samples below 10X the blank amount were flagged as undetected (U) with the detection limit being raised to the level of contamination in each sample.

Trip Blanks and Equipment Blanks:

Methylene chloride was detected in the trip blanks, equipment blanks and rinsate blank listed below. Since methylene chloride was also a method blank contamination, all data qualification was previously performed.

<u>Sample #</u>	<u>Methylene Chloride (ug/L)</u>
GDHTB00101	1.7
GDHTB00202	2.8
SGCTB00101	2.0
GDHTB001AA	1.6
GDHBT001BB	1.5
GDHTB00199	8.1
GDHEB00101	2.1
GDHDB00101	2.8

Blank contaminations below the CRQL were raised to the CRQL and flagged as undetected (U).

TIC's:

There were no TIC's reported in the method blanks for this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate (MS/MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard criteria were met. No action was taken.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was necessary.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

Non-detect sample results for isobutyl alcohol, 1,4-dioxane, ethyl cyanide, methacrylonitrile and acrolein were rejected in most samples due to low Relative Response Factors. All remaining laboratory data were acceptable with qualification.

SEMI-VOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met. No action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.035) was below the QC limit of 0.05. All results for this compound in the associated samples, which consisted entirely of non-detects, were rejected.

The Percent Relative Standard Deviations (%RSD's) for 1,4-nitroquinone (32.9%) and 4-nitroquinoline-1-oxide (35.2) exceeded the QC limit of 30% for the initial calibration run on 10/19/94. All results for these compounds consisted entirely of non-detects. No action was necessary for 1,4-nitroquinone. All results for 4-nitroquinoline-1-oxide were previously rejected due to a low RRF.

Continuing Calibration:

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.014) was below the 0.05 QC limit for the continuing calibration run on 10/26/94. All results for this compound were previously rejected.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard run on 10/26/94 for the following compounds:

aniline	40.8%
a,a-dimethylphenethylamine	35.6%
4-nitroquinoline-1-oxide	61.2%

The results for 4-nitroquinoline-1-oxide were previously rejected. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.022) was below the 0.05 QC limit for the continuing calibration run on 10/28/94. All results for this compound were previously rejected.

The Percent Differences (%D's) of aniline (27.7%), 2,4-dinitrophenol (30.7%) and 4-nitroquinoline-1-oxide (36.1%) exceeded the 25% QC limit for the standard run on 10/28/94. The results for 4-nitroquinoline-1-oxide were previously rejected. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.023) was below the 0.05 QC limit for the continuing calibration run on 10/31/94. All results for this compound were previously rejected.

The Percent Differences (%D's) of aniline (32.5%), 2,4-dinitrophenol (35.2%) and 4-nitroquinilone-1-oxide (33.5%) exceeded the 25% QC limit for the continuing calibration run on 10/31/94. The results for 4-nitroquinilone-1-oxide were previously rejected. All results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factor (RRF) of 4-nitroquinoline-1-oxide (0.022) was below the 0.05 QC limit for the continuing calibration run on 11/01/94. All results for this compound were previously rejected.

The Percent Differences (%D's) of bis(2-chloroethyl)ether (29.9%), 2,4-dinitrophenol (56.8%), 4,6-dinitro-2-methylphenol (32.6%) and 4-nitroquinilone-1-oxide (35.7%) exceeded the 25% QC limit for the continuing calibration run on 11/01/94. The results for 4-nitroquinilone-1-oxide were previously rejected. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was necessary.

Equipment Blanks:

All criteria for the method were met, so no action was required.

Rinsate Water Blanks:

Bis(2-ethylhexyl)phthalate was detected at 2.2 ug/L in deionized blank GDHDB00101. Since the results for this compound in the associated samples consisted entirely of non-detects, no action was taken.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of terphenyl-d14 exceeded the 33-141% QC limits for samples GDHEB00101(168%) and GDHDB00101 (158%). Since only one surrogate was out for each sample, no action was necessary.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Percent Recovery (%R) of 4-nitrophenol (93%) exceeded the 10-80% QC limits for the batch matrix spike samples for batch BW9447. Since the associated sample was not part of this SDG, no action was required.

VII.) Field Duplicates:

There were no field duplicates associated with this SDG.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met. No action was required.

IX.) TCL Compound Identification:

All criteria for the method were met, so no action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All criteria for the method were met, so no action was required.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All criteria were met, so no action was necessary.

XIII.) Overall Assessment of Data/General:

All results for 4-nitroquinilone-1-oxide were rejected due to low RRF's in the calibrations. All other laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

The Percent Relative Standard Deviations (%RSD's) of 4,4'-DDD (29.3%) and endosulfan sulfate (34.5%) exceeded the QC limit of 20% for the initial calibration run on 9/27/94, instrument H. All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Relative Standard Deviations (%RSD's) of diallate #1 (22.9%), diallate #2 (30.6%) and chlorobenzilate (24.8%) exceeded the QC limit of 20% for the initial calibration run on 10/22/94. All positive and non-detect results for chlorobenzilate, in the associated samples were flagged as estimated (UJ) and (J).

The Percent Differences (%D's) of the standards listed below exceeded the 25% QC limit:

<u>Date</u>	<u>Time</u>	<u>Compound</u>	<u>%D</u>
10/22/94	16:48	kepone	97.7
10/23/94	02:02	kepone	37.8
10/23/94	15:55	kepone	472.0
10/24/94	10:32	endosulfan II	26.1
		endosulfan sulfate	36.8
10/24/94	11:42	kepone	79.6
10/24/94	21:57	endosulfan sulfate	28.5
10/25/94	14:58	kepone	49.4

All positive and non-detect results for kepone were flagged as estimated (J) and (UJ) in the associated samples. All results for the other compounds, which consisted entirely of non-detects, in the associated samples were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

Equipment Blanks:

All criteria for the method were met, so no action was taken.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of the surrogates listed below exceeded the 30-150% QC limits for the associated samples:

<u>Client</u>	<u>DCB</u>	<u>TCX</u>
<u>Sample #:</u>	<u>Quant. %R</u>	<u>Quant. %R</u>
GDHEB001AA	151	
GDHEB00101	188	
GDHDB00101	174	
GDHCB02501	418	229
GDHCB04401	557	153

All positive results in these samples were flagged as estimated (J).

VI.) Matrix Spike/Matrix Spike Duplicate:

The Relative Percent Differences (RPD's) of the compounds listed below exceeded the QC limits for spiked sample GDHCB06702:

<u>Compound</u>	<u>RPD</u>	<u>QC Limit</u>
gamma-BHC	26%	15%
heptachlor	24%	20%
endrin	29%	21%
4,4'-DDT	28%	27%

All positive and non-detect results for these compounds in associated sample GDHCB06702 were flagged as estimated (J) and (UJ).

VII.) **TCL Compound Identification:**

Pesticide/PCB Identification Summary (PIS):

All PIS criteria for the method were met. No action was required.

VIII.) **Field Duplicates:**

There were no field duplicates associated with this SDG.

IX.) **Pesticide Cleanup Check:**

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) **Overall Assessment of Data/General:**

All data were acceptable with qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) **Holding Times:**

All samples were extracted and analyzed within required holding times. No action was required.

II.) **Instrument Performance:**

All Instrument Performance criteria for the method were met. No action was necessary.

III.) **Calibration:**

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was required.

Equipment Blanks:

Parathion was detected at 0.8 ug/L in equipment blank GDHEB00101. Parathion was also detected at 0.6 ug/L in rinsate water blank GDHDB00101. Since there were no positive results for this compound in the associated samples, no action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

The Percent Recovery (%R) of thionazin (167%) exceeded the 40-150% QC limits for the water blank spike. Since the QC for the water samples in this SDG were performed on laboratory blanks, no action was taken.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable with qualification.

HERBICIDES

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary.

III.) Calibration:

All Calibration criteria for the method were met, so no action was taken.

IV.) Blanks:

Method Blanks:

All Method Blank criteria for the method were met. No action was required.

Equipment Blanks:

All criteria for the method were met, so no action was required.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was required.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

TOTAL METALS, CYANIDE, and HEXAVALENT CHROMIUM

I.) Holding Times:

The samples listed below exceeded the 24 hour technical holding time for hexavalent chromium. All positive and non-detect results for these samples were flagged as estimated (J) and (UJ).

<u>Client</u> <u>Sample #:</u>	<u>Days Between</u> <u>Sampling and Analysis</u>
GDHEB00101	3
GDHDB00101	3
GDBEB001AA	4
GDHCB02501	6
GDHCB04401	5
GDHCB05701	6
GDHCB06702	2
SGCCB00302	3

II.) Calibration:

All Calibration criteria for the method were met. No action was required.

III.) Blanks:

The following blank results represent the highest detections associated with the samples and were used for data qualification:

<u>Blank</u> <u>Type/ID#</u>	<u>Element</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
CCB4	antimony	25.2 ug/L	25.2
CCB4	copper	10.5 ug/L	10.5
CCB1	zinc	22.0 ug/L	22.0
EB00199	barium	137 ug/L	137

CCB = Continuing Calibration Blank, EB = Equipment Blank (684EB01101)

All results greater than the IDL but less than 5X the blank amount (Action Level mg/kg for soil samples) for which the contaminated blank is an associated calibration or field blank were flagged as undetected (U).

The following analyte had a negative result with an absolute value greater than the IDL's:

<u>Blank</u> <u>Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc. (mg/kg)</u>
CCB1	selenium	-3.7 ug/L	3.7

CCB = Continuing Calibration Blank

All associated positive sample results less than 5X the absolute value of the negative blank result were flagged as estimated (J) and all non-detects were flagged as estimated (UJ).

IV.) ICP Interference Check Sample Results:

All Interference Check Sample criteria for the method were met. No action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria for the method were met, so no action was necessary.

VI.) Laboratory Control Samples (LCS):

All Laboratory Control Sample criteria for the method were met. No action was required.

VII.) Duplicate Sample Analysis:

All Duplicate Sample Analysis criteria for the method were met. No action was required.

VIII.) Matrix Spike Recoveries:

The Percent Recovery (%R) of antimony (61.8%) for sample GDHCB04401MS was below the 75-125% QC limits. The result for this compound in associated sample GDHCB04401 was flagged as estimated (UJ).

IX.) Field Duplicates:

No designated field duplicates were provided for this SDG.

X.) Furnace Atomic Absorption QC:

All Graphite Furnace QC criteria for the method were met. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria for the method were met, so no action was taken.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

TOTAL PETROLEUM HYDROCARBONS

I.) Holding Times:

All samples were extracted and analyzed within required holding times. No action was required.

II.) Instrument Performance:

All Instrument Performance criteria for the method were met. No action was necessary. *

III.) Calibration:

All Calibration criteria for the method were met. No action was necessary.

IV.) Blanks:

Method Blanks:

There were no positive detections in the method blanks, so no data qualification was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method was met. No action was required.

VI.) Matrix Spike/Matrix Spike Duplicate (MS / MSD):

All MS / MSD criteria for the method were met. No action was necessary.

VII.) TCL Compound Identification:

All Compound Identification criteria for the method were met. No action was required.

VIII.) Field Duplicates:

There were no field duplicates associated with this SDG.

IX.) Overall Assessment of Data/General:

All data were acceptable without qualification.

Client	Lab		VOA	SVO	P/PCB	OPest	Herb	ME	CN	HX	TRPH
Sample #:	Sample #:	Matrix									
178EW00101	41940003	Water									X
656HW00101	UKT001	Water	X	X	X	X	X				
656HW00101	41988002	Water						X			
656HW00101	41988003	Water							X		
656HW00101	41988001	Water								X	
656HW00101	41988004	Water									X
662FW00101	UJY003	Water	X	X	X	X	X				
662FW00101	41960005	Water						X			
662FW00101	41960007	Water							X		
662FW00101	41960002	Water								X	
662FW00101	41960003	Water									X
663HW00101	UJY001	Water	X	X	X	X	X				
663HW00101	41960006	Water						X			
663HW00101	41960008	Water							X		
663HW00101	41960002	Water								X	
663HW00101	41960004	Water									X
GDH4B07401	UII002	Soil	X	X	X	X	X				
GDH4B07401	41925002	Soil						X	X	X	X
GDHCB08201	UIH003	Soil	X	X	X	X	X				
GDHCB08201	41940006	Soil						X	X	X	
GDHCB08201	41940002	Soil									
GDHEB08201	UIH001	Water	X	X	X	X	X				
GDHEB08201	41940010	Water						X			
GDHEB08201	41940008	Water							X		
GDHEB08201	41940004	Water								X	
GDHEB08201	41940001	Water									X
GDHCB07401	UII001	Soil	X	X	X	X	X				
GDHCB07401	41925001	Soil						X	X	X	X
BLKTB02604	UJY004	Water	X								
BLKTB02802	UKT002	Water	X								
BLKTB01902	UGM004	Water	X								
BLKTB01904	UGM002	Water	X								
BLKTB02203	UII003	Water	X								
BLKTB02402	UIH002	Water	X								
BLKTB02405	UIH005	Water	X								
BLKTB02602	UJY002	Water	X								
ENBS110794A	BLKSPKS1	Soil	X								
FNBS103194A	BLKSPKW1	Water	X								
FNBS110794A	BLKSPKW2	Water	X								
FNBS103194B	BLKSPKW3	Water	X								
FNBS110394A	BLKSPKW4	Water	X								
GDH4B07401RE	UII002RE	Soil	X								
BSL043S2BS	BLKSPKS1	Soil		X							
BWL049S1BS	BLKSPKW1	Water		X							
BWL055S1BS	BLKSPKW2	Water		X							
BWL056S1BS	BLKSPKW3	Water		X							
GDHCB08201MS	UIH003MS	Soil			X						
GDHCB08201MSD	UIH003MSD	Soil			X						

Client	Lab		VOA	SVO	P/PCB	OPest	Herb	ME	CN	HX	TRPH
Sample #:	Sample #:	Matrix									
PWL10841BS	BLKSPKW1	Water			X						
PWL10841BSD	BLKSPKDW1	Water			X						
OPWL10839BS	BLKSPKW1	Water				X					
OPWL10839BSD	BLKSPKDW1	Water				X					
OPSL10725BS	BLKSPKS1	Soil				X					
HWL10840BS	BLKSPKW1	Water					X				
HWL10840BSD	BLKSPKDW1	Water					X				
GDHCB07401MS	UII001MS	Soil					X				
GDHCB0401MSD	UII001MSD	Soil					X				
HXL269	LCSS269	Soil								X	
HXL270	LCSS270	Soil								X	
HXL272	LCSW272	Water								X	
CNL489	LCSS489	Soil							X		
CNL491	LCSS491	Soil							X		
CNL492	LCSW492	Water							X		
TPHL1151	LCSW1151	Water									X
TPHL1152	LCSW1152	Water									X
TPHL1154A	LCSW1154	Water									X
TPHL1150B	LCSS1150	Soil									X
GDHCB08201S*	41940006S*	Soil						X			
GDHCB08201D*	41940006D*	Soil						X			
METLCSW1	LCSW1	Water						X			
METLCSW2	LCSW2	Water						X			

MS = MATRIX SPIKES, MSD = MATRIX SPIKE DUPLICATES, RE = RE-ANALYSES / RE-EXTRACTIONS, D* = MATRIX DUPLICATES, S* = MATRIX SPIKES, TB = TRIP BLANKS, EB = EQUIPMENT BLANKS, LCS = LABORATORY CONTROL SPIKES, WL, SL, BS = BLANK SPIKE

DATA REVIEWER(S): Cathi W. Sharp, Marvin L. Smith

RELEASE SIGNATURE:



Data Qualifier Definitions:

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

PACE, Incorporated - APX11 Organics and Inorganics

SAMPLES: 0177W00101, 0177W00101, 0177W00101, 0177W00101, 0177W00101, 017DW00101, 017DW00101, 017DW00101, 017DW00101, 017DW00101, 178EW00101, 178EW00101, 178EW00101, 178EW00101, 178EW00101, 656HW00101, 656HW00101, 656HW00101, 656HW00101, 656HW00101, 662FW00101, 662FW00101, 662FW00101, 662FW00101, 662FW00101, 663HW00101, 663HW00101, 663HW00101, 663HW00101, 663HW00101, 663HW00101, GDH4B07401, GDH4B07401, GDHCB08201, GDHCB08201, GDHCB08201, GDHEB08201, GDHEB08201, GDHEB08201, GDHEB08201, GDHCB07401, GDHCB07401, BLKTB02604, BLKTB02802, BLKTB01902, BLKTB01904, BLKTB02203, BLKTB02402, BLKTB02405, BLKTB02602, ENBS110794A, FNBS103194A, FNBS110794A, FNBS103194B, FNBS110394A, GDH4B07401RE, BSL043S2BS, BWL049S1BS, BWL055S1BS, BWL056S1BS, GDHCB08201MS, GDHCB08201MSD, PWL10841BS, PWL10841BSD, OPWL10839BS, OPWL10839BSD, OPWL10725BS, HWL10840BS, HWL10840BSD, GDHCB07401MS, GDHCB0401MSD, HXL269, HXL270, HXL272, CNL489, CNL491, CNL492, TPHL1151, T PHL1152, TPHL1154A, TPHL1150B, GDHCB08201MS, GDHCB08201MSD, METLCSW1, METLCSW2

VOLATILE ORGANICS

I.) Holding Times:

The Holding Time criteria for the method were met, so no action was required.

II.) GC/MS Tuning:

All GC/MS Tuning criteria were met, so no action was necessary.

III.) Calibration:

Initial Calibration:

The following compounds had Relative Response Factors (RRF's) that than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) above the 30% QC limit for the Initial Calibration analyzed on instrument E:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
methylene chloride		50
trans-1,4-dichloro-2-butene		62
1,4,-dioxane	0.018	45
isobutyl alcohol	0.008	39

Associated samples analyzed with these initial calibrations had results qualified as follows:

Non-detect compound results with RRF's less than the 0.05 QC limit were rejected (R). Compounds with RRF's less than the 0.05 QC limit that had positive results were flagged as estimated (J). Compounds with %RSD's greater than the QC limit of 30% that were positive were flagged as estimated (J).

The following compounds had Relative Response Factors (RRF's) less than the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) above the 30% QC limit for the Initial Calibration analyzed on Instrument F:

<u>Compound</u>	<u>RRE</u>	<u>%RSD</u>
dichlorodifluoromethane		102
acetone		52
acetonitrile		35
ethyl cyanide	0.040	51
isobutyl alcohol	0.003	39
1,4-dioxane	0.009	

Associated samples analyzed with these initial calibrations had results qualified as follows:

Compounds with RRF's less than the 0.05 QC limit that were non-detect were rejected (R). Compounds with RRF's that were less than the 0.05 QC limit that had positive results were flagged estimated (J). Compounds with %RSD's that were greater than the 30% QC limit that were positive were flagged estimated (J). In addition, dichlorodifluoromethane had a %RSD of 102%, which was greater than 70%, and all associated non-detect sample results were qualified as estimated (UJ).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS110394A for the following compounds:

methylene chloride	27 %
dichlorodifluoromethane	54 %
acetone	54 %
acrolein	42 %
acrylonitrile	32 %
2-butanone	42 %
2-hexanone	45 %
isobutyl alcohol	35 %
1,4-dioxane	62 %
trans-1,4-dichloro-2-butene	70 %
trans-1,3-dichloropropene	36 %

cis-1,3-dichloropropene	29 %
4-methyl-2-pentanone	30 %
allyl chloride	28 %
ethyl cyanide	84 %
1,2,3-trichloropropane	52 %
1,2-dibromo-3-chloropropane	39 %

All associated positive and non-detect sample results for any of these compounds were qualified as estimated (J) or (UJ). In addition, dichlorodifluoromethane, acrolein, ethyl cyanide, isobutyl alcohol, 1,4-dioxane and trans-1,4-dichloro-2-butene had Relative Response Factors (RRF's) of 0.014, 0.030, 0.018, 0.005, 0.007 and 0.032, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard ENS110794A for the following compounds:

acetone	26 %
acrolein	27 %
acrylonitrile	38 %
2-hexanone	29 %
2-butanone	29 %
1,4-dioxane	32 %
isobutyl alcohol	58 %
methacrylonitrile	41 %
1,2,3-trichloropropane	33 %
trans-1,4-dichloro-2-butene	41 %
1,2-dibromo-3-chloropropane	45 %
dichlorodifluoromethane	43 %
acetonitrile	32 %
allyl chloride	32 %

All associated samples with positive and non-detect results for these compounds were qualified as estimated (J) or (UJ). In addition, the RRF's for acrolein, dichlorodifluoromethane, ethyl cyanide, 1,4-dioxane and isobutyl alcohol of 0.038, 0.017, 0.021, 0.012 and 0.003, respectively, were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS103194A for the following compounds:

dichlorodifluoromethane	85 %
trans-1,4-dichloro-2-butene	27 %

All associated positive and non-detect results for these compounds were flagged as estimated (J) and (UJ). In addition, dichlorodifluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.013, 0.003 and 0.008, respectively, which were below the 0.05 QC limit. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS110194B for the following compounds:

vinyl acetate	28 %
dichlorodifluoromethane	88 %
ethyl cyanide	28 %

All associated positive and non-detect results for any of these compounds were flagged as estimated (J) or (UJ). In addition dichlorofluoromethane, acrolein, isobutyl alcohol and 1,4-dioxane had RRF's of 0.010, 0.043, 0.002 and 0.007, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds were non-detects, and were therefore, rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard FNS110994A for the following compounds:

1,2-dichloroethane	47 %
acrolein	40 %
carbon tetrachloride	33 %
acetone	31 %
dichlorodifluoromethane	64 %
isobutyl alcohol	53 %
1,4-dioxane	46 %
trans-1,4-dichloro-2-butene	37 %

All associated samples with positive or non-detect results for any of these compounds were flagged as estimated (J) or (UJ). In addition, acrolein, dichlorofluoromethane, isobutyl alcohol and 1,4-dioxane had RRF's of 0.030, 0.031, 0.004 and 0.005, respectively, which were below the 0.05 QC limit. All associated sample results for these compounds, which consisted entirely of non-detects, were rejected (R).

IV.) Blanks:

Method Blanks:

Acetone was detected in water method blanks VBLKW1 and VBLKW2 at 25.0 ug/L and 2.3 ug/L, respectively. Detections of acetone in the associated water samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Acetone was detected in soil method blank VBLKS1 at 6.5 ug/kg. Detections of acetone in associated soil samples below 10X this amount were flagged as undetected (U) with the detections limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in soil method blank VBLKS2 at 4.8 ug/kg. Detections of methylene chloride in the associated soil samples below 10X this amount were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Methylene chloride was detected in water method blanks VBLKW2 and VBLKW3 at 10.7 ug/L and 1.5 ug/L, respectively. Detections of acetone in the associated water samples below 10X these amounts

were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Trip Blanks:

Trip Blanks BLKTB002604, BLKTB02802, BLKTB01902, BLKTB01904, BLKTB02203, BLKTB02402, BLKTB02405 and BLKTB02602 had positive results for methylene chloride of 2.0 ug/L, 3.8 ug/L, 1.6 ug/L, 3.6 ug/L, 5.8 ug/L, 8.1 ug/L, 7.0 ug/L and 1.7 ug/L, respectively. Detections of methylene chloride in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of the contamination in each sample.

Trip Blanks BLKTB01902, BLKTB01904, BLKTB02203 and BLKTB02405 had positive results for acetone of 45.2 ug/L, 27.9 ug/L, 9.9 ug/L and 5.1 ug/L, respectively. Detections of acetone in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of the contamination in each sample.

Equipment Blanks:

Equipment blank GDHEB08201 had positive results for acetone of 5.5 ug/L and methylene chloride of 7.3 ug/L. Detections of these compounds in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of the contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

There were no Matrix Spikes (MS) or Matrix Spike Duplicates (MSD) analyzed on the samples in this SDG. All of the Blank Spikes (BS's) analyzed with this SDG met method criteria, so no data qualification was needed.

VII.) Field Duplicates:

There were no field duplicates designated with this SDG, so no action was taken.

VIII.) Internal Standards Performance:

The area counts of internal standards bromochloromethane, 1,4-difluorobenzene and chlorobenzene in sample GDH4B07401 were 42%, 38% and 42%, respectively, which were below the 50-200% QC limits. Reanalysis of this sample exhibited area counts that were within the QC limits for all three internal standards, so no data qualification was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC Compound Identification criteria for the method were met, so no action was required.

XII.) System Performance:

All System Performance criteria for the method were met.

XIII.) Overall Assessment of Data/General:

The reanalysis of sample GDH4B07401 was of preferable data quality since the original analysis had three internal standard percent recoveries outside the QC limits.

The original analysis of sample GDH4B07401 was inadvertently spiked with matrix spiking solution. The reanalyses of sample GDH4B07401 was analyzed outside holding time, however, the reanalysis is of preferable data quality, since the original analysis was spiked.

All soil and water sample results for isobutyl alcohol and 1,4-dioxane were rejected due to excessively low average Relative Response Factors (RRF's) in the initial calibrations for these compounds.

All acrolein results in samples 178EW00101, 656HW00101, 662FW00101, 663HW00101, BLKTB02604, BLKTB02802, GDH4B7401, GDHEB08201, GDHCB07401, BLKTB02203, BLKTB02402, BLKTB02405 and BLKTB02602 were rejected due to an excessively low RRF in the continuing calibration associated with these samples.

Trans-1,4-dichloro-2-butene results in samples GDHCB07401, and BLKTB02203 were rejected due to an excessively low RRF in the continuing calibration associated with these samples.

Dichlorodifluoromethane results in samples 0177W00101, 017DW00101, 178EW00101, 656HW00101, 663HW00101, BLKTB02604, BLKTB02802, GDH4B07401, GDHEB08201, GDHCB07401, BLKTB01902, BLKTB01904, BLKTB02203, BLKTB02402, BLKTB03405 and BLKTB02602 were rejected due to excessively low RRFs in the continuing calibrations associated with these samples.

Ethyl cyanide results in samples 0177W00101, 017DW00101, 178EW00101, 656HW00101, 662FW00101, 663HW00101, BLTB02604, BLKTB02802, GDH4B07401, GDHCB08201, GDHEB08201, GDHCB07401, BLKTB01902, BLKTB01904, BLKTB02203, BLKTB02402, BLKTB02405 and BLKTB02602 were rejected due to excessively low RRFs in the continuing calibrations associated with these samples.

All remaining laboratory data were acceptable with qualification.

SEMIVOLATILE ORGANICS

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) GC/MS Tuning:

All GC/MS Tuning criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The following compounds had Relative Response Factors (RRF's) below the 0.05 QC limit, and Percent Relative Standard Deviations (%RSD's) above the 30% QC limit for the Initial Calibration analyzed on Instrument C:

<u>Compound</u>	<u>RRF</u>	<u>%RSD</u>
1,4-naphthoquinone		33
4-nitroquinoline-1-oxide	0.034	40

Associated samples analyzed with these initial calibrations had results qualified as follows:

Compounds with RRF's below the 0.05 QC limit, which consisted entirely of non-detects, were rejected (R). Positive results for compounds with %RSD's greater 30% were flagged as estimated (J).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard HS103194 for the following compounds:

aniline	32 %
2,4-dinitrophenol	35 %
4-nitroquinoline-1-oxide	34 %

There were no positive detections of these compounds in the associated samples. All non-detect results were flagged as estimated (UJ). In addition, the RRF for 4-nitroquinoline-1-oxide was 0.023, which was below the 0.05 QC limit. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard HS110294 for the following compounds:

aniline	31 %
hexachlorocyclopentadiene	27 %
4-nitroquinoline-1-oxide	64 %

There were no positive results for these compounds in the associated samples. All non-detects were flagged as estimated (UJ). In addition, 4-nitroquinoline-1-oxide had a Relative Response Factor (RRF) of 0.013, which was below the 0.05 QC limit. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard HS110394 for the following compounds:

aniline	29 %
hexachlorocyclopentadiene	34 %
4-nitroquinoline-1-oxide	68 %

There were no positive detections of these compounds in the associated samples. All non-detects were flagged as estimated (UJ). In addition, 4-nitroquinoline-1-oxide had a RRF of 0.011, which was below the 0.05 QC limit. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard HS110794 for the following compounds:

aniline	28 %
bis(2-chloroethyl)ether	26 %
hexachlorocyclopentadiene	27 %
4-nitroquinoline-1-oxide	44 %

There were no positive detections of these compounds in the associated samples. All non-detects were flagged as estimated (UJ). In addition, 4-nitroquinoline-1-oxide had a RRF of 0.020, which was below the QC limit of 0.05. All associated sample results, which consisted entirely of non-detects, were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for continuing calibration standard HS111694 for the following compounds:

aniline	35 %
2,4-dinitrophenol	37 %
4,6-dinitro-2-methylphenol	32 %
4-nitroquinoline-1-oxide	35 %

There were no positive detections of these compounds in the associated samples. All non-detects were flagged as estimated (UJ). In addition, 4-nitroquinoline-1-oxide had an RRF of 0.022, which was below the 0.05 QC limit. All associated sample results, which consisted entirely of non-detects, were rejected (R).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected in water method blanks SBLKW1, SBLKW2 and SBLKW3, at

34.6 ug/L, 17.8 ug/L and 14.2 ug/L, respectively. Detections of this compound in the associated samples below 10X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

Equipment blank GDHEB08201 had no positive results, so data qualification was not necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was required.

VI.) Matrix Spike/Matrix Spike Duplicate:

There were no MS or MSD analyses performed on samples from this SDG, however, there were water and soil blank spike (BS) analyses performed with this SDG. All method criteria for these BS analyses were met, so no action was taken.

VII.) Field Duplicates:

There were no field duplicates analyzed with this SDG. No qualification was not necessary.

VIII.) Internal Standards Performance:

All Internal Standard Performance criteria for the method were met, so no action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria for the method were met, so no action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All CRQL criteria for the method were met, so no action was taken.

XI.) Tentatively Identified Compounds (TIC's):

All TIC criteria for the method were met, so no action was taken.

XII.) System Performance:

All System Performance criteria for the method were met, so no action was taken.

XIII.) Overall Assessment of Data/General:

All soil and water sample results for 4-nitroquinoline-1-oxide were rejected due to an excessively low average Relative Response Factor (RRF) in the initial calibration associated with these samples. All remaining laboratory data were acceptable with qualification.

PESTICIDES/PCB's

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

The initial calibration standard analyzed on 10/22/94 on the DB 608 column had a Percent Relative Standard Deviation (%RSD) of 28.6% for chlorobenzilate, which was above the QC limit of 20%. Since the %RSD was less than 30% and there was only one compound that exceeded the 20% QC limit, no data qualification was necessary.

The initial calibration analyzed on 11/14/94 on the DB 608 column had a %RSD of 96.6% for kepone, which was above the QC limit of 20%. Since the %RSD was greater than 30%, all associated sample results for kepone, which consisted entirely of non-detects, were qualified as estimated (UJ).

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

The soil method blank PESTBLKS1 had detections of aldrin at 28.5 ug/kg, gamma-chlordane at 21.2 ug/kg, 4,4-DDE at 4.2 ug/kg, 4,4-DDT at 54.6 ug/kg, dieldrin at 56.9 ug/kg, endrin at 61.1 ug/kg, endrin aldehyde at 2.6 ug/kg and heptachlor at 25.5 ug/kg. Detections of these compounds in the associated samples below 5X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

The soil method blank PESTBLKS2 had detections of gamma-BHC at 1.2 ug/kg and endrin at 2.3 ug/kg. Detections of these compounds in the associated samples below 5X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Equipment Blanks:

Equipment blank GDHEB08201 had positive detections of delta-BHC at 0.02 ug/L and heptachlor at 0.03 ug/L. Detections of these compounds in the associated samples below 5X these amounts were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

The Relative Percent Differences (RPD's) between the MS and MSD on soil sample GDHCB08201 were 39% for heptachlor, 42% for aldrin, 49% for dieldrin and 41% for 4,4-DDT. All positive and non-detect results for these compounds in associated sample GDHCB08201 were flagged as estimated (J) and (UJ).

The Blank Spike (BS) and Blank Spike Duplicate (BSD) associated with the water samples of this SDG met all method criteria, so no action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary:

All criteria for the method were met, so no action was taken.

VIII.) Field Duplicates:

There were no field duplicates analyzed with this SDG, so no action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria for this method were met, so no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria for the method were met, so no action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualification.

ORGANOPHOSPHORUS PESTICIDES

I.) Holding Times:

All Holding Time criteria for the method were met, so no action was necessary.

II.) Instrument Performance:

All Pesticide Instrument Performance criteria for the method were met, so no action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria for the method were met, so no action was required.

Continuing Calibration:

All Continuing Calibration criteria for the method were met, so no action was needed.

IV.) Blanks:

Method Blanks:

There were no positive detections in any of the method blanks analyzed with this SDG, so no action was required.

Equipment Rinsate Blanks:

There were no positive detections in the equipment blanks associated with this SDG.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria for the method were met, so no action was taken.

VI.) Matrix Spike/Matrix Spike Duplicate:

There was no MS or MSD performed on any sample in this SDG. There were blank spike (BS) and blank spike duplicate (BSD) analyzed with this SDG.

The following Relative Percent Differences (RPD's) were above the QC limit of 25% between OPWL10839BS and OPWL10839BSD:

o,o,o-triethylphosphorothioate	28 %
thionazin	40 %
sulfotepp	38 %
phorate	12 %
disulfoton	37 %
methyl parathion	40 %
parathion	36 %
famphur	39 %

All results in associated samples, which consisted entirely of non-detects, were qualified estimated (UJ).

VII.) TCL Compound Identification:

All criteria for the method were met, so no action was taken.

Appendix L
Comprehensive Long-Term Environmental Action Navy — Naval Base Charleston
Final Focused Field Investigation Report
(Bound Under Separate Cover)

Appendix M
Grid-Based Analytical Data for Zone H NAVBASE Charleston

Section 1A

Grid-Based Analytical Data for Soil

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-CN		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01			
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701			
		LAB SAMPLE ID ---->	41668-001	41668-003	41668-002	41735-004	41751-003	41782-003			
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803			
		SAMPLE DATE ----->	09/22/94	09/27/94	09/27/94	10/04/94	10/14/94	10/07/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/07/94	10/11/94	10/11/94			
		DATE ANALYZED ---->	10/06/94	10/06/94	10/06/94	10/10/94	10/12/94	10/12/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/L	MG/KG			
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	1.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-CN		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID ---->	41807-001	41925-001	41940-006	42984-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/21/94	10/25/94	10/25/94	02/09/95			
		DATE ANALYZED ---->	10/21/94	10/26/94	10/26/94	02/13/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-DIOXI		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8044-99			
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC804401			
		LAB SAMPLE ID ---->	1K1324-1	1K1324-3	1K1324-2	1K1400-1	1K1401-1	1K1401-2			
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100620			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	10/04/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/07/94	10/08/94	10/08/94	10/22/94	10/22/94	10/22/94			
		DATE ANALYZED ---->	10/24/94	10/24/94	10/24/94	11/01/94	11/01/94	11/02/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	PG/G	PG/G	PG/G	PG/G	PG/G	PG/G			
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL
1746-01-6	2378-TCDD	0.31	EMPC	0.2923	U	0.3206	EMPC	0.3948	EMPC	0.1432	EMPC
19408-74-3	123789-HxCDD	10.8824	J	4.3382	EMPC	9.9395	EMPC	2.3415	EMPC	0.9254	EMPC
3268-87-9	OCDD	2741.0105	J	1591.7007	J	2526.4001	J	763.6115	EMPC	117.1464	EMPC
35822-46-9	1234678-HpCDD	253.8876	J	89.6097	J	130.2307	J	38.5717	J	8.7225	EMPC
39001-02-0	OCDF	140.0141	J	35.2048	J	46.3137	J	10.4678	J	2.1768	EMPC
39227-28-6	123478-HxCDD	4.5242	EMPC	1.4077	EMPC	2.7322	EMPC	0.6573	EMPC	0.2805	EMPC
40321-76-4	12378-PeCDD	2.0242	EMPC	1.0295	EMPC	1.4048	EMPC	0.4524	EMPC	0.2973	EMPC
51207-31-9	2378-TCDF	4.6751	EMPC	0.7929	EMPC	2.2764	EMPC	0.7992	EMPC	0.0995	EMPC
55673-89-7	1234789-HpCDF	4.8795	EMPC	0.7584	EMPC	1.3309	EMPC	0.3651	EMPC	3.07	EMPC
57117-31-4	23478-PeCDF	4.6804	EMPC	0.4106	EMPC	1.1997	EMPC	0.3483	EMPC	0.0751	EMPC
57117-41-6	12378-PeCDF	1.6191	EMPC	0.3309	U	0.758	EMPC	0.4896	EMPC	0.1862	EMPC
57117-44-9	123678-HxCDF	2.6526	EMPC	0.4485	EMPC	1.2703	EMPC	0.2965	EMPC	0.0714	EMPC
57653-85-7	123678-HxCDD	9.0307	EMPC	3.0909	EMPC	4.9359	EMPC	1.3135	EMPC	0.5099	EMPC
60851-34-5	234678-HxCDF	4.8308	EMPC	0.7199	EMPC	2.2006	EMPC	0.5314	EMPC	0.0844	EMPC
67562-39-4	1234678-HpCDF	43.398	J	10.9498	EMPC	18.2097	J	4.0367	EMPC	0.9213	EMPC
70648-26-9	123478-HxCDF	8.6794	EMPC	0.9418	EMPC	2.7719	EMPC	0.7974	EMPC	0.1275	EMPC
72918-21-9	123789-HxCDF	0.7779	EMPC	0.2589	EMPC	0.3839	U	0.0959	EMPC	0.0481	EMPC
9999900-00-6	Total TCDD	16.2675	J	11.4926	J	13.9444	J	3.6241	EMPC	2.5416	EMPC
9999900-00-7	Total PeCDD	2.0242	EMPC	11.4209	J	17.3297	J	2.3575	EMPC	3.2388	EMPC
9999900-00-8	Total HxCDD	133.3626	J	102.5725	J	167.5011	J	37.5093	J	14.2416	J
9999900-00-9	Total HpCDD	579.6467	J	278.8499	J	407.9603	J	121.9844	J	28.0609	J
9999900-01-0	Total TCDF	27.0424	J	11.5514	J	15.7798	J	5.0704	EMPC	2.8088	EMPC
9999900-01-1	Total PeCDF	50.0614	J	12.339	J	24.4031	J	3.9811	EMPC	1.093	EMPC
9999900-01-2	Total HxCDF	86.2439	J	17.0998	J	35.8605	J	7.0155	EMPC	1.4276	EMPC
9999900-01-3	Total HpCDF	155.4586	J	39.3582	J	51.4205	J	12.8147	J	2.9541	EMPC

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-DIOXI		SAMPLE ID ----->	GDH-C-8057-01	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01				
		ORIGINAL ID ----->	GDHC805701	GDHC806702	GDHC807401	GDHC808201	GDHC810401				
		LAB SAMPLE ID ----->	IK1429-3	IK1427-1	IK1491-1	IK1492-1	IK10187-1				
		ID FROM REPORT -->	100803	101201	102201	102403	GDHC810401				
		SAMPLE DATE ----->	10/07/94	10/11/94	10/21/94	10/22/94	02/06/95				
		DATE EXTRACTED -->	10/22/94	10/22/94	11/03/94	11/03/94	02/13/95				
		DATE ANALYZED -->	11/01/94	11/02/94	11/16/94	11/16/94	02/27/95				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	PG/G	PG/G	PG/G	PG/G	PG/G				
CAS #	Parameter	APX10	VAL	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
1746-01-6	2378-TCDD	0.5975	EMPC	0.2182	EMPC	1.6568	EMPC	1.219	EMPC	0.17	U
19408-74-3	123789-HxCDD	0.7465	EMPC	0.59	EMPC	4.0462	EMPC	3.7873	EMPC	2.9525	EMPC
3268-87-9	OCDD	176.8933	EMPC	78.3153	EMPC	475.276	J	1199.8035	J	1212.6089	J
35822-46-9	1234678-HpCDD	11.5099	EMPC	5.7602	EMPC	35.6979	J	52.5735	J	78.8602	J
39001-02-0	OCDF	5.9773	EMPC	0.365	EMPC	3.1162	EMPC	20.7315	J	17.326	J
39227-28-6	123478-HxCDD	0.3259	EMPC	0.1899	EMPC	1.9681	U	1.5694	EMPC	0.6832	EMPC
40321-76-4	12378-PeCDD	0.3517	EMPC	0.2551	EMPC	1.178	EMPC	0.9808	EMPC	0.3398	EMPC
51207-31-9	2378-TCDF	0.3635	EMPC	0.26	EMPC	0.8298	EMPC	0.6354	EMPC	0.5181	U
55673-89-7	1234789-HpCDF	0.3463	EMPC	0.44	EMPC	0.4632	EMPC	0.5974	EMPC	1.0299	U
57117-31-4	23478-PeCDF	0.2447	EMPC	0.2	EMPC	0.5697	U	0.7292	EMPC	0.2779	U
57117-41-6	12378-PeCDF	0.2854	EMPC	0.0478	EMPC	0.3915	EMPC	0.4055	EMPC	0.405	U
57117-44-9	123678-HxCDF	0.188	EMPC	0.09	EMPC	0.5114	EMPC	0.8193	EMPC	0.4211	U
57653-85-7	123678-HxCDD	0.4311	EMPC	0.2451	EMPC	1.8729	U	1.8267	EMPC	2.3929	EMPC
60851-34-5	234678-HxCDF	0.2515	EMPC	0.11	EMPC	0.5168	U	1.3186	EMPC	0.9921	EMPC
67562-39-4	1234678-HpCDF	2.6759	EMPC	0.2347	EMPC	2.5009	EMPC	8.4737	EMPC	10.1873	J
70648-26-9	123478-HxCDF	0.4512	EMPC	0.11	EMPC	0.7409	EMPC	0.9629	EMPC	0.9437	EMPC
72918-21-9	123789-HxCDF	0.49	EMPC	0.14	EMPC	0.5254	U	0.4127	EMPC	0.2765	U
9999900-00-6	Total TCDD	1.9407	EMPC	0.8641	EMPC	20.2296	J	8.0054	EMPC	3.2489	EMPC
9999900-00-7	Total PeCDD	0.7184	EMPC	1.1741	EMPC	14.4402	J	14.2652	J	1.8636	EMPC
9999900-00-8	Total HxCDD	9.0176	EMPC	16.08	J	103.1656	J	101.3336	J	34.4414	J
9999900-00-9	Total HpCDD	32.6335	J	23.9949	J	153.1958	J	213.42	J	178.0297	J
9999900-01-0	Total TCDF	1.6702	EMPC	0.1961	EMPC	4.559	EMPC	18.2007	J	2.0306	EMPC
9999900-01-1	Total PeCDF	1.9395	EMPC	0.153	EMPC	5.5457	EMPC	21.5829	J	4.3366	EMPC
9999900-01-2	Total HxCDF	3.7738	EMPC	0.1704	EMPC	5.7385	EMPC	23.3354	J	20.9109	J
9999900-01-3	Total HpCDF	7.868	EMPC	0.0483	EMPC	6.0832	EMPC	25.4854	J	35.9001	J

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-HERB		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01					
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701					
		LAB SAMPLE ID ---->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005					
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803					
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94					
		DATE EXTRACTED -->	10/11/94	10/03/94	10/03/94	10/18/94	10/18/94	10/21/94					
		DATE ANALYZED ---->	10/21/94	10/11/94	10/11/94	11/02/94	11/02/94	11/02/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL		
93-72-1	2,4,5-TP (Silvex)	10.	U	10.	U	10.	U	9.5	J	7.4	J	10.	U
93-76-5	2,4,5-T	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
94-75-7	2,4-D	50.	U	50.	U	50.	UJ	50.	U	50.	U	50.	U
94-82-6	2,4-DB	NR		NR		NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-HERB		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
	ORIGINAL ID ----->	GDHC806702	GDHC807401	GDHC808201	GDHC810401				
	LAB SAMPLE ID ---->	UDB-001	UII-001	UIH-003	VNR-001				
	ID FROM REPORT -->	101201	102201	102403	GDHC810401				
	SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95				
	DATE EXTRACTED -->	10/21/94	11/04/94	11/04/94	02/10/95				
	DATE ANALYZED ---->	11/02/94	11/22/94	11/23/94	02/11/95				
	MATRIX ----->	Soil	Soil	Soil	Soil				
	UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG				
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
93-72-1	2,4,5-TP (Silvex)	7.	J	10.		10.	U	7.3	J
93-76-5	2,4,5-T	10.	U	9.2		9.8	J	8.2	J
94-75-7	2,4-D	50.	U	49.4		50.	U	50.	U
94-82-6	2,4-DB	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-HEXAC		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01					
		ORIGINAL ID ----->	GDHCB00701	GDHCB00901	GDHCB01101	GDHCB02501	GDHCB04401	GDHCB05701					
		LAB SAMPLE ID ---->	41668-001	41668-003	41668-002	41735-004	41751-003	41782-003					
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	10/04/94	10/05/94	10/07/94					
		DATE ANALYZED ---->	09/29/94	09/29/94	09/29/94	10/10/94	10/10/94	10/13/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL	APX10	VAL
9999900-00-5	Hexavalent Chromium	0.5	U	0.6	U	0.6	U	0.4	UJ	0.4	UJ	0.5	UJ

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-REXAC		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHC806702	GDHC807401	GDHC808201	GDHC810401			
		LAB SAMPLE ID --->	41807-001	41925-001	41940-006	42984-001			
		ID FROM REPORT -->	101201	GDHC807401	GDHC808201	GDHC810401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE ANALYZED --->	10/13/94	10/25/94	10/25/94	02/10/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
9999900-00-5	Hexavalent Chromium	0.5	UJ	0.1	U	0.1	U	0.1	UJ

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-METAL	SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01
	ORIGINAL ID ----->	GDHCB00701	GDHCB00901	GDHCB01101	GDHCB02501	GDHCB04401	GDHCB05701
	LAB SAMPLE ID ---->	41668-001	41668-003	41668-002	41735-004	41751-003	41782-003
	ID FROM REPORT -->	092801	092803	092802	100524	100620	100803
	SAMPLE DATE ----->	09/22/94	09/27/94	09/27/94	10/04/94	10/05/94	10/07/94
	DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/07/94	10/11/94	10/11/94
	DATE ANALYZED ---->	10/06/94	10/06/94	10/06/94	10/10/94	10/12/94	10/12/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
	UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG

CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL	APX10	VAL
7439-92-1	Lead	83.3	J	14.4	J	30.3	J	11.		2.6	J	21.9	U
7439-97-6	Mercury	0.18		0.04	J	0.1		0.03	U	0.22		0.02	U
7440-02-0	Nickel	6.6		1.6	J	4.5	J	6.2		1.2	J	9.9	J
7440-22-4	Silver	0.33	U	0.38	U	0.39	U	0.27	U	0.31	U	2.7	U
7440-31-5	Tin	1.7	U	2.	U	2.1	U	1.4	U	1.6	U	14.2	U
7440-36-0	Antimony	1.5	UJ	1.8	UJ	1.9	UJ	1.3	U	1.5	UJ	12.8	U
7440-38-2	Arsenic	6.		3.		1.4	J	2.9		1.3		4.2	
7440-39-3	Barium	22.7	U	10.9	U	12.4	U	7.6	U	3.9	U	0.64	U
7440-41-7	Beryllium	0.45	J	0.15	J	0.11	J	0.16	J	0.14	J	0.26	J
7440-43-9	Cadmium	0.2	U	0.24	U	0.24	U	0.17	U	0.19	U	1.7	U
7440-47-3	Chromium	25.9		8.2		15.3		13.8		4.		12.3	
7440-48-4	Cobalt	2.9	J	0.95	J	0.93	J	0.96	J	0.73	J	4.5	J
7440-50-8	Copper	19.3	U	4.5	U	14.8	U	4.	U	1.6	U	15.	J
7440-62-2	Vanadium	26.9		9.9		14.1		14.7		3.7	J	10.7	J
7440-66-6	Zinc	85.2	UJ	16.1	UJ	25.3	UJ	22.1		8.	U	33.6	
7782-49-2	Selenium	0.14	J	0.14	J	0.09	J	0.27	UJ	0.3	UJ	0.26	UJ
7440-28-0	Thallium	0.38	J	0.07	J	0.26	UJ	0.47	U	0.53	U	0.46	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-METAL		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHC806702	GDHC807401	GDHC808201	GDHC810401			
		LAB SAMPLE ID ---->	41807-001	41925-001	41940-006	42984-001			
		ID FROM REPORT -->	101201	102201	102403	GDHC810401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/21/94	10/25/94	10/25/94	02/10/95			
		DATE ANALYZED ---->	10/21/94	10/26/94	10/26/94	02/13/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
7439-92-1	Lead	2.4	U	3.1	J	10.1		17.2	
7439-97-6	Mercury	0.02	U	0.02	U	0.03	U	0.03	J
7440-02-0	Nickel	0.9	U	5.	U	8.6	U	4.2	U
7440-22-4	Silver	0.3	U	0.26	U	0.29	U	0.15	UJ
7440-31-5	Tin	1.5	U	1.3	U	1.5	U	0.42	U
7440-36-0	Antimony	1.4	U	1.2	U	1.4	U	0.95	U
7440-38-2	Arsenic	2.1		4.1		6.9		1.4	
7440-39-3	Barium	2.1	U	4.6	U	14.2	U	11.4	J
7440-41-7	Beryllium	0.12	J	0.24	U	0.38	U	0.09	U
7440-43-9	Cadmium	0.18	U	0.16	U	0.28	U	0.12	J
7440-47-3	Chromium	2.6		13.5	U	24.8	U	9.8	
7440-48-4	Cobalt	0.49	J	0.91	U	1.4	U	0.98	U
7440-50-8	Copper	0.9	U	4.6	U	7.1	U	1.6	J
7440-62-2	Vanadium	3.2	J	8.9	U	17.3	U	21.9	
7440-66-6	Zinc	7.4	U	17.6	U	30.1	U	11.3	
7782-49-2	Selenium	0.29	UJ	0.41	U	0.6	U	0.28	UJ
7440-28-0	Thallium	0.5	U	0.44	J	0.5	U	0.3	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-DP PE	SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01
	ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701
	LAB SAMPLE ID ---->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005
	ID FROM REPORT -->	092801	092803	092802	100524	100620	100803
	SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94
	DATE EXTRACTED -->	10/03/94	10/04/94	10/03/94	10/18/94	10/18/94	10/21/94
	DATE ANALYZED ---->	10/06/94	10/06/94	10/06/94	10/24/94	10/24/94	10/29/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
	UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL	APX10	VAL
126-68-1	O,O,O-Triethylphosphorothioate	33.	U										
297-97-2	Thionazin	33.	U										
298-00-0	Methyl parathion	33.	U										
298-02-2	Phorate	33.	U										
298-04-4	Disulfoton	33.	U										
3689-24-5	Sulfotep	33.	U	33.	U	33.	UJ	33.	U	33.	U	33.	U
52-85-7	Famphur	33.	U										
56-38-2	Parathion	33.	U	22.8	U	37.4	U	33.	U	33.	U	33.	U
60-51-5	Dimethoate	33.	U	33.	U	33.	UJ	33.	U	33.	U	33.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-OP PE		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID ---->	U08-001	U11-001	U1H-003	VWR-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/21/94	11/04/94	11/04/94	02/10/95			
		DATE ANALYZED ---->	10/29/94	11/09/94	11/09/94	02/11/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
126-68-1	O,O,O-Triethylphosphorothioate	33.	U	33.	UJ	33.	UJ	33.	U
297-97-2	Thionazin	33.	U	33.	UJ	33.	UJ	33.	U
298-00-0	Methyl parathion	33.	U	33.	UJ	33.	UJ	33.	U
298-02-2	Phorate	33.	U	33.	UJ	33.	UJ	33.	U
298-04-4	Disulfoton	33.	U	33.	UJ	33.	UJ	33.	U
3689-24-5	Sulfotep	33.	U	33.	UJ	33.	UJ	33.	U
52-85-7	Famphur	33.	U	33.	UJ	33.	UJ	33.	U
56-38-2	Parathion	33.	U	33.	UJ	33.	UJ	33.	U
60-51-5	Dimethoate	33.	U	33.	UJ	33.	UJ	33.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-PEST		SAMPLE ID ----->	GDH-C-B007-01	GDH-C-B009-01	GDH-C-B011-01	GDH-C-B025-01	GDH-C-B044-01	GDH-C-B057-01			
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701			
		LAB SAMPLE ID ---->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005			
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803			
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94			
		DATE EXTRACTED -->	10/03/94	10/03/94	10/03/94	10/18/94	10/18/94	10/21/94			
		DATE ANALYZED ---->	10/22/94	10/22/94	10/22/94	10/23/94	10/23/94	11/04/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL
309-00-2	Aldrin	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
319-84-6	alpha-BHC	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
319-85-7	beta-BHC	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
319-86-8	delta-BHC	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
5103-71-9	alpha-Chlordane	1.7	U	1.7	U	1.7	U	1.7	U	1.6	J
5103-74-2	gamma-Chlordane	1.7	U	1.7	U	1.7	U	1.7	U	1.7	J
510-15-6	Chlorobenzilate	33.	UJ	33.	UJ	33.	UJ	124.	J	33.	UJ
72-54-8	4,4'-DDD	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U
72-55-9	4,4'-DDE	3.3	U	3.3	U	3.3	U	48.1	J	3.3	U
50-29-3	4,4'-DDT	3.3	U	2.1	J	5.5	J	27.3	J	3.3	U
2303-16-4	Diallate	33.	UJ	33.	UJ	33.	UJ	33.	U	33.	U
60-57-1	Dieldrin	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U
959-98-8	Endosulfan I	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
33213-65-9	Endosulfan II	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U
72-20-8	Endrin	3.3	U	3.3	U	3.3	U	84.8	J	3.3	U
7421-93-4	Endrin aldehyde	3.3	U	3.3	U	3.3	U	24.1	J	3.3	U
76-44-8	Heptachlor	1.7	U	1.7	U	1.7	U	1.3	J	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U	1.7	U	1.7	U	4.9	J	1.7	U
465-73-6	Isodrin	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U
143-50-0	Kepone	33.	U	33.	U	33.	U	151.	J	33.	UJ
72-43-5	Methoxychlor	17.	U	17.	U	17.	U	17.	U	17.	U
8001-35-2	Toxaphene	170.	U	170.	U	170.	U	170.	U	170.	U
12674-11-2	Aroclor-1016	33.	U	33.	U	33.	U	33.	U	33.	U
11104-28-2	Aroclor-1221	67.	U	67.	U	67.	U	67.	U	67.	U
11141-16-5	Aroclor-1232	33.	U	33.	U	33.	U	33.	U	33.	U
53469-21-9	Aroclor-1242	33.	U	33.	U	33.	U	33.	U	33.	U
12672-29-6	Aroclor-1248	33.	U	33.	U	33.	U	33.	U	33.	U
11097-69-1	Aroclor-1254	33.	U	33.	U	33.	U	33.	U	33.	U
11096-82-5	Aroclor-1260	3040.		33.	U	33.	U	33.	U	33.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-PEST		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID --->	UDB-001	UII-001	UIH-003	VWR-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/21/94	11/04/94	11/04/94	02/10/95			
		DATE ANALYZED --->	11/04/94	11/15/94	11/15/94	02/11/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
309-00-2	Aldrin	1.7	U	1.7	U	1.7	UJ	1.7	U
319-84-6	alpha-BHC	1.7	U	1.7	U	1.7	U	1.7	U
319-85-7	beta-BHC	1.7	U	1.7	U	1.7	U	1.7	U
319-86-8	delta-BHC	1.7	U	1.7	U	1.7	U	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	UJ	1.7	U	1.7	U	1.7	U
5103-71-9	alpha-Chlordane	1.7	U	1.7	U	1.7	U	1.5	J
5103-74-2	gamma-Chlordane	1.7	U	1.7	U	1.7	U	1.7	U
510-15-6	Chlorobenzilate	33.	U	33.	U	33.	U	33.	U
72-54-8	4,4'-DDD	3.3	U	2.8	J	3.3	U	3.3	U
72-55-9	4,4'-DDE	3.3	U	3.3	U	11.3	U	3.3	U
50-29-3	4,4'-DDT	3.3	UJ	3.3	U	3.3	UJ	2.8	J
2303-16-4	Diallate	33.	U	33.	U	33.	U	33.	U
60-57-1	Dieldrin	3.3	U	3.3	U	3.3	UJ	3.3	U
959-98-8	Endosulfan I	1.7	U	1.7	U	1.7	U	1.7	U
33213-65-9	Endosulfan II	3.3	U	3.3	U	3.3	U	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U	3.3	U	3.3	U	3.3	U
72-20-8	Endrin	3.3	UJ	3.3	U	3.3	U	3.3	U
7421-93-4	Endrin aldehyde	3.3	U	3.	J	3.3	U	3.3	U
76-44-8	Heptachlor	1.7	UJ	1.7	U	1.7	UJ	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U	1.7	U	1.7	U	2.7	
465-73-6	Isodrin	3.3	U	3.3	U	3.3	U	3.3	U
143-50-0	Kepone	33.	U	33.	UJ	33.	UJ	33.	U
72-43-5	Methoxychlor	17.	U	17.	U	17.	U	17.	U
8001-35-2	Toxaphene	170.	U	170.	U	170.	U	170.	U
12674-11-2	Aroclor-1016	33.	U	33.	U	33.	U	33.	U
11104-28-2	Aroclor-1221	67.	U	67.	U	67.	U	67.	U
11141-16-5	Aroclor-1232	33.	U	33.	U	33.	U	33.	U
53469-21-9	Aroclor-1242	33.	U	33.	U	33.	U	33.	U
12672-29-6	Aroclor-1248	33.	U	33.	U	33.	U	33.	U
11097-69-1	Aroclor-1254	33.	U	33.	U	33.	U	33.	U
11096-82-5	Aroclor-1260	33.	U	33.	U	33.	U	33.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SVDA		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01					
		ORIGINAL ID ----->	GDHCB00701	GDHCB00901	GDHCB01101	GDHCB02501	GDHCB04401	GDHCB05701					
		LAB SAMPLE ID ---->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005					
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803					
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94					
		DATE EXTRACTED -->	10/03/94	10/03/94	10/03/94	10/18/94	10/18/94	10/21/94					
		DATE ANALYZED ---->	10/27/94	10/22/94	10/21/94	11/01/94	10/31/94	10/27/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL	APX10	VAL
83-32-9	Acenaphthene	330.	U	330.	U	330.	U	650.	J	330.	U	330.	U
208-96-8	Acenaphthylene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
98-86-2	Acetophenone	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
53-96-3	Acetamidofluorene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
92-67-1	4-Aminobiphenyl	330.	UJ	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
62-53-3	Aniline	330.	U	330.	UJ	330.	UJ	330.	U	330.	UJ	330.	UJ
120-12-7	Anthracene	41.4	J	330.	U	330.	U	1040.	U	330.	U	330.	U
140-57-8	Aramite	330.	U	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
56-55-3	Benzo(a)anthracene	240.	J	330.	U	330.	U	2670.	U	330.	U	330.	U
205-99-2	Benzo(b)fluoranthene	236.	J	330.	U	40.6	J	2840.	U	330.	U	330.	U
207-08-9	Benzo(k)fluoranthene	248.	J	330.	U	330.	U	2340.	U	330.	U	330.	U
191-24-2	Benzo(g,h,i)perylene	123.	J	330.	U	330.	U	1110.	U	330.	U	330.	U
50-32-8	Benzo(a)pyrene	224.	J	330.	U	330.	U	2560.	U	330.	U	330.	U
100-51-6	Benzyl alcohol	330.	U	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
111-91-1	bis(2-Chloroethoxy)methane	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
111-44-4	bis(2-Chloroethyl)ether	330.	U	330.	U	330.	U	330.	UJ	330.	U	330.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	407.	U	111.	J	74.2	J	330.	U	330.	U	330.	U
101-55-3	4-Bromophenylphenylether	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
85-68-7	Butylbenzylphthalate	330.	U	65.8	J	67.	J	330.	U	330.	U	330.	U
106-47-8	4-Chloroaniline	330.	U	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
59-50-7	4-Chloro-3-methylphenol	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
91-58-7	2-Chloronaphthalene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
95-57-8	2-Chlorophenol	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
7005-72-3	4-Chlorophenylphenylether	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
218-01-9	Chrysene	273.	J	330.	U	330.	U	2960.	U	330.	U	330.	U
95-48-7	2-Methylphenol (o-Cresol)	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
108-39-4	3-Methylphenol (m-Cresol)	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
106-44-5	4-Methylphenol (p-Cresol)	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
53-70-3	Dibenzo(a,h)anthracene	330.	U	330.	U	330.	U	456.	J	330.	U	330.	U
132-64-9	Dibenzofuran	330.	U	330.	U	330.	U	301.	J	330.	U	330.	U
95-50-1	1,2-Dichlorobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
541-73-1	1,3-Dichlorobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
106-46-7	1,4-Dichlorobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
91-94-1	3,3'-Dichlorobenzidine	660.	U	660.	U	660.	U	660.	U	660.	U	660.	U
120-83-2	2,4-Dichlorophenol	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SVOA		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01			
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701			
		LAB SAMPLE ID --->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005			
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803			
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94			
		DATE EXTRACTED -->	10/03/94	10/03/94	10/03/94	10/18/94	10/18/94	10/21/94			
		DATE ANALYZED --->	10/27/94	10/22/94	10/21/94	11/01/94	10/31/94	10/27/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL
87-65-0	2,6-Dichlorophenol	330.	U	330.	U	330.	U	330.	U	330.	U
84-66-2	Diethylphthalate	330.	U	330.	U	330.	U	330.	U	330.	U
60-11-7	p-(Dimethylamino)azobenzene	330.	U	330.	UJ	330.	UJ	330.	U	330.	U
57-97-6	7,12-Dimethylbenz(a)anthracene	330.	U	330.	UJ	330.	UJ	330.	U	330.	U
119-93-7	3,3-Dimethylbenzidine	330.	U	330.	U	330.	U	330.	U	330.	U
122-09-8	alpha, alpha-Dimethylphenethylamine	330.	UJ	330.	U	330.	U	330.	U	330.	UJ
131-11-3	Dimethylphthalate	330.	U	330.	U	330.	U	330.	U	330.	U
105-67-9	2,4-Dimethylphenol	330.	U	330.	U	330.	U	330.	U	330.	U
84-74-2	Di-n-butylphthalate	330.	U	330.	U	330.	U	330.	U	330.	U
99-65-0	1,3-Dinitrobenzene	330.	U	330.	U	330.	U	330.	U	330.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1600.	U	1600.	U	1600.	U	1600.	UJ	1600.	U
51-28-5	2,4-Dinitrophenol	1600.	U	1600.	U	1600.	U	1600.	UJ	1600.	U
88-85-7	Dinoseb	330.	U	330.	U	330.	U	330.	U	330.	U
121-14-2	2,4-Dinitrotoluene	330.	U	330.	U	330.	U	330.	U	330.	U
606-20-2	2,6-Dinitrotoluene	330.	U	330.	U	330.	U	330.	U	330.	U
117-84-0	Di-n-octylphthalate	330.	U	330.	U	330.	U	330.	U	330.	U
122-39-4	Diphenylamine	330.	U	330.	U	330.	U	330.	U	330.	U
97-63-2	Ethyl methacrylate	330.	U	330.	UJ	330.	UJ	330.	U	330.	U
62-50-0	Ethyl methanesulfonate	330.	U	330.	U	330.	U	330.	U	330.	U
206-44-0	Fluoranthene	404.	U	330.	U	50.7	J	5960.	U	330.	U
86-73-7	Fluorene	330.	U	330.	U	330.	U	591.	J	330.	U
118-74-1	Hexachlorobenzene	330.	U	330.	U	330.	U	330.	U	330.	U
87-68-3	Hexachlorobutadiene	330.	U	330.	U	330.	U	330.	U	330.	U
77-47-4	Hexachlorocyclopentadiene	330.	U	330.	U	330.	U	330.	U	330.	U
67-72-1	Hexachloroethane	330.	U	330.	U	330.	U	330.	U	330.	U
70-30-4	Hexachlorophene	330.	U	330.	U	330.	U	330.	U	330.	U
1888-71-7	Hexachloropropene	330.	U	330.	U	330.	U	330.	U	330.	U
193-39-5	Indeno(1,2,3-cd)pyrene	131.	J	330.	U	330.	U	1110.	U	330.	U
78-59-1	Isophorone	330.	U	330.	U	330.	U	330.	U	330.	U
120-58-1	Isosafrole	330.	U	330.	UJ	330.	UJ	330.	U	330.	U
91-80-5	Methapyrilene	330.	U	330.	U	330.	U	330.	U	330.	U
56-49-5	3-Methylcholanthrene	330.	U	330.	UJ	330.	UJ	330.	U	330.	U
80-62-6	Methyl methacrylate	330.	UJ	330.	UJ	330.	UJ	330.	U	330.	U
66-27-3	Methyl methanesulfonate	330.	UJ	330.	U	330.	U	330.	U	330.	U
91-57-6	2-Methylnaphthalene	330.	U	330.	U	330.	U	104.	J	330.	U
91-20-3	Naphthalene	330.	U	330.	U	330.	U	214.	J	330.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SVOA		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01					
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701					
		LAB SAMPLE ID --->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005					
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803					
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94					
		DATE EXTRACTED -->	10/03/94	10/03/94	10/03/94	10/18/94	10/18/94	10/21/94					
		DATE ANALYZED --->	10/27/94	10/22/94	10/21/94	11/01/94	10/31/94	10/27/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL	APX10	VAL
130-15-4	1,4-Naphthoquinone	1600.	UJ	1600.	UJ	1600.	UJ	1600.	U	1600.	U	1600.	U
134-32-7	1-Naphthylamine	330.	UJ	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
91-59-8	2-Naphthylamine	330.	UJ	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
88-74-4	2-Nitroaniline	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U
99-09-2	3-Nitroaniline	1600.	U	1600.	UJ	1600.	UJ	1600.	U	1600.	U	1600.	U
100-01-6	4-Nitroaniline	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U
98-95-3	Nitrobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
88-75-5	2-Nitrophenol	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
100-02-7	4-Nitrophenol	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U
56-57-5	4-Nitroquinoline 1-oxide	330.	U	330.	UR	330.	UR	330.	UR	330.	UR	330.	UR
924-16-3	N-Nitroso-di-n-butylamine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
55-18-5	N-Nitrosodiethylamine	330.	U	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
62-75-9	N-Nitrosodimethylamine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
86-30-6	N-Nitrosodiphenylamine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
621-64-7	N-Nitroso-di-n-propylamine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
10595-95-6	N-Nitrosomethylethylamine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
59-89-2	N-Nitrosomorpholine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
100-75-4	N-Nitrosopiperidine	330.	UJ	330.	U	330.	U	330.	U	330.	U	330.	U
930-55-2	N-Nitrosopyrrolidine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
99-55-8	5-Nitro-o-toluidine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
608-93-5	Pentachlorobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
76-01-7	Pentachloroethane	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
82-68-8	Pentachloronitrobenzene	330.	UJ	330.	U	330.	U	330.	U	330.	U	330.	U
87-86-5	Pentachlorophenol	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U
62-44-2	Phenacetin	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
85-01-8	Phenanthrene	324.	J	330.	U	330.	U	5230.	U	330.	U	330.	U
108-95-2	Phenol	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
106-50-3	p-Phenylenediamine	330.	UJ	330.	UJ	330.	UJ	330.	U	330.	U	330.	U
109-06-8	2-Picoline	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
23950-58-5	Pronamide	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
129-00-0	Pyrene	523.	U	330.	U	45.8	J	5440.	U	330.	U	330.	U
110-86-1	Pyridine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
94-59-7	Safrole	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
58-90-2	2,3,4,6-Tetrachlorophenol	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
95-53-4	o-Toluidine	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SV0A		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01					
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701					
		LAB SAMPLE ID ---->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UGG-005					
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803					
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94					
		DATE EXTRACTED -->	10/03/94	10/03/94	10/03/94	10/18/94	10/18/94	10/21/94					
		DATE ANALYZED -->	10/27/94	10/22/94	10/21/94	11/01/94	10/31/94	10/27/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL	APX10	VAL
120-82-1	1,2,4-Trichlorobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
95-95-4	2,4,5-Trichlorophenol	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U
88-06-2	2,4,6-Trichlorophenol	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U
99-35-4	1,3,5-Trinitrobenzene	330.	U	330.	U	330.	U	330.	U	330.	U	330.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SVOA		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID ---->	UDB-001	UII-001	UIH-003	VWR-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/21/94	11/04/94	11/04/94	02/13/95			
		DATE ANALYZED ---->	10/28/94	11/16/94	11/16/94	02/22/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
83-32-9	Acenaphthene	330.	U	330.	U	330.	U	333.	U
208-96-8	Acenaphthylene	330.	U	330.	U	330.	U	333.	U
98-86-2	Acetophenone	330.	U	330.	U	330.	U	333.	U
53-96-3	Acetamidofluorene	330.	U	330.	U	330.	U	333.	U
92-67-1	4-Aminobiphenyl	330.	U	330.	U	330.	U	333.	U
62-53-3	Aniline	330.	UJ	330.	UJ	330.	UJ	333.	U
120-12-7	Anthracene	330.	U	330.	U	330.	U	333.	U
140-57-8	Aramite	330.	U	330.	U	330.	U	333.	U
56-55-3	Benzo(a)anthracene	330.	U	330.	U	330.	U	333.	U
205-99-2	Benzo(b)fluoranthene	330.	U	330.	U	330.	U	333.	U
207-08-9	Benzo(k)fluoranthene	330.	U	330.	U	330.	U	333.	U
191-24-2	Benzo(g,h,i)perylene	330.	U	330.	U	330.	U	333.	U
50-32-8	Benzo(a)pyrene	330.	U	330.	U	330.	U	333.	U
100-51-6	Benzyl alcohol	330.	U	330.	U	330.	U	333.	U
111-91-1	bis(2-Chloroethoxy)methane	330.	U	330.	U	330.	U	333.	U
111-44-4	bis(2-Chloroethyl)ether	330.	U	330.	U	330.	U	333.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330.	U	330.	U	330.	U	333.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	330.	U	330.	U	330.	U	333.	U
101-55-3	4-Bromophenylphenylether	330.	U	330.	U	330.	U	333.	U
85-68-7	Butylbenzylphthalate	330.	U	330.	U	330.	U	333.	U
106-47-8	4-Chloroaniline	330.	U	330.	U	330.	U	333.	U
59-50-7	4-Chloro-3-methylphenol	330.	U	330.	U	330.	U	333.	U
91-58-7	2-Chloronaphthalene	330.	U	330.	U	330.	U	333.	U
95-57-8	2-Chlorophenol	330.	U	330.	U	330.	U	333.	U
7005-72-3	4-Chlorophenylphenylether	330.	U	330.	U	330.	U	333.	U
218-01-9	Chrysene	330.	U	330.	U	330.	U	333.	U
95-48-7	2-Methylphenol (o-Cresol)	330.	U	330.	U	330.	U	333.	U
108-39-4	3-Methylphenol (m-Cresol)	330.	U	330.	U	330.	U	333.	U
106-44-5	4-Methylphenol (p-Cresol)	330.	U	330.	U	330.	U	333.	U
53-70-3	Dibenzo(a,h)anthracene	330.	U	330.	U	330.	U	333.	U
132-64-9	Dibenzofuran	330.	U	330.	U	330.	U	333.	U
95-50-1	1,2-Dichlorobenzene	330.	U	330.	U	330.	U	333.	U
541-73-1	1,3-Dichlorobenzene	330.	U	330.	U	330.	U	333.	U
106-46-7	1,4-Dichlorobenzene	330.	U	330.	U	330.	U	333.	U
91-94-1	3,3'-Dichlorobenzidine	660.	U	660.	U	660.	U	667.	U
120-83-2	2,4-Dichlorophenol	330.	UJ	330.	U	330.	U	333.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SV0A		SAMPLE ID -----> GDH-C-8067-02		GDH-C-8074-01		GDH-C-8082-01		GDH-C-8104-01	
		ORIGINAL ID -----> GDHCB06702		GDHCB07401		GDHCB08201		GDHCB10401	
		LAB SAMPLE ID ----> UDB-001		U11-001		U11-003		VMR-001	
		ID FROM REPORT --> 101201		102201		102403		GDHCB10401	
		SAMPLE DATE -----> 10/11/94		10/21/94		10/22/94		02/06/95	
		DATE EXTRACTED --> 10/21/94		11/04/94		11/04/94		02/13/95	
		DATE ANALYZED ----> 10/28/94		11/16/94		11/16/94		02/22/95	
		MATRIX -----> Soil		Soil		Soil		Soil	
		UNITS -----> UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
87-65-0	2,6-Dichlorophenol	330.	U	330.	U	330.	U	333.	U
84-66-2	Diethylphthalate	330.	U	330.	U	330.	U	333.	U
60-11-7	p-(Dimethylamino)azobenzene	330.	U	330.	U	330.	U	333.	U
57-97-6	7,12-Dimethylbenz(a)anthracene	330.	U	330.	U	330.	U	333.	U
119-93-7	3,3-Dimethylbenzidine	330.	U	330.	U	330.	U	333.	U
122-09-8	alpha, alpha-Dimethylphenethylamine	330.	U	330.	U	330.	U	333.	U
131-11-3	Dimethylphthalate	330.	U	330.	U	330.	U	333.	U
105-67-9	2,4-Dimethylphenol	330.	U	330.	U	330.	U	333.	U
84-74-2	Di-n-butylphthalate	330.	U	330.	U	330.	U	333.	U
99-65-0	1,3-Dinitrobenzene	330.	U	330.	U	330.	U	333.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1600.	U	1600.	UJ	1600.	UJ	1600.	UJ
51-28-5	2,4-Dinitrophenol	1600.	UJ	1600.	UJ	1600.	UJ	1600.	UJ
88-85-7	Dinoseb	330.	U	330.	U	330.	U	333.	U
121-14-2	2,4-Dinitrotoluene	330.	U	330.	U	330.	U	333.	U
606-20-2	2,6-Dinitrotoluene	330.	U	330.	U	330.	U	333.	U
117-84-0	Di-n-octylphthalate	330.	U	330.	U	330.	U	333.	U
122-39-4	Diphenylamine	330.	U	330.	U	330.	U	333.	U
97-63-2	Ethyl methacrylate	330.	U	330.	U	330.	U	333.	U
62-50-0	Ethyl methanesulfonate	330.	U	330.	U	330.	U	333.	U
206-44-0	Fluoranthene	330.	U	330.	U	330.	U	333.	U
86-73-7	Fluorene	330.	U	330.	U	330.	U	333.	U
118-74-1	Hexachlorobenzene	330.	U	330.	U	330.	U	333.	U
87-68-3	Hexachlorobutadiene	330.	U	330.	U	330.	U	333.	U
77-47-4	Hexachlorocyclopentadiene	330.	U	330.	U	330.	U	333.	UJ
67-72-1	Hexachloroethane	330.	U	330.	U	330.	U	333.	U
70-30-4	Hexachlorophene	330.	U	330.	U	330.	U	333.	U
1888-71-7	Hexachloropropene	330.	U	330.	U	330.	U	333.	U
193-39-5	Indeno(1,2,3-cd)pyrene	330.	U	330.	U	330.	U	333.	U
78-59-1	Isophorone	330.	U	330.	U	330.	U	333.	U
120-58-1	Isosafrole	330.	U	330.	U	330.	U	333.	U
91-80-5	Methapyrilene	330.	U	330.	U	330.	U	333.	U
56-49-5	3-Methylcholanthrene	330.	U	330.	U	330.	U	333.	U
80-62-6	Methyl methacrylate	330.	U	330.	U	330.	U	333.	U
66-27-3	Methyl methanesulfonate	330.	U	330.	U	330.	U	333.	U
91-57-6	2-Methylnaphthalene	330.	U	330.	U	330.	U	333.	U
91-20-3	Naphthalene	330.	U	330.	U	330.	U	333.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SV0A		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID ---->	UDB-001	UII-001	UIH-003	VWR-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/21/94	11/04/94	11/04/94	02/13/95			
		DATE ANALYZED ---->	10/28/94	11/16/94	11/16/94	02/22/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
130-15-4	1,4-Naphthoquinone	1600.	U	1600.	U	1600.	U	1600.	U
134-32-7	1-Naphthylamine	330.	U	330.	U	330.	U	333.	U
91-59-8	2-Naphthylamine	330.	U	330.	U	330.	U	333.	U
88-74-4	2-Nitroaniline	1600.	U	1600.	U	1600.	U	1600.	U
99-09-2	3-Nitroaniline	1600.	U	1600.	U	1600.	U	1600.	U
100-01-6	4-Nitroaniline	1600.	U	1600.	U	1600.	U	1600.	U
98-95-3	Nitrobenzene	330.	U	330.	U	330.	U	333.	U
88-75-5	2-Nitrophenol	330.	U	330.	U	330.	U	333.	U
100-02-7	4-Nitrophenol	1600.	U	1600.	U	1600.	U	1600.	U
56-57-5	4-Nitroquinoline 1-oxide	330.	UR	330.	UR	330.	UR	333.	UR
924-16-3	N-Nitroso-di-n-butylamine	330.	U	330.	U	330.	U	333.	U
55-18-5	N-Nitrosodiethylamine	330.	U	330.	U	330.	U	333.	U
62-75-9	N-Nitrosodimethylamine	330.	U	330.	U	330.	U	333.	UJ
86-30-6	N-Nitrosodiphenylamine	330.	U	330.	U	330.	U	333.	U
621-64-7	N-Nitroso-di-n-propylamine	330.	U	330.	U	330.	U	333.	U
10595-95-6	N-Nitrosomethylethylamine	330.	U	330.	U	330.	U	333.	U
59-89-2	N-Nitrosomorpholine	330.	U	330.	U	330.	U	333.	U
100-75-4	N-Nitrosopiperidine	330.	U	330.	U	330.	U	333.	U
930-55-2	N-Nitrosopyrrolidine	330.	U	330.	U	330.	U	333.	U
99-55-8	5-Nitro-o-toluidine	330.	U	330.	U	330.	U	333.	U
608-93-5	Pentachlorobenzene	330.	U	330.	U	330.	U	333.	U
76-01-7	Pentachloroethane	330.	U	330.	U	330.	U	333.	U
82-68-8	Pentachloronitrobenzene	330.	U	330.	U	330.	U	333.	U
87-86-5	Pentachlorophenol	1600.	U	1600.	U	1600.	U	1600.	U
62-44-2	Phenacetin	330.	U	330.	U	330.	U	333.	U
85-01-8	Phenanthrene	330.	U	330.	U	330.	U	333.	U
108-95-2	Phenol	330.	U	330.	U	330.	U	333.	U
106-50-3	p-Phenylenediamine	330.	U	330.	U	330.	U	333.	U
109-06-8	2-Picoline	330.	U	330.	U	330.	U	333.	U
23950-58-5	Pronamide	330.	U	330.	U	330.	U	333.	U
129-00-0	Pyrene	330.	U	330.	U	330.	U	333.	U
110-86-1	Pyridine	330.	U	330.	U	330.	U	333.	UJ
94-59-7	Safrole	330.	U	330.	U	330.	U	333.	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330.	U	330.	U	330.	U	333.	U
58-90-2	2,3,4,6-Tetrachlorophenol	330.	U	330.	U	330.	U	333.	U
95-53-4	o-Toludine	330.	U	330.	U	330.	U	333.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-SVOM		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID ---->	UD8-001	U11-001	U1H-003	VWR-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/21/94	11/04/94	11/04/94	02/13/95			
		DATE ANALYZED ---->	10/28/94	11/16/94	11/16/94	02/22/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
120-82-1	1,2,4-Trichlorobenzene	330.	U	330.	U	330.	U	333.	U
95-95-4	2,4,5-Trichlorophenol	1600.	U	1600.	U	1600.	U	1600.	U
88-06-2	2,4,6-Trichlorophenol	330.	U	330.	U	330.	U	333.	U
99-35-4	1,3,5-Trinitrobenzene	330.	U	330.	U	330.	U	333.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-TPH		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01			
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701			
		LAB SAMPLE ID --->	41668-001	41668-003	41668-002	41735-005	41751-004	41782-003			
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	10/04/94	10/05/94	10/07/94			
		DATE EXTRACTED -->	10/03/94	10/03/94	10/03/94	10/07/94	10/07/94	10/11/94			
		DATE ANALYZED --->	10/04/94	10/04/94	10/04/94	10/07/94	10/07/94	10/11/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL
9999900-08-3	Indeterminate Lubricating Oil	NR		NR		NR		NR		NR	
9999900-02-4	Petroleum Hydrocarbons, TPH	72.		71.	U	70.	U	220.		64.	U
9999900-04-9	Miscellaneous Light Products	NR		NR		NR		NR		NR	
9999900-11-8	Indeterminate Diesel Fuel	NR		NR		NR		NR		NR	
9999900-06-1	Total Gasoline	NR		NR		NR		NR		NR	
9999900-10-7	Heavy Products	NR		NR		NR		NR		NR	
9999900-20-9	Indeterminate Gasoline	NR		NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-TPH		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201			
		LAB SAMPLE ID ---->	41807-001	41925-001	41940-002			
		ID FROM REPORT -->	101201	GDHCB07401	GDHCB08201			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94			
		DATE EXTRACTED -->	10/18/94	10/26/94	10/26/94			
		DATE ANALYZED ---->	10/21/94	10/28/94	10/28/94			
		MATRIX ----->	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	
9999900-08-3	Indeterminate Lubricating Oil	NR		NR		NR		
9999900-02-4	Petroleum Hydrocarbons, TPH	68.	U	68.	U	74.	U	
9999900-04-9	Miscellaneous Light Products	NR		NR		NR		
9999900-11-8	Indeterminate Diesel Fuel	NR		NR		NR		
9999900-06-1	Total Gasoline	NR		NR		NR		
9999900-10-7	Heavy Products	NR		NR		NR		
9999900-20-9	Indeterminate Gasoline	NR		NR		NR		

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-VDA		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01			
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701			
		LAB SAMPLE ID ---->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005			
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803			
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94			
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/10/94	10/10/94	10/13/94			
		DATE ANALYZED ---->	10/07/94	10/07/94	10/07/94	10/10/94	10/10/94	10/13/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL
67-64-1	Acetone	44.5	U	17.2	U	20.5	U	13.9	UJ	10.	UJ
75-05-8	Acetonitrile	50.	U	50.	U	50.	U	50.	UJ	50.	UJ
107-02-8	Acrolein	10.	U	10.	U	10.	U	10.	U	10.	UJ
107-13-1	Acrylonitrile	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
107-05-1	3-Chloropropene	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	U	5.	UJ
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U
126-99-8	Chloroprene	50.	U	50.	U	50.	U	50.	U	50.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.	U	5.	U	5.	U	5.	U	5.	U
106-93-4	1, 2-Dibromoethane	5.	U	5.	U	5.	U	5.	U	5.	U
110-57-6	trans-1,4-Dichloro-2-butene	5.	U	5.	U	5.	U	5.	U	5.	U
75-71-8	Dichlorodifluoromethane	50.	U	50.	U	50.	U	50.	U	50.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	5.	U	5.	U	5.	U	5.	U	5.	U
156-60-5	trans-1,2-Dichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U
123-91-1	1,4-Dioxane	250.	UR	250.	UR	250.	UR	250.	UR	250.	UR
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	UJ	10.	UJ	10.	U
78-83-1	Isobutyl alcohol	250.	UR	250.	UR	250.	UR	250.	UR	250.	UR
126-98-7	Methacrylonitrile	5.	U	5.	U	5.	U	5.	U	5.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U
74-95-3	Methylene bromide	5.	U	5.	U	5.	U	5.	U	5.	U
75-09-2	Methylene chloride	19.2	U	20.7	U	18.4	U	18.2	U	13.5	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	UJ	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-VOA		SAMPLE ID ----->	GDH-C-8007-01	GDH-C-8009-01	GDH-C-8011-01	GDH-C-8025-01	GDH-C-8044-01	GDH-C-8057-01					
		ORIGINAL ID ----->	GDHC800701	GDHC800901	GDHC801101	GDHC802501	GDHC804401	GDHC805701					
		LAB SAMPLE ID ---->	TVZ-001	TVZ-003	TVZ-002	UAL-002	UAK-002	UDG-005					
		ID FROM REPORT -->	092801	092803	092802	100524	100620	100803					
		SAMPLE DATE ----->	09/27/94	09/22/94	09/27/94	10/04/94	10/05/94	10/07/94					
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/10/94	10/10/94	10/13/94					
		DATE ANALYZED ---->	10/07/94	10/07/94	10/07/94	10/10/94	10/10/94	10/13/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	APX06	VAL	APX06	VAL	APX06	VAL	APX10	VAL	APX10	VAL	APX10	VAL
74-88-4	Methyl iodide	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	UJ	10.	UJ	10.	U
107-12-0	Propionitrile	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ	10.	UJ
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
630-20-6	1,1,1,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	5.	J	13.6	J	2.1	J	5.	U	1.3	J	125.	J
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-69-4	Trichlorofluoromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
96-18-4	1,2,3-Trichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	5.	U	5.	U	5.	U	5.	UJ	5.	UJ	5.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-V0A		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID ---->	UDB-001	UTI-001	UIH-003	VWR-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/13/94	11/03/94	11/03/94	02/10/95			
		DATE ANALYZED ---->	10/13/94	11/03/94	11/03/94	02/10/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
67-64-1	Acetone	20.7	U	10.	UJ	10.	U	10.	U
75-05-8	Acetonitrile	50.	UJ	50.	U	50.	U	50.	U
107-02-8	Acrolein	10.	UJ	10.	UR	10.	U	10.	U
107-13-1	Acrylonitrile	10.	UJ	10.	U	10.	U	10.	U
107-05-1	3-Chloropropene	5.	U	5.	UJ	5.	U	5.	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
75-15-0	Carbon disulfide	5.	UJ	5.	U	1.3	J	5.	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
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U
126-99-8	Chloroprene	50.	U	50.	U	50.	U	50.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	UJ	5.	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.	U	5.	UJ	5.	U	5.	U
106-93-4	1, 2-Dibromoethane	5.	U	5.	U	5.	U	5.	U
110-57-6	trans-1,4-Dichloro-2-butene	5.	U	5.	UR	5.	U	5.	U
75-71-8	Dichlorodifluoromethane	50.	U	50.	UR	50.	U	50.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	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.	UJ	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	UJ	5.	U	5.	U
123-91-1	1,4-Dioxane	250.	UR	250.	UR	250.	UR	250.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U
591-78-6	2-Hexanone	10.	U	10.	UJ	10.	U	10.	U
78-83-1	Isobutyl alcohol	250.	UR	250.	UR	250.	UR	250.	U
126-98-7	Methacrylonitrile	5.	U	5.	U	5.	U	5.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U
74-95-3	Methylene bromide	5.	U	5.	U	5.	U	5.	U
75-09-2	Methylene chloride	10.5	UJ	5.	U	14.9	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

APX9-V0A		SAMPLE ID ----->	GDH-C-8067-02	GDH-C-8074-01	GDH-C-8082-01	GDH-C-8104-01			
		ORIGINAL ID ----->	GDHCB06702	GDHCB07401	GDHCB08201	GDHCB10401			
		LAB SAMPLE ID --->	UDB-001	UII-001	UIH-003	VWR-001			
		ID FROM REPORT -->	101201	102201	102403	GDHCB10401			
		SAMPLE DATE ----->	10/11/94	10/21/94	10/22/94	02/06/95			
		DATE EXTRACTED -->	10/13/94	11/03/94	11/03/94	02/10/95			
		DATE ANALYZED --->	10/13/94	11/03/94	11/03/94	02/10/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	APX10	VAL	APX11	VAL	APX11	VAL	APX16	VAL
74-88-4	Methyl iodide	5.	U	5.	UJ	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	UJ	10.	U	10.	U
107-12-0	Propionitrile	10.	UJ	10.	UR	10.	UR	10.	U
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U
630-20-6	1,1,1,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U
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	4.2	J	1.2	J	7.	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	5.7	J	7.3	U	5.	U
96-18-4	1,2,3-Trichloropropane	5.	U	5.	UJ	5.	U	5.	U
108-05-4	Vinyl acetate	5.	U	5.	U	5.	U	5.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
1330-20-7	Xylene (Total)	5.	U	1.5	J	1.6	J	5.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-S-8001-01	GDH-S-8001-02	GDH-S-8002-01	GDH-S-8002-02	GDH-S-8003-01	GDH-S-8003-02			
		ORIGINAL ID ----->	GDHSB00101	GDHSB00102	GDHSB00201	GDHSB00202	GDHSB00301	GDHSB00302			
		LAB SAMPLE ID --->	41665-039	41665-040	41665-041	41665-042	41665-043	41665-044			
		ID FROM REPORT -->	092806	092807	092808	092809	092810	092811			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED --->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	1.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8004-01	GDH-S-8004-02	GDH-S-8005-01	GDH-S-8006-01	GDH-S-8006-02	GDH-S-8007-01			
		ORIGINAL ID ----->	GDHS800401	GDHS800402	GDHS800501	GDHS800601	GDHS800602	GDHS800701			
		LAB SAMPLE ID ---->	41665-045	41665-046	41665-047	41665-049	41665-050	41665-051			
		ID FROM REPORT -->	092812	092813	092814	092816	092817	092818			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
CN	Cyanide	1.	U	1.	U	0.9	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-S-8007-02	GDH-S-8008-01	GDH-S-8008-02	GDH-S-8009-01	GDH-S-8009-02	GDH-S-8010-01			
		ORIGINAL ID ----->	GDHS800702	GDHS800801	GDHS800802	GDHS800901	GDHS800902	GDHS801001			
		LAB SAMPLE ID ---->	41665-052	41665-053	41665-054	41665-055	41665-057	41666-003			
		ID FROM REPORT -->	092819	092820	092821	092822	092824	092805			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/07/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS16	VAL
CN	Cyanide	1.	U	1.	U	2.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CN	SAMPLE ID ----->	GDH-S-8010-02	GDH-S-8011-01	GDH-S-8011-02	GDH-S-8012-01	GDH-S-8012-02	GDH-S-8013-01
	ORIGINAL ID ----->	GDHSB01002	GDHSB01101	GDHSB01102	GDHSB01201	GDHSB01202	GDHSB01301
	LAB SAMPLE ID ---->	41665-056	41667-009	41667-010	41667-011	41667-012	41693-018
	ID FROM REPORT -->	092823	092825	092826	092827	092828	093003
	SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/29/94
	DATE EXTRACTED -->	10/05/94	09/29/94	09/29/94	09/29/94	09/29/94	10/05/94
	DATE ANALYZED ---->	10/06/94	09/30/94	10/03/94	09/30/94	10/03/94	10/06/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	

CAS #	Parameter	CHS15	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS16	VAL
CN	Cyanide	1.	U	1.	U	2.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-B013-02	GDH-S-B014-01	GDH-S-B014-02	GDH-S-B015-01	GDH-S-B015-02	GDH-S-B016-01					
		ORIGINAL ID ----->	GDHSB01302	GDHSB01401	GDHSB01402	GDHSB01501	GDHSB01502	GDHSB01601					
		LAB SAMPLE ID ---->	41693-019	41693-020	41693-021	41693-022	41693-023	41693-024					
		ID FROM REPORT -->	093004	093005	093006	093007	093008	093009					
		SAMPLE DATE ----->	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE ANALYZED ---->	10/06/94	10/06/94	10/07/94	10/06/94	10/07/94	10/06/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL		
CN	Cyanide	1.	U	0.9	U	2.	U	1.	U	2.	U	1.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-S-8016-02	GDH-S-8017-01	GDH-S-8017-02	GDH-S-8018-01	GDH-S-8019-01	GDH-S-8019-02					
		ORIGINAL ID ----->	GDHSB01602	GDHSB01701	GDHSB01702	GDHSB01801	GDHSB01901	GDHSB01902					
		LAB SAMPLE ID ---->	41693-025	41713-020	41713-021	41713-022	41713-023	41713-024					
		ID FROM REPORT -->	093010	100401	100402	100403	100404	100405					
		SAMPLE DATE ----->	09/29/94	10/03/94	10/03/94	10/03/94	10/03/94	10/03/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE ANALYZED ---->	10/07/94	10/07/94	10/07/94	10/07/94	10/06/94	10/06/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL		
CN	Cyanide	1.	U	1.	U	2.	U	1.	U	0.9	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-CN		SAMPLE ID ----->	GDH-S-B020-01	GDH-S-B020-02	GDH-S-B021-01	GDH-S-B022-01	GDH-S-B023-01	GDH-S-B023-02			
		ORIGINAL ID ----->	GDHSB02001	GDHSB02002	GDHSB02101	GDHSB02201	GDHSB02301	GDHSB02302			
		LAB SAMPLE ID ---->	41713-025	41713-027	41713-026	41713-028	41734-050	41734-051			
		ID FROM REPORT -->	100406	100408	100407	100409	100510	100511			
		SAMPLE DATE ----->	10/03/94	10/03/94	10/03/94	10/03/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/10/94	10/10/94			
		DATE ANALYZED ---->	10/06/94	10/07/94	10/06/94	10/06/94	10/11/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS17	VAL	CHS17	VAL
CN	Cyanide	1.	U	1.	U	1.	U	0.9	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-CN		SAMPLE ID ----->	GDH-S-8024-01	GDH-S-8025-01	GDH-S-8026-01	GDH-S-8026-02	GDH-S-8027-01	GDH-S-8027-02			
		ORIGINAL ID ----->	GDHS802401	GDHS802501	GDHS802601	GDHS802602	GDHS802701	GDHS802702			
		LAB SAMPLE ID ---->	41734-052	41734-053	41734-054	41734-055	41734-056	41734-057			
		ID FROM REPORT -->	100512	100513	100514	100515	100516	100517			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94			
		DATE ANALYZED ---->	10/17/94	10/17/94	10/11/94	10/11/94	10/11/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
CN	Cyanide	0.8	U	1.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8028-01	GDH-S-8029-01	GDH-S-8030-01	GDH-S-8031-01	GDH-S-8031-02	GDH-S-8032-01			
		ORIGINAL ID ----->	GDHS802801	GDHS802901	GDHS803001	GDHS803101	GDHS803102	GDHS803201			
		LAB SAMPLE ID ---->	41734-058	41734-059	41734-060	41734-041	41734-042	41734-043			
		ID FROM REPORT -->	100518	100519	100520	100501	100502	100503			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94			
		DATE ANALYZED ---->	10/11/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-B032-02	GDH-S-B033-01	GDH-S-B033-02	GDH-S-B034-01	GDH-S-B034-02	GDH-S-B035-01			
		ORIGINAL ID ----->	GDHSB03202	GDHSB03301	GDHSB03302	GDHSB03401	GDHSB03402	GDHSB03501			
		LAB SAMPLE ID --->	41734-044	41734-045	41734-046	41734-047	41734-048	41734-049			
		ID FROM REPORT -->	100504	100505	100506	100507	100508	100509			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94			
		DATE ANALYZED --->	10/17/94	10/11/94	10/17/94	10/17/94	10/17/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	2.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8036-01	GDH-S-8037-01	GDH-S-8037-02	GDH-S-8038-01	GDH-S-8038-02	GDH-S-8039-01			
		ORIGINAL ID ----->	GDHS803601	GDHS803701	GDHS803702	GDHS803801	GDHS803802	GDHS803901			
		LAB SAMPLE ID ---->	41733-004	41742-037	41742-038	41742-039	41742-040	41742-041			
		ID FROM REPORT -->	GDHS803601	GDHS803701	GDHS803702	GDHS803801	GDHS803802	GDHS803901			
		SAMPLE DATE ----->	10/04/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		DATE ANALYZED ---->	10/18/94	10/18/94	10/17/94	10/17/94	10/18/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
CN	Cyanide	1.	U	2.	U	1.	U	2.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB846-CN		SAMPLE ID ----->	GDH-S-8039-02	GDH-S-8040-01	GDH-S-8040-02	GDH-S-8041-01	GDH-S-8042-01	GDH-S-8042-02			
		ORIGINAL ID ----->	GDHS803902	GDHS804001	GDHS804002	GDHS804101	GDHS804201	GDHS804202			
		LAB SAMPLE ID ---->	41742-042	41742-043	41742-044	41742-045	41742-046	41742-047			
		ID FROM REPORT -->	GDHS803902	GDHS804001	GDHS804002	GDHS804101	GDHS804201	GDHS804202			
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/11/94	10/11/94	10/11/94	10/11/94	10/14/94	10/11/94			
		DATE ANALYZED ---->	10/18/94	10/17/94	10/18/94	10/18/94	10/18/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
CN	Cyanide	4.	U	1.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8043-01	GDH-S-8043-02	GDH-S-8044-01	GDH-S-8045-01	GDH-S-8045-02	GDH-S-8046-01			
		ORIGINAL ID ----->	GDHS804301	GDHS804302	GDHS804401	GDHS804501	GDHS804502	GDHS804601			
		LAB SAMPLE ID --->	41742-048	41742-049	41742-050	41742-051	41742-052	41742-053			
		ID FROM REPORT -->	GDHS804301	GDHS804302	GDHS804401	GDHS804501	GDHS804502	GDHS804601			
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		DATE ANALYZED --->	10/19/94	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
CN	Cyanide	1.	U	2.	U	1.	U	2.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-S-8046-02	GDH-S-8047-01	GDH-S-8047-02	GDH-S-8048-01	GDH-S-8049-01	GDH-S-8050-01			
		ORIGINAL ID ----->	GDHS804602	GDHS804701	GDHS804702	GDHS804801	GDHS804901	GDHS805001			
		LAB SAMPLE ID ---->	41742-054	41760-030	41760-031	41760-032	41760-033	41760-034			
		ID FROM REPORT -->	GDHS804602	100701	100702	100703	100704	100705			
		SAMPLE DATE ----->	10/05/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		DATE EXTRACTED -->	10/11/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED ---->	10/18/94	10/19/94	10/20/94	10/20/94	10/20/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS18	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL
CN	Cyanide	2.	U	1.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-CN		SAMPLE ID ----->	GDH-S-8051-01	GDH-S-8051-02	GDH-S-8052-01	GDH-S-8052-02	GDH-S-8053-01	GDH-S-8053-02			
		ORIGINAL ID ----->	GDHS805101	GDHS805102	GDHS805201	GDHS805202	GDHS805301	GDHS805302			
		LAB SAMPLE ID ---->	41760-035	41760-036	41760-037	41760-038	41760-039	41760-040			
		ID FROM REPORT -->	100706	100707	100708	100709	100710	100711			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED ---->	10/20/94	10/18/94	10/20/94	10/20/94	10/18/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	1.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8054-01	GDH-S-8054-02	GDH-S-8055-01	GDH-S-8056-01	GDH-S-8056-02	GDH-S-8057-01			
		ORIGINAL ID ----->	GDHS805401	GDHS805402	GDHS805501	GDHS805601	GDHS805602	GDHS805701			
		LAB SAMPLE ID ---->	41760-041	41760-042	41760-043	41779-011	41779-012	41780-009			
		ID FROM REPORT -->	100712	100713	100714	100807	100808	100814			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/07/94	10/07/94	10/07/94			
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED -->	10/20/94	10/18/94	10/18/94	10/20/94	10/18/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS20	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	2.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CM		SAMPLE ID ----->	GDH-S-8058-01	GDH-S-8058-02	GDH-S-8059-01	GDH-S-8060-01	GDH-S-8061-01	GDH-S-8062-01					
		ORIGINAL ID ----->	GDHS805801	GDHS805802	GDHS805901	GDHS806001	GDHS806101	GDHS806201					
		LAB SAMPLE ID ---->	41779-013	41779-014	41780-005	41780-006	41779-015	41784-014					
		ID FROM REPORT -->	100809	100810	100812	100813	100811	101001					
		SAMPLE DATE ----->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/08/94					
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94					
		DATE ANALYZED ---->	10/20/94	10/20/94	10/18/94	10/20/94	10/18/94	10/20/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS20	VAL	CHS20	VAL	CHS19	VAL	CHS20	VAL
CN	Cyanide	2.	U	1.	U	1.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SM846-CN	SAMPLE ID ----->	GDH-S-8063-01	GDH-S-8063-02	GDH-S-8064-01	GDH-S-8064-02	GDH-S-8065-01	GDH-S-8066-01
	ORIGINAL ID ----->	GDHS806301	GDHS806302	GDHS806401	GDHS806402	GDHS806501	GDHS806601
	LAB SAMPLE ID ---->	41784-015	41784-016	41784-017	41784-018	41784-019	41790-030
	ID FROM REPORT -->	101002	101003	101004	101005	101006	101112
	SAMPLE DATE ----->	10/08/94	10/08/94	10/08/94	10/08/94	10/08/94	10/10/94
	DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94
	DATE ANALYZED ---->	10/20/94	10/18/94	10/18/94	10/18/94	10/20/94	10/20/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	

CAS #	Parameter	CHS20	VAL								
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	0.9	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-S-8067-01	GDH-S-8067-02	GDH-S-8068-01	GDH-S-8069-01	GDH-S-8070-01	GDH-S-8071-01					
		ORIGINAL ID ----->	GDHS806701	GDHS806702	GDHS806801	GDHS806901	GDHS807001	GDHS807101					
		LAB SAMPLE ID ---->	41806-025	41806-026	41806-027	41806-028	41806-031	41806-032					
		ID FROM REPORT -->	101203	101204	101205	101206	101209	101210					
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94					
		DATE EXTRACTED -->	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94					
		DATE ANALYZED ---->	10/19/94	10/19/94	10/19/94	10/19/94	10/19/94	10/19/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL		
CN	Cyanide	0.9	U	1.	U	1.	U	0.9	U	0.9	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-S-8071-02	GDH-S-8072-01	GDH-S-8072-02	GDH-S-8073-01	GDH-S-8073-02	GDH-S-8074-01					
		ORIGINAL ID ----->	GDHS807102	GDHS807201	GDHS807202	GDHS807301	GDHS807302	GDHS807401					
		LAB SAMPLE ID --->	41806-033	41806-034	41806-035	41821-014	41821-015	252468					
		ID FROM REPORT -->	101211	101212	101213	101303	101304	102204					
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/12/94	10/12/94	10/21/94					
		DATE EXTRACTED -->	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94	11/03/94					
		DATE ANALYZED --->	10/21/94	10/21/94	10/21/94	10/19/94	10/21/94	11/03/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS23	VAL		
CN	Cyanide	1.	U	1.	U	1.	U	0.8	U	1.	U	1.6	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWS46-CN		SAMPLE ID ----->	GDH-S-8075-01	GDH-S-8076-01	GDH-S-8077-01	GDH-S-8078-01	GDH-S-8078-02	GDH-S-8079-01					
		ORIGINAL ID ----->	GDHS807501	GDHS807601	GDHS807701	GDHS807801	GDHS807802	GDHS807901					
		LAB SAMPLE ID --->	252476	252484	252492	252506	252514	252522					
		ID FROM REPORT -->	102205	102206	102207	102208	102209	102210					
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94					
		DATE EXTRACTED -->	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94					
		DATE ANALYZED --->	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL		
CN	Cyanide	1.6	U	1.5	U	1.6	U	1.4	U	1.5	U	1.6	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-CN		SAMPLE ID ----->	GDH-S-8079-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-8081-01	GDH-S-8082-01	GDH-S-8082-02					
		ORIGINAL ID ----->	GDHS807902	GDHS808001	GDHS808002	GDHS808101	GDHS808201	GDHS808202					
		LAB SAMPLE ID ---->	252530	252549	252557	252565	252573	252581					
		ID FROM REPORT -->	102211	102212	102213	102214	102215	102216					
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/22/94	10/22/94					
		DATE EXTRACTED -->	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94					
		DATE ANALYZED ---->	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL		
CN	Cyanide	1.6	U	1.4	U	1.7	U	1.4	U	1.5	U	2.3	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SN846-CN		SAMPLE ID ----->	GDH-S-8083-01	GDH-S-8084-01	GDH-S-8084-02	GDH-S-8085-01	GDH-S-8085-02	GDH-S-8086-01					
		ORIGINAL ID ----->	GDHS808301	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601					
		LAB SAMPLE ID --->	252590	42136-018	42136-019	42136-020	42136-021	42347-013					
		ID FROM REPORT -->	102217	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601					
		SAMPLE DATE ----->	10/22/94	11/09/94	11/09/94	11/09/94	11/09/94	11/22/94					
		DATE EXTRACTED -->	11/03/94	11/14/94	11/14/94	11/14/94	11/14/94	12/16/94					
		DATE ANALYZED --->	11/03/94	11/19/94	11/19/94	11/21/94	11/19/94	12/22/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS23	VAL	CHS25	VAL	CHS25	VAL	CHS25	VAL	CHS27	VAL		
CN	Cyanide	1.4	U	0.01	U	0.01	U	0.01	U	0.03	U	2.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8086-02	GDH-S-8087-01	GDH-S-8087-02	GDH-S-8088-01	GDH-S-8088-02	GDH-S-8089-01			
		ORIGINAL ID ----->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		LAB SAMPLE ID ---->	42347-014	42347-015	42347-016	42347-017	42347-018	42430-008			
		ID FROM REPORT -->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		SAMPLE DATE ----->	11/22/94	11/22/94	11/22/94	11/22/94	11/22/94	11/30/94			
		DATE EXTRACTED -->	12/16/94	12/16/94	12/16/94	12/16/94	12/16/94	12/16/94			
		DATE ANALYZED ---->	12/22/94	12/22/94	12/22/94	12/21/94	12/22/94	12/22/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL
CN	Cyanide	1.	U	2.	U	1.	U	1.	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8090-01	GDH-S-8091-01	GDH-S-8092-01	GDH-S-8092-02	GDH-S-8093-01	GDH-S-8104-01					
		ORIGINAL ID ----->	GDHS809001	GDHS809101	GDHS809201	GDHS809202	GDHS809301	GDHS810401					
		LAB SAMPLE ID ---->	42430-009	42430-010	42574-009	42574-012	42613-004	42985-009					
		ID FROM REPORT -->	GDHS809001	GDHS809101	GDHS809201	GDHS809202	GDHS809301	GDHS810401					
		SAMPLE DATE ----->	11/30/94	11/30/94	12/14/94	12/14/94	12/19/94	02/06/95					
		DATE EXTRACTED -->	12/16/94	12/16/94	12/29/94	12/29/94	12/29/94	02/08/95					
		DATE ANALYZED ---->	12/22/94	12/21/94	01/03/95	01/03/95	12/30/94	02/09/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS28	VAL	CHS28	VAL	CHS28	VAL	CHS34	VAL
CN	Cyanide	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8104-02	GDH-S-8105-01	GDH-S-8107-01	GDH-S-8107-02			
		ORIGINAL ID ----->	GDHS810402	GDHS810501	GDHS810701	GDHS810702			
		LAB SAMPLE ID ---->	42985-010	42985-011	43002-006	43002-007			
		ID FROM REPORT -->	GDHS810402	GDHS810501	GDHS810701	GDHS810702			
		SAMPLE DATE ----->	02/06/95	02/06/95	02/07/95	02/07/95			
		DATE EXTRACTED -->	02/08/95	02/08/95	02/10/95	02/10/95			
		DATE ANALYZED -->	02/09/95	02/09/95	02/13/95	02/13/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL
CN	Cyanide	1.	U	0.9	U	0.9	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-META		SAMPLE ID ----->	GDH-S-B001-01	GDH-S-B001-02	GDH-S-B002-01	GDH-S-B002-02	GDH-S-B003-01	GDH-S-B003-02					
		ORIGINAL ID ----->	GDHSB00101	GDHSB00102	GDHSB00201	GDHSB00202	GDHSB00301	GDHSB00302					
		LAB SAMPLE ID ---->	41665-039	41665-040	41665-041	41665-042	41665-043	41665-044					
		ID FROM REPORT -->	092806	092807	092808	092809	092810	092811					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE ANALYZED ---->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL		
7429-90-5	Aluminum	3070.	J	7180.	J	1500.	J	5760.	J	8420.	J	5770.	J
7439-89-6	Iron	4330.		7030.		2510.		4310.		7760.		5730.	
7439-92-1	Lead	69.5		19.8	U	47.8		28.	J	45.9		21.1	J
7440-02-0	Nickel	7.2		17.3	J	8.1		7.	J	12.3		21.7	J
7440-09-7	Potassium	155.	J	835.	J	112.	J	978.	J	677.		1180.	J
7440-22-4	Silver	0.3	UJ	3.2	UJ	0.26	UJ	2.5	UJ	0.3	UJ	2.8	UJ
7440-23-5	Sodium	295.	J	865.	J	102.	J	477.	J	559.	J	1290.	J
7440-28-0	Thallium	0.34	U	0.36	U	0.3	U	0.29	U	0.35	U	0.32	U
7440-36-0	Antimony	1.4	UJ	15.4	U	1.3	U	12.2	U	1.5	U	13.4	U
7440-38-2	Arsenic	3.3		6.6		15.3		4.7		6.3		5.7	
7440-39-3	Barium	22.9		6.7	J	16.		0.84	U	12.2		0.92	U
7440-41-7	Beryllium	0.26	J	0.6	J	0.58		0.48	J	0.44	J	0.55	J
7440-43-9	Cadmium	0.18	U	1.9	U	0.3	J	1.5	U	0.35	J	1.6	U
7440-48-4	Cobalt	2.5	J	4.4	J	1.7	J	2.6	U	2.	J	3.4	J
7440-50-8	Copper	68.7	J	22.3		23.9		10.3	J	34.5		11.8	J
7440-62-2	Vanadium	17.9		23.9		16.8		16.7		24.3		30.2	
7440-66-6	Zinc	119.	J	90.2		34.6		38.8		431.		65.6	
7782-49-2	Selenium	0.34	U	1.1	J	0.37	J	0.7	J	0.47	J	1.4	
7439-97-6	Mercury	0.23	J	0.06	J	0.06	J	0.11	J	0.11	J	0.08	UJ
7439-95-4	Magnesium	1250.		5230.		752.		3150.		3320.		6670.	
7439-96-5	Manganese	127.		45.6		19.6		39.1		77.2		51.3	
7440-70-2	Calcium	52400.		146000.		20100.		134000.		109000.		242000.	
7440-47-3	Chromium	17.8		51.6		10.2		30.4		32.4		61.8	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-META		SAMPLE ID ----->	GDH-S-B010-02	GDH-S-B011-01	GDH-S-B011-02	GDH-S-B012-01	GDH-S-B012-02	GDH-S-B013-01			
		ORIGINAL ID ----->	GDHSB01002	GDHSB01101	GDHSB01102	GDHSB01201	GDHSB01202	GDHSB01301			
		LAB SAMPLE ID ---->	41665-056	41667-009	41667-010	41667-011	41667-012	41693-018			
		ID FROM REPORT -->	092823	092825	092826	092827	092828	093003			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/29/94			
		DATE EXTRACTED -->	10/05/94	09/29/94	09/29/94	09/29/94	09/29/94	10/05/94			
		DATE ANALYZED ---->	10/06/94	09/30/94	10/03/94	09/30/94	10/03/94	10/06/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS15	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS16	VAL
7429-90-5	Aluminum	15300.	J	6460.		18400.		5060.		4810.	
7439-89-6	Iron	21000.		4980.		27100.		3880.		4540.	
7439-92-1	Lead	22.1		41.3		36.3		40.3	U	10.7	U
7440-02-0	Nickel	7.4		7.7		11.		6.9		23.6	J
7440-09-7	Potassium	910.		211.	U	1610.		265.	U	1360.	J
7440-22-4	Silver	0.41	UJ	0.24	U	0.28	U	0.25	U	1.7	U
7440-23-5	Sodium	63.1	J	51.2	J	463.		183.		1420.	
7440-28-0	Thallium	0.47	U	0.35	U	0.41	U	0.37	U	0.36	U
7440-36-0	Antimony	2.	U	1.2	U	1.3	U	1.2	U	8.3	U
7440-38-2	Arsenic	4.5		2.4	J	14.3	J	3.5	J	8.	J
7440-39-3	Barium	23.6		11.3		25.3		11.5		0.57	U
7440-41-7	Beryllium	0.58	J	0.17	J	0.87		0.22	J	0.54	J
7440-43-9	Cadmium	0.24	U	0.16	J	0.16	U	0.15	U	1.2	J
7440-48-4	Cobalt	3.2	J	1.1	J	5.4		1.1	J	1.8	U
7440-50-8	Copper	10.6		19.1		22.		11.1		10.8	J
7440-62-2	Vanadium	42.5		17.5		53.5		13.9		40.	
7440-66-6	Zinc	37.4		33.6	U	93.7		83.5		58.	U
7782-49-2	Selenium	0.47	U	0.66	J	1.8	J	0.37	UJ	2.7	J
7439-97-6	Mercury	0.17	J	0.05	J	0.24		0.07		0.03	U
7439-95-4	Magnesium	1450.		722.		3800.		1060.		6370.	
7439-96-5	Manganese	115.		66.5		483.		31.8		24.9	
7440-70-2	Calcium	3540.		7450.		15300.		47500.		320000.	
7440-47-3	Chromium	30.5		18.8		41.		17.8		64.9	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-META		SAMPLE ID ----->	GDH-S-8013-02	GDH-S-8014-01	GDH-S-8014-02	GDH-S-8015-01	GDH-S-8015-02	GDH-S-8016-01					
		ORIGINAL ID ----->	GDHS801302	GDHS801401	GDHS801402	GDHS801501	GDHS801502	GDHS801601					
		LAB SAMPLE ID ---->	41693-019	41693-020	41693-021	41693-022	41693-023	41693-024					
		ID FROM REPORT -->	093004	093005	093006	093007	093008	093009					
		SAMPLE DATE ----->	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE ANALYZED ---->	10/06/94	10/06/94	10/07/94	10/06/94	10/07/94	10/06/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL		
7429-90-5	Aluminum	5840.		3550.		11600.		5880.		19600.		3440.	
7439-89-6	Iron	5950.		3700.		18300.		6830.		33600.		3400.	
7439-92-1	Lead	19.6	U	78.5		19.3	U	172.		39.4		29.2	
7440-02-0	Nickel	3.9		3.8		12.3		7.6		10.9		2.2	J
7440-09-7	Potassium	374.		216.	J	1650.		454.		1950.		185.	J
7440-22-4	Silver	0.32	U	0.22	U	0.31	U	0.26	U	0.44	U	0.21	U
7440-23-5	Sodium	45.5	J	32.3	J	268.		65.9	J	1350.		17.	J
7440-28-0	Thallium	0.37	UJ	0.25	UJ	0.36	U	0.3	UJ	0.51	UJ	0.25	U
7440-36-0	Antimony	1.6	U	1.	U	1.5	U	1.3	U	2.2	U	1.	U
7440-38-2	Arsenic	5.4		2.2		11.		3.8		18.5		1.2	
7440-39-3	Barium	25.2		26.9		13.7		19.1		26.6		15.3	
7440-41-7	Beryllium	0.33	J	0.17	J	0.88		0.26	J	1.		0.12	J
7440-43-9	Cadmium	0.19	U	1.4		0.19	U	0.22	J	0.26	U	0.13	U
7440-48-4	Cobalt	1.9	J	1.1	J	4.6		1.7	J	6.6		1.	J
7440-50-8	Copper	7.		14.1		13.3		14.9		21.2		7.4	
7440-62-2	Vanadium	12.5		9.9		31.3		25.3		62.3		8.4	
7440-66-6	Zinc	22.1		137.		60.1		64.2		72.4		37.3	
7782-49-2	Selenium	0.37	U	0.25	U	0.36	UJ	0.3	U	0.51	U	0.25	UJ
7439-97-6	Mercury	0.25	U	1.6		0.78	J	0.37	J	1.3		0.26	J
7439-95-4	Magnesium	629.		551.		4160.		1680.		4080.		358.	
7439-96-5	Manganese	124.		85.9		254.		107.		501.		39.5	
7440-70-2	Calcium	2340.		6620.		63300.		2730.		6060.		1460.	
7440-47-3	Chromium	11.6		17.2		31.8		56.9		44.7		12.7	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META	SAMPLE ID ----->	GDH-S-8016-02	GDH-S-8017-01	GDH-S-8017-02	GDH-S-8018-01	GDH-S-8019-01	GDH-S-8019-02
	ORIGINAL ID ----->	GDHS801602	GDHS801701	GDHS801702	GDHS801801	GDHS801901	GDHS801902
	LAB SAMPLE ID ---->	41693-025	41713-020	41713-021	41713-022	41713-023	41713-024
	ID FROM REPORT -->	093010	100401	100402	100403	100404	100405
	SAMPLE DATE ----->	09/29/94	10/03/94	10/03/94	10/03/94	10/03/94	10/03/94
	DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94
	DATE ANALYZED ---->	10/07/94	10/07/94	10/07/94	10/07/94	10/06/94	10/06/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	

CAS #	Parameter	CHS16	VAL										
7429-90-5	Aluminum	7970.		9210.		20700.		10100.		4240.		2980.	
7439-89-6	Iron	13000.		16600.		32900.		16500.		2880.		3610.	
7439-92-1	Lead	33.9		23.2	U	31.7		24.4	U	11.3	U	3.4	U
7440-02-0	Nickel	4.8		8.6		11.5		8.7		3.4		0.63	U
7440-09-7	Potassium	642.		983.		2050.		972.		210.	J	176.	J
7440-22-4	Silver	0.2	U	0.29	U	0.41	U	0.21	U	0.3	U	0.25	U
7440-23-5	Sodium	127.		239.		1450.		206.		134.		49.5	J
7440-28-0	Thallium	0.23	UJ	0.33	UJ	0.48	UJ	0.24	UJ	0.34	UJ	0.28	UJ
7440-36-0	Antimony	0.96	U	2.2	J	2.	U	1.	U	1.5	U	1.2	U
7440-38-2	Arsenic	10.3		11.3		12.3		10.1		2.2		1.6	
7440-39-3	Barium	23.4		13.2		26.8		14.1		6.5	J	8.9	J
7440-41-7	Beryllium	0.49		0.63		1.		0.56		0.09	J	0.07	J
7440-43-9	Cadmium	0.12	U	0.17	U	0.25	U	0.13	U	0.18	U	0.15	U
7440-48-4	Cobalt	2.7		3.7		5.6		3.1		0.75	J	0.26	U
7440-50-8	Copper	8.4		11.1		18.1		10.3		2.9		0.64	J
7440-62-2	Vanadium	27.6		35.5		56.3		31.6		12.4		8.	
7440-66-6	Zinc	44.1		47.		70.7		41.2		14.8		2.2	
7782-49-2	Selenium	0.23	U	0.33	U	0.48	U	0.24	U	0.34	U	0.28	U
7439-97-6	Mercury	0.49	J	0.75		0.97		0.51		0.23	U	0.19	U
7439-95-4	Magnesium	1590.		2600.		3900.		2560.		707.		153.	
7439-96-5	Manganese	156.		401.		707.		316.		19.5		5.6	
7440-70-2	Calcium	20000.		31700.		5800.		35800.		15700.		1570.	
7440-47-3	Chromium	18.2		27.		41.5		24.9		11.4		5.4	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID ----->	GDH-S-8020-01	GDH-S-8020-02	GDH-S-8021-01	GDH-S-8022-01	GDH-S-8023-01	GDH-S-8023-02					
		ORIGINAL ID ----->	GDHS802001	GDHS802002	GDHS802101	GDHS802201	GDHS802301	GDHS802302					
		LAB SAMPLE ID ---->	41713-025	41713-027	41713-026	41713-028	41734-050	41734-051					
		ID FROM REPORT -->	100406	100408	100407	100409	100510	100511					
		SAMPLE DATE ----->	10/03/94	10/03/94	10/03/94	10/03/94	10/04/94	10/04/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/10/94	10/10/94					
		DATE ANALYZED ---->	10/06/94	10/07/94	10/06/94	10/06/94	10/11/94	10/17/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS17	VAL	CHS17	VAL
7429-90-5	Aluminum	5710.		5480.		6520.		4580.		5360.		8670.	
7439-89-6	Iron	2340.		5310.		5540.		2990.		4140.		7590.	
7439-92-1	Lead	7.2	U	16.8	U	22.	U	35.		26.3		6.5	
7440-02-0	Nickel	3.4		21.9	J	5.		6.2		5.7	U	5.2	U
7440-09-7	Potassium	104.	J	1220.	J	189.	J	132.	J	311.		726.	
7440-22-4	Silver	0.23	U	2.7	U	0.27	U	0.25	U	0.2	UJ	0.23	UJ
7440-23-5	Sodium	181.		811.	J	130.		50.9	J	107.	J	274.	
7440-28-0	Thallium	0.26	UJ	0.31	UJ	0.31	UJ	0.29	UJ	0.23	U	0.26	U
7440-36-0	Antimony	1.1	U	19.4	J	1.3	U	1.2	U	0.97	UJ	1.5	U
7440-38-2	Arsenic	3.2		4.6		2.6		1.9		4.4	U	6.7	
7440-39-3	Barium	6.2	J	0.89	U	10.3		8.6	J	10.3		11.5	
7440-41-7	Beryllium	0.13	J	0.53	J	0.12	J	0.12	J	0.12	J	0.41	J
7440-43-9	Cadmium	0.14	U	1.6	U	0.16	U	0.15	U	0.17	J	0.13	U
7440-48-4	Cobalt	0.67	J	4.6	J	1.1	J	1.2	J	0.9	J	2.2	U
7440-50-8	Copper	2.7		6.7	J	5.1		6.		5.3	U	3.6	U
7440-62-2	Vanadium	10.		30.8		20.6		17.4		19.4		19.3	
7440-66-6	Zinc	11.7		42.1		30.1		90.3		24.6	J	19.4	
7782-49-2	Selenium	0.26	U	1.1		0.31	U	0.29	U	0.23	U	0.26	U
7439-97-6	Mercury	0.25	U	0.28	U	0.25	J	0.41	J	0.05	J	0.03	U
7439-95-4	Magnesium	677.		9100.		607.		712.		632.		1370.	
7439-96-5	Manganese	14.7		82.6		22.5		49.5		33.2		51.9	
7440-70-2	Calcium	17000.		189000.		9620.		8750.		12800.		22800.	
7440-47-3	Chromium	9.9		47.9		16.5		13.6		13.4		16.5	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW046-META		SAMPLE ID ----->	GDH-S-B024-01	GDH-S-B025-01	GDH-S-B026-01	GDH-S-B026-02	GDH-S-B027-01	GDH-S-B027-02			
		ORIGINAL ID ----->	GDHSB02401	GDHSB02501	GDHSB02601	GDHSB02602	GDHSB02701	GDHSB02702			
		LAB SAMPLE ID ---->	41734-052	41734-053	41734-054	41734-055	41734-056	41734-057			
		ID FROM REPORT -->	100512	100513	100514	100515	100516	100517			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94			
		DATE ANALYZED ---->	10/17/94	10/17/94	10/11/94	10/11/94	10/11/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
7429-90-5	Aluminum	11700.		9720.		7940.		3310.		3970.	
7439-89-6	Iron	11500.		4480.		3270.		2840.		3250.	
7439-92-1	Lead	47.		13.7		53.3		2.1	J	109.	U
7440-02-0	Nickel	10.		6.7	U	5.8	U	1.7	U	17.1	J
7440-09-7	Potassium	878.		361.		312.		173.	J	336.	J
7440-22-4	Silver	0.22	UJ	0.19	UJ	0.27	UJ	0.2	UJ	0.3	UJ
7440-23-5	Sodium	280.		318.		90.6	J	135.		160.	
7440-28-0	Thallium	0.25	U	0.22	U	0.31	U	0.23	U	0.34	U
7440-36-0	Antimony	1.3	U	1.	U	1.3	U	0.96	U	2.	U
7440-38-2	Arsenic	7.8		3.	U	2.3	U	2.5	U	2.5	U
7440-39-3	Barium	11.4		12.2		18.1		6.3	U	18.	J
7440-41-7	Beryllium	0.45		0.22	J	0.14	J	0.13	J	0.15	J
7440-43-9	Cadmium	0.27	U	0.18	U	0.25	U	0.12	U	0.63	U
7440-48-4	Cobalt	2.2	U	0.92	U	0.99	U	0.52	U	1.4	U
7440-50-8	Copper	68.1		5.2	U	9.2		1.7	U	22.5	U
7440-62-2	Vanadium	29.9		18.2		20.3		8.6		46.6	
7440-66-6	Zinc	92.4		31.2		42.4		7.2	U	104.	
7782-49-2	Selenium	0.48	J	0.22	U	0.31	U	0.23	U	0.34	U
7439-97-6	Mercury	0.1		0.02	J	0.06	J	0.02	U	2.4	
7439-95-4	Magnesium	2850.		1270.		616.		522.		1410.	
7439-96-5	Manganese	143.		26.9		27.5		16.7		44.1	
7440-70-2	Calcium	48200.		38700.		8960.		12500.		28700.	
7440-47-3	Chromium	27.2		19.5		19.9		11.9		31.3	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-META		SAMPLE ID ----->	GDH-S-B028-01	GDH-S-B029-01	GDH-S-B030-01	GDH-S-B031-01	GDH-S-B031-02	GDH-S-B032-01					
		ORIGINAL ID ----->	GDHSB02801	GDHSB02901	GDHSB03001	GDHSB03101	GDHSB03102	GDHSB03201					
		LAB SAMPLE ID ---->	41734-058	41734-059	41734-060	41734-041	41734-042	41734-043					
		ID FROM REPORT -->	100518	100519	100520	100501	100502	100503					
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94					
		DATE EXTRACTED -->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94					
		DATE ANALYZED ---->	10/11/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL		
7429-90-5	Aluminum	6040.		6100.		6470.		12800.		6850.		16900.	
7439-89-6	Iron	3770.		1810.		1910.		6740.		4650.		19700.	
7439-92-1	Lead	26.3		8.7		12.6		10.9		14.6	U	70.5	
7440-02-0	Nickel	6.3	U	5.6	U	2.9	U	7.8		6.	U	13.9	
7440-09-7	Potassium	196.	J	83.2	J	113.	J	403.		426.	U	777.	
7440-22-4	Silver	0.22	UJ	0.19	UJ	0.19	UJ	0.25	UJ	2.3	UJ	0.31	UJ
7440-23-5	Sodium	95.4		13.6	J	29.7	J	1000.		883.		113.	J
7440-28-0	Thallium	0.25	U	0.21	U	0.21	U	0.28	U	0.27	U	0.36	U
7440-36-0	Antimony	1.1	U	0.9	U	0.9	U	1.2	U	11.3	U	1.5	U
7440-38-2	Arsenic	2.6	U	0.78	U	1.1	U	5.4		5.		8.9	
7440-39-3	Barium	7.3	J	5.4	U	4.8	U	15.2		0.78	U	26.5	
7440-41-7	Beryllium	0.09	J	0.06	J	0.05	J	0.3	J	0.28	J	0.59	
7440-43-9	Cadmium	1.5	U	0.13	U	0.13	U	0.2	U	1.4	U	0.3	U
7440-48-4	Cobalt	0.72	U	0.45	U	0.52	U	1.8	U	2.4	U	3.6	
7440-50-8	Copper	23.2		3.6	U	5.4	U	4.4	U	2.2	U	17.8	
7440-62-2	Vanadium	24.5		24.8		11.6		25.6		12.6		48.7	
7440-66-6	Zinc	104.		13.9		11.9	U	18.8		13.8	J	85.8	
7782-49-2	Selenium	0.25	U	0.21	U	0.21	U	0.28	U	0.27	U	0.36	U
7439-97-6	Mercury	0.03	J	0.05	J	0.05	J	0.03	U	0.04	U	0.16	
7439-95-4	Magnesium	585.		132.		287.		828.		1950.		2270.	
7439-96-5	Manganese	20.3		5.3		13.1		62.8		38.8		284.	
7440-70-2	Calcium	13600.		1070.		4160.		43300.		120000.		7440.	
7440-47-3	Chromium	13.5		8.8		9.2		21.3		16.		53.	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SU846-META		SAMPLE ID ----->	GDH-S-8032-02	GDH-S-8033-01	GDH-S-8033-02	GDH-S-8034-01	GDH-S-8034-02	GDH-S-8035-01					
		ORIGINAL ID ----->	GDHS803202	GDHS803301	GDHS803302	GDHS803401	GDHS803402	GDHS803501					
		LAB SAMPLE ID --->	41734-044	41734-045	41734-046	41734-047	41734-048	41734-049					
		ID FROM REPORT -->	100504	100505	100506	100507	100508	100509					
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94					
		DATE EXTRACTED -->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94					
		DATE ANALYZED --->	10/17/94	10/11/94	10/17/94	10/17/94	10/17/94	10/17/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL		
7429-90-5	Aluminum	21600.		9310.		15500.		23400.		31700.		20200.	
7439-89-6	Iron	30800.		15000.		13100.		30900.		46800.		31800.	
7439-92-1	Lead	24.6		15.8		27.5		28.4		37.3		37.4	
7440-02-0	Nickel	10.4		8.3		10.6		13.7		14.		11.6	
7440-09-7	Potassium	1780.		1090.		941.		2130.		2650.		2470.	
7440-22-4	Silver	0.24	UJ	0.35	UJ	0.38	UJ	0.25	UJ	0.42	UJ	0.41	UJ
7440-23-5	Sodium	767.		147.		350.		207.		889.		240.	
7440-28-0	Thallium	0.55	U	0.4	U	0.43	U	0.57	U	0.97	U	0.47	U
7440-36-0	Antimony	1.2	U	1.7	U	1.8	U	1.2	U	2.	U	2.2	U
7440-38-2	Arsenic	13.5		8.5		8.2		17.2		22.3		17.6	
7440-39-3	Barium	27.6		16.2		23.6		25.9		35.3		28.7	
7440-41-7	Beryllium	1.		0.5	J	0.46	J	1.		1.3		0.81	
7440-43-9	Cadmium	0.14	U	1.	U	0.22	U	0.15	U	0.25	U	0.24	U
7440-48-4	Cobalt	5.3		2.6	U	3.1	J	5.5		7.1		5.	
7440-50-8	Copper	18.5		15.1		14.6		20.7		24.5		16.2	
7440-62-2	Vanadium	56.5		31.4		33.9		60.1		73.7		69.1	
7440-66-6	Zinc	64.8		52.3		52.8		80.5		88.9		76.9	
7782-49-2	Selenium	0.55	U	0.4	U	0.43	U	0.57	U	0.97	U	0.81	J
7439-97-6	Mercury	0.21		3.8		0.97		0.21		0.23		0.17	
7439-95-4	Magnesium	4010.		1920.		3000.		4370.		5730.		3450.	
7439-96-5	Manganese	791.		376.		284.		589.		417.		228.	
7440-70-2	Calcium	5910.		20200.		38800.		28500.		8610.		2900.	
7440-47-3	Chromium	39.3		24.3		57.3		47.4		56.4		55.5	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID ----->	GDH-S-8036-01	GDH-S-8037-01	GDH-S-8037-02	GDH-S-8038-01	GDH-S-8038-02	GDH-S-8039-01			
		ORIGINAL ID ----->	GDHSB03601	GDHSB03701	GDHSB03702	GDHSB03801	GDHSB03802	GDHSB03901			
		LAB SAMPLE ID ---->	41733-004	41742-037	41742-038	41742-039	41742-040	41742-041			
		ID FROM REPORT -->	GDHSB03601	GDHSB03701	GDHSB03702	GDHSB03801	GDHSB03802	GDHSB03901			
		SAMPLE DATE ----->	10/04/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		DATE ANALYZED ---->	10/18/94	10/18/94	10/17/94	10/17/94	10/18/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
7429-90-5	Aluminum	20700.		2560.		9140.		5640.		13500.	
7439-89-6	Iron	30300.		5780.		8620.		5630.		12000.	
7439-92-1	Lead	20.6		27.5	J	23.9		36.2		16.	
7440-02-0	Nickel	10.6		7.5	U	11.3		4.3		7.7	
7440-09-7	Potassium	1190.		1120.	J	760.		333.	J	828.	
7440-22-4	Silver	0.32	UJ	2.9	UJ	0.31	UJ	0.74	J	0.34	UJ
7440-23-5	Sodium	182.		244.	J	236.		90.7	J	144.	
7440-28-0	Thallium	1.1	J	0.34	UJ	0.41	J	0.3	UJ	0.46	J
7440-36-0	Antimony	1.5	U	14.3	U	1.5	U	1.3	U	1.7	U
7440-38-2	Arsenic	13.7		4.		5.2		11.8		9.6	
7440-39-3	Barium	22.5		0.98	U	27.1		14.		19.3	
7440-41-7	Beryllium	1.1		0.33	U	0.52	J	0.26	J	0.58	J
7440-43-9	Cadmium	0.19	U	1.7	U	0.18	U	0.19	J	0.2	U
7440-48-4	Cobalt	5.7		3.1	U	2.7	J	1.4	J	3.	J
7440-50-8	Copper	16.6		8.2	J	20.2		8.2		8.4	
7440-62-2	Vanadium	55.5		13.1		19.6		14.3		27.9	
7440-66-6	Zinc	64.8		44.1		123.		202.		50.	
7782-49-2	Selenium	0.89	J	0.34	U	0.36	U	0.3	U	0.4	U
7439-97-6	Mercury	0.16	J	0.02	J	0.02	J	0.06	J	0.11	J
7439-95-4	Magnesium	3410.		3210.		1900.		888.		1780.	
7439-96-5	Manganese	388.		195.		58.3		82.		124.	
7440-70-2	Calcium	45200.		280000.		41400.		32700.		15600.	
7440-47-3	Chromium	38.9		21.6		22.8		15.		21.8	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUS46-META		SAMPLE ID ----->	GDH-S-8039-02	GDH-S-8040-01	GDH-S-8040-02	GDH-S-8041-01	GDH-S-8042-01	GDH-S-8042-02					
		ORIGINAL ID ----->	GDHS803902	GDHS804001	GDHS804002	GDHS804101	GDHS804201	GDHS804202					
		LAB SAMPLE ID ---->	41742-042	41742-043	41742-044	41742-045	41742-046	41742-047					
		ID FROM REPORT -->	GDHS803902	GDHS804001	GDHS804002	GDHS804101	GDHS804201	GDHS804202					
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE EXTRACTED -->	10/11/94	10/11/94	10/11/94	10/11/94	10/14/94	10/11/94					
		DATE ANALYZED ---->	10/18/94	10/17/94	10/18/94	10/18/94	10/18/94	10/17/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL		
7429-90-5	Aluminum	32600.		4030.		19100.		32700.		5760.		2770.	
7439-89-6	Iron	30000.		2500.		34900.		38800.		7460.		3530.	
7439-92-1	Lead	18.4		4.3	J	23.		33.6		1.6	U	1.9	U
7440-02-0	Nickel	29.5		1.9	J	12.3		18.4		10.5		5.9	
7440-09-7	Potassium	2800.		65.	J	1400.		2960.		730.		449.	J
7440-22-4	Silver	0.55	UJ	0.28	UJ	0.36	UJ	0.36	UJ	0.26	UJ	0.31	UJ
7440-23-5	Sodium	1600.		13.3	J	123.	J	185.		601.		1090.	
7440-28-0	Thallium	1.3	J	0.33	UJ	1.2	J	1.1	J	0.63	J	0.35	UJ
7440-36-0	Antimony	2.6	U	1.4	UJ	2.5	U	1.8	U	1.3	U	1.5	U
7440-38-2	Arsenic	18.3		1.6		22.8		18.4		9.1		4.9	
7440-39-3	Barium	24.3		3.6	J	28.8		39.6		12.6		0.1	U
7440-41-7	Beryllium	1.3		0.1	J	1.2		1.4		0.41	J	0.32	J
7440-43-9	Cadmium	0.52	J	0.17	U	0.21	U	0.21	U	0.15	U	0.18	U
7440-48-4	Cobalt	6.6		1.1	J	6.		7.9		2.9		0.95	J
7440-50-8	Copper	20.1		1.1	J	17.9		23.4		4.7		2.2	J
7440-62-2	Vanadium	70.3		7.2		58.1		74.8		19.3		9.2	
7440-66-6	Zinc	108.		10.1		70.1		100.		50.6		14.2	
7782-49-2	Selenium	2.		0.35	J	1.	J	1.6		0.41	J	0.72	J
7439-97-6	Mercury	0.1	J	0.04	U	0.17		0.21		0.04	U	0.04	J
7439-95-4	Magnesium	7620.		323.		2520.		4660.		3470.		2660.	
7439-96-5	Manganese	430.		14.1		753.		983.		1200.		49.1	
7440-70-2	Calcium	99100.		6940.		7030.		7850.		71900.		88900.	
7440-47-3	Chromium	72.6		8.3		36.3		57.		23.3		14.3	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-META		SAMPLE ID ----->	GDH-S-B043-01	GDH-S-B043-02	GDH-S-B044-01	GDH-S-B045-01	GDH-S-B045-02	GDH-S-B046-01	
		ORIGINAL ID ----->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601	
		LAB SAMPLE ID ---->	41742-048	41742-049	41742-050	41742-051	41742-052	41742-053	
		ID FROM REPORT -->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601	
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	
		DATE EXTRACTED -->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	
		DATE ANALYZED ---->	10/19/94	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
7429-90-5	Aluminum	11500.		45300.		6350.		7900.	
7439-89-6	Iron	7960.		44600.		1850.		6780.	
7439-92-1	Lead	12.6		34.		4.4		11.7	
7440-02-0	Nickel	7.6		20.1		2.6		5.2	
7440-09-7	Potassium	684.		2660.		217. J		638.	
7440-22-4	Silver	0.27 UJ		0.36 UJ		0.18 UJ		0.2 UJ	
7440-23-5	Sodium	270.		276.		53.2 J		143.	
7440-28-0	Thallium	0.31 UJ		0.92 J		0.2 UJ		0.23 UJ	
7440-36-0	Antimony	1.3 U		2. U		0.85 U		0.97 U	
7440-38-2	Arsenic	5.2		136.		1.7		4.5	
7440-39-3	Barium	9.5 J		47.5		8.9		8.4	
7440-41-7	Beryllium	0.39 J		1.6		0.23 J		0.4	
7440-43-9	Cadmium	0.22 J		0.21 U		0.1 U		0.12 U	
7440-48-4	Cobalt	1.8 J		9.4		0.94 J		2. J	
7440-50-8	Copper	9.4		28.9		1.3		6.	
7440-62-2	Vanadium	21.		87.1		5.8		15.1	
7440-66-6	Zinc	40.4		110.		7.		29.3	
7782-49-2	Selenium	0.31 U		1.5		0.2 U		0.23 U	
7439-97-6	Mercury	0.05 U		0.27		0.03 U		0.02 J	
7439-95-4	Magnesium	2230.		5440.		810.		2980.	
7439-96-5	Manganese	128.		655.		40.		155.	
7440-70-2	Calcium	60800.		6460.		21500.		103000.	
7440-47-3	Chromium	22.9		68.6		5.8		15.5	
								34600.	
								40600.	
								33.8	
								17.1	
								2260.	
								0.47 UJ	
								481.	
								1.9 J	
								2.3 U	
								19.1	
								36.3	
								14.7	
								1.4	
								0.28 U	
								8.2	
								25.6	
								81.4	
								96.7	
								0.54 U	
								0.25	
								4780.	
								415.	
								8440.	
								56.8	
								14800.	
								12300.	
								14.4	
								7.5	
								810.	
								0.25 UJ	
								150.	
								0.28 UJ	
								1.2 U	
								5.7	
								14.7	
								0.47	
								0.15 U	
								2.6 J	
								7.	
								27.3	
								35.8	
								0.28 U	
								0.09 J	
								1920.	
								142.	
								24700.	
								24.4	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-META		SAMPLE ID ----->	GDH-S-8046-02	GDH-S-8047-01	GDH-S-8047-02	GDH-S-8048-01	GDH-S-8049-01	GDH-S-8050-01				
		ORIGINAL ID ----->	GDHS804602	GDHS804701	GDHS804702	GDHS804801	GDHS804901	GDHS805001				
		LAB SAMPLE ID ---->	41742-054	41760-030	41760-031	41760-032	41760-033	41760-034				
		ID FROM REPORT -->	GDHS804602	100701	100702	100703	100704	100705				
		SAMPLE DATE ----->	10/05/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94				
		DATE EXTRACTED -->	10/11/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94				
		DATE ANALYZED ---->	10/18/94	10/19/94	10/20/94	10/20/94	10/20/94	10/20/94				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG				
CAS #	Parameter	CHS18	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	
7429-90-5	Aluminum	31100.		17100.		15500.		20000.		29600.		5150.
7439-89-6	Iron	40400.		18000.		14300.		19400.		32200.		5470.
7439-92-1	Lead	27.8		11.3		9.7		35.3		24.6		16.3 U
7440-02-0	Nickel	15.5		9.9		9.6		19.4		21.1		11.7 J
7440-09-7	Potassium	2440.		1210.		1130.		1790.		2330.		546. J
7440-22-4	Silver	0.38	UJ	0.24	U	0.29	U	0.41	U	0.36	U	2.6 U
7440-23-5	Sodium	298.		302.		494.		528.		330.		639. J
7440-28-0	Thallium	0.96	J	0.27	U	0.34	U	0.47	U	0.42	U	0.3 U
7440-36-0	Antimony	1.8	U	1.2	U	2.	J	2.	U	1.8	U	12.7 U
7440-38-2	Arsenic	20.3		9.7		7.7		13.2		15.7		6.2
7440-39-3	Barium	36.6		17.		15.4		6.8	J	27.3		0.87 U
7440-41-7	Beryllium	1.4		0.71		0.62		0.8		1.2		0.29 U
7440-43-9	Cadmium	0.22	U	0.14	U	0.17	U	0.24	U	0.22	U	1.5 U
7440-48-4	Cobalt	7.5		3.4		3.4		3.5	J	5.8		2.7 U
7440-50-8	Copper	27.1		11.6		9.8		17.		23.1		7.9 J
7440-62-2	Vanadium	85.		35.9		30.8		49.8		68.3		20.4
7440-66-6	Zinc	99.9		62.5		52.3		85.9		108.		54.
7782-49-2	Selenium	0.89	J	0.27	U	0.34	U	0.47	U	0.42	U	0.82 J
7439-97-6	Mercury	0.26		0.09		0.04	J	0.06	J	0.16		0.04 J
7439-95-4	Magnesium	5320.		2990.		2600.		6000.		5370.		3750.
7439-96-5	Manganese	737.		243.		192.		282.		444.		51.
7440-70-2	Calcium	9990.		41600.		31300.		160000.		62300.		154000.
7440-47-3	Chromium	54.		39.3		35.4		54.3		61.8		40.2

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-META		SAMPLE ID ----->	GDH-S-8054-01	GDH-S-8054-02	GDH-S-8055-01	GDH-S-8056-01	GDH-S-8056-02	GDH-S-8057-01			
		ORIGINAL ID ----->	GDHS805401	GDHS805402	GDHS805501	GDHS805601	GDHS805602	GDHS805701			
		LAB SAMPLE ID ---->	41760-041	41760-042	41760-043	41779-011	41779-012	41780-009			
		ID FROM REPORT -->	100712	100713	100714	100807	100808	100814			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/07/94	10/07/94	10/07/94			
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED ---->	10/20/94	10/18/94	10/18/94	10/20/94	10/18/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS20	VAL
7429-90-5	Aluminum	10100.		4400.		3810.		5480.		5420.	
7439-89-6	Iron	7670.		5800.		2780.		5450.		1920.	
7439-92-1	Lead	19.5		2.1	J	16.8		24.		6.1	U
7440-02-0	Nickel	12.7		6.4		2.2	J	6.8		2.4	J
7440-09-7	Potassium	824.		447.		92.6	U	417.		258.	U
7440-22-4	Silver	0.25	U	0.24	U	0.2	U	0.17	U	0.21	U
7440-23-5	Sodium	729.		961.		41.2	J	636.		649.	
7440-28-0	Thallium	0.28	U	0.27	U	0.23	U	0.19	U	0.25	U
7440-36-0	Antimony	1.2	U	1.1	U	0.99	U	0.81	U	1.	U
7440-38-2	Arsenic	7.3		6.6		3.7		5.1		1.3	
7440-39-3	Barium	9.9		10.5		17.		11.5		8.5	
7440-41-7	Beryllium	0.54		0.5		0.14	J	0.29	J	0.11	J
7440-43-9	Cadmium	0.18	J	0.26	J	0.18	J	0.15	J	0.13	U
7440-48-4	Cobalt	1.9	J	0.89	J	0.51	J	1.8	J	0.82	J
7440-50-8	Copper	9.7		3.5		4.7		23.8		2.4	U
7440-62-2	Vanadium	25.3		15.6		7.9		15.2		6.3	
7440-66-6	Zinc	56.2		16.5		74.4		62.3		10.3	
7782-49-2	Selenium	0.32	J	0.47	J	0.23	U	0.19	U	0.25	U
7439-97-6	Mercury	0.09		0.02	U	0.03	J	0.03	J	0.02	U
7439-95-4	Magnesium	3390.		2550.		388.		1550.		809.	
7439-96-5	Manganese	86.4		43.5		21.4		85.7		17.	
7440-70-2	Calcium	97700.		65200.		5000.		61600.		15200.	
7440-47-3	Chromium	45.1		23.6		12.5		18.3		6.4	
										1610.	
										3330.	
										11.7	U
										7.4	J
										341.	U
										1.9	U
										284.	J
										0.21	UJ
										9.1	U
										3.4	
										0.62	U
										0.21	U
										1.1	U
										2.	J
										6.4	J
										6.9	
										28.3	
										0.21	U
										0.02	U
										3680.	
										281.	
										333000.	
										5.8	J

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-META		SAMPLE ID ----->	GDH-S-8058-01	GDH-S-8058-02	GDH-S-8059-01	GDH-S-8060-01	GDH-S-8061-01	GDH-S-8062-01					
		ORIGINAL ID ----->	GDHSB05801	GDHSB05802	GDHSB05901	GDHSB06001	GDHSB06101	GDHSB06201					
		LAB SAMPLE ID ---->	41779-013	41779-014	41780-005	41780-006	41779-015	41784-014					
		ID FROM REPORT -->	100809	100810	100812	100813	100811	101001					
		SAMPLE DATE ----->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/08/94					
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94					
		DATE ANALYZED ---->	10/20/94	10/20/94	10/18/94	10/20/94	10/18/94	10/20/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS20	VAL	CHS20	VAL	CHS19	VAL	CHS20	VAL
7429-90-5	Aluminum	9070.		10600.		5060.		16200.		5960.	J	15200.	
7439-89-6	Iron	10600.		13100.		12000.		14600.		4800.	J	26400.	
7439-92-1	Lead	24.6	J	9.5		63.8		23.7		9.3		25.	
7440-02-0	Nickel	6.2	U	8.9		7.2		12.4		3.5		7.9	
7440-09-7	Potassium	698.	J	1100.		425.	J	1010.		214.	U	2590.	
7440-22-4	Silver	2.4	U	0.23	U	0.55	J	0.33	U	0.23	U	0.26	U
7440-23-5	Sodium	182.	J	1320.		142.		1660.		134.	J	1370.	
7440-28-0	Thallium	0.28	U	0.26	U	0.2	UJ	0.38	UJ	0.27	U	0.3	UJ
7440-36-0	Antimony	11.8	U	1.1	U	1.4	J	1.6	U	1.1	UJ	1.3	U
7440-38-2	Arsenic	5.9		7.4		4.1		9.8		5.3		14.4	
7440-39-3	Barium	4.7	J	11.1		17.		33.4		18.8		24.6	
7440-41-7	Beryllium	0.27	U	0.48		0.34		0.69		0.22	J	0.72	
7440-43-9	Cadmium	1.4	U	0.14	J	0.1	U	0.2	U	0.14	J	0.15	U
7440-48-4	Cobalt	3.1	J	2.4	J	1.5	J	3.8		1.1	J	4.3	
7440-50-8	Copper	11.4	J	15.5		20.1		12.7		3.7		12.6	
7440-62-2	Vanadium	23.6		24.1		17.9		36.3		12.6		44.4	
7440-66-6	Zinc	58.1		51.3		56.		61.4		36.7	J	59.1	
7782-49-2	Selenium	0.28	U	0.26	U	0.28	J	0.47	J	0.27	U	1.1	
7439-97-6	Mercury	0.05	J	0.08		0.04	J	0.06	J	0.02	J	0.08	
7439-95-4	Magnesium	2910.		2960.		855.		3220.		593.		2710.	
7439-96-5	Manganese	403.		198.		53.2		166.		46.7	J	177.	
7440-70-2	Calcium	174000.		44300.		11400.		27200.		16600.	J	15500.	
7440-47-3	Chromium	23.2		25.5		20.8		48.5		15.8	J	33.3	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID ----->	GDH-S-8063-01	GDH-S-8063-02	GDH-S-8064-01	GDH-S-8064-02	GDH-S-8065-01	GDH-S-8066-01			
		ORIGINAL ID ----->	GDHS806301	GDHS806302	GDHS806401	GDHS806402	GDHS806501	GDHS806601			
		LAB SAMPLE ID ---->	41784-015	41784-016	41784-017	41784-018	41784-019	41790-030			
		ID FROM REPORT -->	101002	101003	101004	101005	101006	101112			
		SAMPLE DATE ----->	10/08/94	10/08/94	10/08/94	10/08/94	10/08/94	10/10/94			
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED ---->	10/20/94	10/18/94	10/18/94	10/18/94	10/20/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL
7429-90-5	Aluminum	9290.		798.		1090.		2930.		2630.	
7439-89-6	Iron	19100.		1570.		3230.		4920.		7340.	
7439-92-1	Lead	151.		2.5 J		79.8		5.3		21.2 J	
7440-02-0	Nickel	5.6		0.54 U		6.9		1.8 J		4.9 J	
7440-09-7	Potassium	494.	J	196.	J	380.	J	569.	J	665.	J
7440-22-4	Silver	0.22	U	0.21	U	0.29	U	0.21	U	1.7	U
7440-23-5	Sodium	577.		234.		109.		175.		167.	J
7440-28-0	Thallium	0.25	UJ	0.24	UJ	0.34	UJ	0.25	UJ	0.19	UJ
7440-36-0	Antimony	1.7	J	1.	U	1.5	J	1.	U	8.1	U
7440-38-2	Arsenic	11.3		1.4		7.9		2.8		7.6	
7440-39-3	Barium	36.1		2.4	J	24.2		6.3	J	4.	J
7440-41-7	Beryllium	0.47		0.12	J	0.34	J	0.29	J	0.27	J
7440-43-9	Cadmium	0.13	J	0.13	U	0.17	U	0.13	U	0.99	U
7440-48-4	Cobalt	2.5		0.32	J	2.4	J	1.2	J	4.2	J
7440-50-8	Copper	25.4		0.53	J	14.3		1.3	J	7.	J
7440-62-2	Vanadium	19.1		2.7		11.7		8.6		12.	
7440-66-6	Zinc	163.		5.7		34.5		12.2		40.	
7782-49-2	Selenium	0.66	J	0.24	U	0.34	U	0.25	U	0.19	U
7439-97-6	Mercury	0.25		0.03	U	0.04	U	0.03	U	0.05	
7439-95-4	Magnesium	843.		277.		432.		731.		1330.	
7439-96-5	Manganese	124.		18.7		28.4		39.2		87.9	
7440-70-2	Calcium	28300.		3920.		26200.		3460.		108000.	
7440-47-3	Chromium	18.4		2.9		14.6		8.		11.1	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-META		SAMPLE ID -----> ORIGINAL ID -----> LAB SAMPLE ID ----> ID FROM REPORT --> SAMPLE DATE -----> DATE EXTRACTED --> DATE ANALYZED ----> MATRIX -----> UNITS ----->	GDH-S-8071-02 GDHSB07102 41806-033 101211 10/11/94 10/18/94 10/21/94 Soil MG/KG	GDH-S-8072-01 GDHSB07201 41806-034 101212 10/11/94 10/18/94 10/21/94 Soil MG/KG	GDH-S-8072-02 GDHSB07202 41806-035 101213 10/11/94 10/18/94 10/21/94 Soil MG/KG	GDH-S-8073-01 GDHSB07301 41821-014 101303 10/12/94 10/18/94 10/19/94 Soil MG/KG	GDH-S-8073-02 GDHSB07302 41821-015 101304 10/12/94 10/18/94 10/21/94 Soil MG/KG	GDH-S-8074-01 GDHSB07401 252468 102204 10/21/94 11/10/94 11/11/94 Soil MG/KG					
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS23	VAL
7429-90-5	Aluminum	4000.		11300.		11000.		3240.		18400.		5000.	
7439-89-6	Iron	7540.		19200.		17900.		2910.		30100.		5130.	
7439-92-1	Lead	15.2	U	20.3		12.4		2.4	J	24.7		4.6	J
7440-02-0	Nickel	16.	J	8.6		9.2		1.1	J	9.1		6.6	J
7440-09-7	Potassium	1550.	J	1470.		1340.		111.	U	1680.		282.	J
7440-22-4	Silver	2.4	U	0.33	UJ	0.29	U	0.16	U	0.25	U	1.1	U
7440-23-5	Sodium	1330.		1140.		2110.		192.		679.		356.	J
7440-28-0	Thallium	0.28	UJ	0.38	U	0.33	UJ	0.19	UJ	0.57	UJ	1.1	U
7440-36-0	Antimony	15.8	J	1.6	U	1.4	U	0.8	U	1.2	U	8.1	UJ
7440-38-2	Arsenic	8.3		9.8		12.4		2.9		13.6		5.9	
7440-39-3	Barium	0.81	U	18.9		15.2		5.	J	23.5		28.6	J
7440-41-7	Beryllium	0.47	J	0.74		0.63		0.14	J	1.		0.54	J
7440-43-9	Cadmium	1.4	U	0.19	U	0.17	U	0.1	U	0.15	U	0.81	U
7440-48-4	Cobalt	4.3	J	4.8		3.5		1.2	J	5.8		1.	J
7440-50-8	Copper	9.2	J	14.8		10.5		0.97	J	20.5		4.6	J
7440-62-2	Vanadium	21.2		38.7		34.8		5.4		58.		14.8	
7440-66-6	Zinc	45.1		53.7		43.5		8.		71.5		24.1	
7782-49-2	Selenium	1.	U	0.38	U	0.33	U	0.19	U	0.57	U	1.1	U
7439-97-6	Mercury	0.03	U	0.15		0.11		0.02	U	0.23		0.13	U
7439-95-4	Magnesium	12700.		2840.		2750.		442.		3590.		1340.	J
7439-96-5	Manganese	178.		268.		271.		24.6		399.		55.8	
7440-70-2	Calcium	181000.		15300.		26200.		23600.		9010.		37900.	
7440-47-3	Chromium	36.4		27.		24.9		4.9		39.1		19.	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWS46-META		SAMPLE ID ----->	GDH-S-8075-01	GDH-S-8076-01	GDH-S-8077-01	GDH-S-8078-01	GDH-S-8078-02	GDH-S-8079-01					
		ORIGINAL ID ----->	GDHS807501	GDHS807601	GDHS807701	GDHS807801	GDHS807802	GDHS807901					
		LAB SAMPLE ID --->	252476	252484	252492	252506	252514	252522					
		ID FROM REPORT -->	102205	102206	102207	102208	102209	102210					
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94					
		DATE EXTRACTED -->	11/10/94	11/10/94	11/10/94	11/10/94	11/10/94	11/10/94					
		DATE ANALYZED --->	11/11/94	11/11/94	11/11/94	11/11/94	11/11/94	11/11/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL		
7429-90-5	Aluminum	8180.		8510.		5640.		4420.		5430.		26600.	
7439-89-6	Iron	8640.		8610.		6150.		4000.		1380.		28100.	
7439-92-1	Lead	89.7		6.3		7.4		18.8		3.6		69.6	
7440-02-0	Nickel	29.6	J	11.7	J	17.1	J	3.	U	3.1	U	21.3	J
7440-09-7	Potassium	779.	J	675.	J	814.	J	233.	J	155.	U	2110.	
7440-22-4	Silver	1.1	U	0.99	U	1.1	U	0.92	U	0.95	U	1.1	U
7440-23-5	Sodium	845.	J	475.	J	1010.	J	1460.		410.	J	301.	J
7440-28-0	Thallium	1.1	U	0.99	U	1.1	U	0.92	U	0.95	U	1.1	U
7440-36-0	Antimony	8.9	UJ	8.3	UJ	11.1	UJ	7.9	UJ	7.1	UJ	8.2	UJ
7440-38-2	Arsenic	8.4		6.2		8.5		2.8		1.4	J	13.5	
7440-39-3	Barium	29.9	J	14.8	J	13.9	J	10.4	J	11.	J	42.5	J
7440-41-7	Beryllium	0.42	J	0.39	J	0.48	J	0.23	U	0.24	U	1.2	J
7440-43-9	Cadmium	0.8	U	0.74	U	0.82	U	0.69	U	0.71	U	1.2	J
7440-48-4	Cobalt	2.5	J	1.7	J	1.	J	1.	J	0.77	J	7.7	J
7440-50-8	Copper	126.		8.5		10.1		5.2	J	1.4	U	35.8	
7440-62-2	Vanadium	30.8		21.7		28.5		12.2		4.5	J	66.5	
7440-66-6	Zinc	125.		39.2		47.7		34.2		7.6		160.	
7782-49-2	Selenium	1.6		0.99	U	1.7		0.92	U	1.1	J	2.	
7439-97-6	Mercury	0.13	U	0.12	U	0.14	U	0.15		0.12	U	0.34	
7439-95-4	Magnesium	2890.		2840.		4780.		868.	J	266.	J	4570.	
7439-96-5	Manganese	175.		109.		51.1		41.9		10.2		597.	
7440-70-2	Calcium	94800.		82300.		223000.		18200.		561.	J	35400.	
7440-47-3	Chromium	63.5		27.8		53.9		20.3		5.8		65.6	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID -----> ORIGINAL ID -----> LAB SAMPLE ID ----> ID FROM REPORT --> SAMPLE DATE -----> DATE EXTRACTED --> DATE ANALYZED ----> MATRIX -----> UNITS ----->	GDH-S-B079-02 GDHSB07902 252530 102211 10/21/94 11/10/94 11/11/94 Soil MG/KG	GDH-S-B080-01 GDHSB08001 252549 102212 10/21/94 11/10/94 11/11/94 Soil MG/KG	GDH-S-B080-02 GDHSB08002 252557 102213 10/21/94 11/10/94 11/11/94 Soil MG/KG	GDH-S-B081-01 GDHSB08101 252565 102214 10/21/94 11/10/94 11/11/94 Soil MG/KG	GDH-S-B082-01 GDHSB08201 252573 102215 10/22/94 11/10/94 11/11/94 Soil MG/KG	GDH-S-B082-02 GDHSB08202 252581 102216 10/22/94 11/10/94 11/11/94 Soil MG/KG					
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL		
7429-90-5	Aluminum	3050.		8490.		7120.		10600.		10800.		41400.	
7439-89-6	Iron	6320.		5880.		7310.		7080.		7730.		54300.	
7439-92-1	Lead	2.8		42.7		3.1		9.2		15.7		38.7	
7440-02-0	Nickel	3.4	U	9.7	J	23.6	J	5.	J	10.3	J	22.8	J
7440-09-7	Potassium	189.	J	446.	J	1030.	J	336.	J	732.	J	2500.	
7440-22-4	Silver	1.1	U	0.91	U	1.1	U	0.91	U	0.98	U	1.7	J
7440-23-5	Sodium	78.1	J	165.	J	669.	J	285.	J	404.	J	261.	J
7440-28-0	Thallium	1.1	U	0.91	U	1.1	U	0.91	U	0.98	U	1.5	U
7440-36-0	Antimony	7.9	UJ	6.8	UJ	19.9	UJ	6.8	UJ	13.6	UJ	11.3	UJ
7440-38-2	Arsenic	4.		3.5		7.5		4.4		7.8		28.3	
7440-39-3	Barium	9.7	J	31.2	J	10.9	J	22.7	J	26.7	J	59.9	J
7440-41-7	Beryllium	0.29	J	0.23	U	0.31	J	0.25	J	0.43	J	1.5	J
7440-43-9	Cadmium	0.79	U	0.68	U	0.85	U	0.68	U	0.74	U	1.1	U
7440-48-4	Cobalt	1.3	J	1.2	J	1.8	J	1.8	J	2.3	J	12.	J
7440-50-8	Copper	1.6	J	9.2		9.		4.	J	8.2		34.5	
7440-62-2	Vanadium	8.9	J	24.1		27.6		21.8		23.		103.	
7440-66-6	Zinc	16.4		51.7		51.1		19.7		41.9		131.	
7782-49-2	Selenium	1.1	U	1.2		3.9		0.91	U	0.98	U	1.5	U
7439-97-6	Mercury	0.13	U	0.11	U	0.14	U	0.11	U	0.12	U	0.38	
7439-95-4	Magnesium	546.	J	1230.		8360.		943.	J	2830.		5420.	
7439-96-5	Manganese	76.9		43.4		114.		25.4		57.		966.	
7440-70-2	Calcium	4600.		21300.		198000.		23200.		62000.		12200.	
7440-47-3	Chromium	7.8		22.2		43.7		17.4		30.8		72.1	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID ----->	GDH-S-8083-01	GDH-S-8084-01	GDH-S-8084-02	GDH-S-8085-01	GDH-S-8085-02	GDH-S-8086-01					
		ORIGINAL ID ----->	GDHS808301	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601					
		LAB SAMPLE ID --->	252590	42136-018	42136-019	42136-020	42136-021	42347-013					
		ID FROM REPORT -->	102217	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601					
		SAMPLE DATE ----->	10/22/94	11/09/94	11/09/94	11/09/94	11/09/94	11/22/94					
		DATE EXTRACTED -->	11/10/94	11/14/94	11/14/94	11/14/94	11/14/94	12/16/94					
		DATE ANALYZED --->	11/11/94	11/19/94	11/19/94	11/21/94	11/19/94	12/22/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS23	VAL	CHS25	VAL	CHS25	VAL	CHS25	VAL	CHS25	VAL	CHS27	VAL
7429-90-5	Aluminum	3160.		9390.		8660.		8550.		13300.		4400.	
7439-89-6	Iron	4820.		14500.		7160.		7830.		12000.		5970.	
7439-92-1	Lead	7.6		27.2	U	7.5		32.3	U	6.5	J	1.6	UJ
7440-02-0	Nickel	13.9	J	39.9		13.7		29.2	J	16.2		91.8	
7440-09-7	Potassium	660.	J	1580.	U	841.	U	1580.	J	1210.		797.	J
7440-22-4	Silver	0.92	U	3.4	U	0.34	U	4.	U	0.45	U	2.3	U
7440-23-5	Sodium	1350.		638.	U	313.	U	1200.	U	714.	U	933.	
7440-28-0	Thallium	0.92	U	0.47	J	0.36	J	0.55	J	0.36	J	0.77	UJ
7440-36-0	Antimony	9.2	UJ	15.9	U	1.6	U	18.9	U	2.1	U	10.7	U
7440-38-2	Arsenic	8.5		12.7	U	1.8	U	8.	U	6.4	U	7.3	
7440-39-3	Barium	14.9	J	10.1	J	26.4	U	5.3	U	15.7	U	0.53	U
7440-41-7	Beryllium	0.52	J	0.8	J	0.87		0.84	J	0.68		0.42	U
7440-43-9	Cadmium	0.98	J	2.1	U	0.21	U	2.5	U	0.47	J	1.4	U
7440-48-4	Cobalt	1.2	J	4.2	J	4.3		2.8	U	3.1	J	2.3	U
7440-50-8	Copper	7.5		16.9	J	4.3		6.4	J	9.3		10.1	U
7440-62-2	Vanadium	17.5		38.1		15.		39.		32.		28.6	
7440-66-6	Zinc	32.3		79.		34.4	U	59.3	U	40.5	U	54.2	
7782-49-2	Selenium	2.6		2.1	J	0.62	J	2.1	J	2.	J	1.5	UJ
7439-97-6	Mercury	0.11	U	0.03	U	0.03	U	0.03	U	0.03	U	0.03	U
7439-95-4	Magnesium	3320.		3330.		2040.		5960.		3140.		6210.	
7439-96-5	Manganese	36.4		195.		59.6		74.		110.		36.9	
7440-70-2	Calcium	141000.		148000.		16100.		208000.		68500.		264000.	
7440-47-3	Chromium	35.		51.7		19.4		63.8		38.5		114.	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID ----->	GDH-S-8086-02	GDH-S-8087-01	GDH-S-8087-02	GDH-S-8088-01	GDH-S-8088-02	GDH-S-8089-01			
		ORIGINAL ID ----->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		LAB SAMPLE ID ---->	42347-014	42347-015	42347-016	42347-017	42347-018	42430-008			
		ID FROM REPORT -->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		SAMPLE DATE ----->	11/22/94	11/22/94	11/22/94	11/22/94	11/22/94	11/30/94			
		DATE EXTRACTED -->	12/16/94	12/16/94	12/16/94	12/16/94	12/16/94	12/16/94			
		DATE ANALYZED ---->	12/22/94	12/22/94	12/22/94	12/21/94	12/22/94	12/22/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL
7429-90-5	Aluminum	4520.		10800.		15400.		8670.		13900.	
7439-89-6	Iron	5920.		9090.		19900.		9680.		19600.	
7439-92-1	Lead	2.4	UJ	8.7	UJ	9.6	UJ	19.6	J	10.5	
7440-02-0	Nickel	78.3		80.8		14.2		11.7		8.7	
7440-09-7	Potassium	862.	J	1050.	J	1840.		755.		1610.	
7440-22-4	Silver	2.	U	2.	U	0.44	U	0.41	U	0.47	U
7440-23-5	Sodium	1110.		833.		482.		422.		578.	
7440-28-0	Thallium	0.68	UJ	0.7	UJ	0.74	UJ	0.7	UJ	0.79	UJ
7440-36-0	Antimony	9.4	U	9.6	U	2.1	U	1.9	U	2.2	U
7440-38-2	Arsenic	8.1		6.7		8.1		5.7		7.5	U
7440-39-3	Barium	4.	U	14.5	J	20.1		24.9		18.3	
7440-41-7	Beryllium	0.53	U	0.61	U	1.		0.79		0.95	
7440-43-9	Cadmium	1.2	U	1.3	U	0.27	U	0.25	U	0.29	U
7440-48-4	Cobalt	2.7	U	3.9	U	4.7	U	4.1	U	3.9	U
7440-50-8	Copper	8.6	U	10.2	U	6.1	U	5.5	U	6.3	U
7440-62-2	Vanadium	26.1		32.1		29.		19.7		27.3	
7440-66-6	Zinc	37.9	U	53.7	U	43.2	U	34.4	U	34.6	U
7782-49-2	Selenium	0.99	UJ	1.1	UJ	0.64	UJ	0.41	UJ	0.45	UJ
7439-97-6	Mercury	0.02	U	0.04	J	0.04	U	0.03	U	0.02	U
7439-95-4	Magnesium	5780.		7850.		3820.		2330.		3110.	
7439-96-5	Manganese	41.3		79.9		141.		135.		173.	
7440-70-2	Calcium	195000.		177000.		44100.		45800.		46500.	
7440-47-3	Chromium	95.2		107.		31.6		24.4		29.5	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID ----->	GDH-S-B090-01	GDH-S-B091-01	GDH-S-B092-01	GDH-S-B092-02	GDH-S-B093-01	GDH-S-B104-01					
		ORIGINAL ID ----->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		LAB SAMPLE ID ---->	42430-009	42430-010	42574-009	42574-012	42613-004	42985-009					
		ID FROM REPORT -->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		SAMPLE DATE ----->	11/30/94	11/30/94	12/14/94	12/14/94	12/19/94	02/06/95					
		DATE EXTRACTED -->	12/16/94	12/16/94	12/29/94	12/29/94	12/29/94	02/08/95					
		DATE ANALYZED ---->	12/22/94	12/21/94	01/03/95	01/03/95	12/30/94	02/09/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG					
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS28	VAL	CHS28	VAL	CHS28	VAL	CHS34	VAL
7429-90-5	Aluminum	22300.		4630.		17700.		13700.		4470.		6650.	
7439-89-6	Iron	36700.		3880.		17500.		14500.		3400.		3170.	
7439-92-1	Lead	41.3		8.2	U	12.		8.1		4.9		16.1	J
7440-02-0	Nickel	17.1		3.4		12.9		8.4	U	1.9	U	5.3	
7440-09-7	Potassium	2010.		244.		1310.		1110.		183.	UJ	215.	U
7440-22-4	Silver	0.49	U	0.24	U	0.36	U	0.33	U	0.26	U	0.2	U
7440-23-5	Sodium	1260.		330.		561.		606.		55.7	J	41.1	J
7440-28-0	Thallium	0.84	UJ	0.4	UJ	0.12	J	0.1	UJ	0.08	UJ	0.39	U
7440-36-0	Antimony	2.3	U	1.1	U	1.7	UJ	1.6	UJ	1.2	UJ	1.2	U
7440-38-2	Arsenic	16.1	U	3.3	U	9.6	J	8.2	J	1.3	J	1.4	J
7440-39-3	Barium	34.		14.5		19.5	U	13.7	U	7.6	U	13.6	
7440-41-7	Beryllium	1.2		0.24	U	0.69	U	0.55	U	0.1	U	0.12	J
7440-43-9	Cadmium	0.3	U	0.15	U	0.22	U	0.2	U	0.16	U	0.15	UJ
7440-48-4	Cobalt	6.6	U	1.4	U	3.8	U	2.9	U	1.1	U	1.1	U
7440-50-8	Copper	20.7	U	2.6	U	12.9	U	7.2	U	3.	U	3.1	J
7440-62-2	Vanadium	71.7		8.5		33.5		24.5		6.8	U	27.2	
7440-66-6	Zinc	112.		15.2	U	53.8		34.9		6.9	U	14.2	
7782-49-2	Selenium	1.1	UJ	0.23	UJ	0.93	J	0.36	J	0.07	UJ	0.36	U
7439-97-6	Mercury	0.17		0.02	J	0.05	J	0.03	J	0.02	J	0.02	J
7439-95-4	Magnesium	5310.		717.		3150.		2460.		463.		468.	
7439-96-5	Manganese	518.		31.7		281.		166.		36.1		26.2	
7440-70-2	Calcium	9460.		6870.		66200.		47200.		23600.		13500.	
7440-47-3	Chromium	87.6		13.1		35.2		23.2		4.6	U	12.2	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-META		SAMPLE ID ----->	GDH-S-8104-02	GDH-S-8105-01	GDH-S-8107-01	GDH-S-8107-02			
		ORIGINAL ID ----->	GDHS810402	GDHS810501	GDHS810701	GDHS810702			
		LAB SAMPLE ID ---->	42985-010	42985-011	43002-006	43002-007			
		ID FROM REPORT -->	GDHS810402	GDHS810501	GDHS810701	GDHS810702			
		SAMPLE DATE ----->	02/06/95	02/06/95	02/07/95	02/07/95			
		DATE EXTRACTED -->	02/08/95	02/08/95	02/10/95	02/10/95			
		DATE ANALYZED ---->	02/09/95	02/09/95	02/13/95	02/13/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL
7429-90-5	Aluminum	2900.		7600.		3300.		4030.	
7439-89-6	Iron	5760.		5390.		1350.		1210.	
7439-92-1	Lead	5.4	J	17.9	J	2.3	J	3.6	J
7440-02-0	Nickel	1.6	J	6.2		1.3	J	1.1	J
7440-09-7	Potassium	442.	U	442.	U	127.	U	154.	U
7440-22-4	Silver	0.23	U	0.16	U	0.19	U	0.21	U
7440-23-5	Sodium	41.6	J	300.		10.2	J	17.7	J
7440-28-0	Thallium	0.46	U	0.31	U	0.36	U	0.41	U
7440-36-0	Antimony	1.5	U	1.	U	1.2	U	1.3	UJ
7440-38-2	Arsenic	3.9	J	5.4	J	0.64	J	1.1	J
7440-39-3	Barium	6.3	U	17.3		3.3	U	9.1	U
7440-41-7	Beryllium	0.3	J	0.27	J	0.06	J	0.09	J
7440-43-9	Cadmium	0.17	UJ	0.21	J	0.14	UJ	0.15	UJ
7440-48-4	Cobalt	1.3	U	1.5	U	1.4	U	0.64	U
7440-50-8	Copper	1.7	J	4.6	J	0.55	UJ	0.62	UJ
7440-62-2	Vanadium	10.4		19.4		4.1		4.3	
7440-66-6	Zinc	13.		33.5		7.5		6.3	
7782-49-2	Selenium	0.43	U	0.29	U	0.34	U	0.39	U
7439-97-6	Mercury	0.03	U	0.03	U	0.19	U	0.22	U
7439-95-4	Magnesium	757.		1290.		184.		222.	
7439-96-5	Manganese	45.4		49.9		5.8		8.3	
7440-70-2	Calcium	3070.		33000.		169.		967.	
7440-47-3	Chromium	8.2		17.5		4.8		4.9	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8001-01	GDH-S-8001-02	GDH-S-8002-01	GDH-S-8002-02	GDH-S-8003-01	GDH-S-8003-02			
		ORIGINAL ID ----->	GDHSB00101	GDHSB00102	GDHSB00201	GDHSB00202	GDHSB00301	GDHSB00302			
		LAB SAMPLE ID ---->	41665-020	41665-021	41665-022	41665-023	41665-024	41665-025			
		ID FROM REPORT -->	092806	092807	092808	092809	092810	092811			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
11097-69-1	Aroclor-1254	200.	U	50.	U	50.	U	50.	U	40.	U
11104-28-2	Aroclor-1221	200.	U	50.	U	50.	U	50.	U	40.	U
11141-16-5	Aroclor-1232	200.	U	50.	U	50.	U	50.	U	40.	U
12672-29-6	Aroclor-1248	200.	U	50.	U	50.	U	50.	U	40.	U
11096-82-5	Aroclor-1260	200.	U	50.	U	50.	U	50.	U	40.	U
12674-11-2	Aroclor-1016	200.	U	50.	U	50.	U	50.	U	40.	U
53469-21-9	Aroclor-1242	200.	U	50.	U	50.	U	50.	U	40.	U
1024-57-3	Heptachlor epoxide	20.	U	5.	U	5.	U	5.	U	4.	U
1031-07-8	Endosulfan sulfate	50.	U	10.	U	9.	U	9.	U	9.	U
309-00-2	Aldrin	20.	U	5.	U	5.	U	5.	U	4.	U
319-84-6	alpha-BHC	20.	U	5.	U	5.	U	5.	U	4.	U
319-85-7	beta-BHC	20.	U	5.	U	5.	U	5.	U	4.	U
319-86-8	delta-BHC	20.	U	5.	U	5.	U	5.	U	4.	U
33213-65-9	Endosulfan II	50.	U	10.	U	9.	U	9.	U	9.	U
50-29-3	4,4'-DDT	50.	U	10.	U	8.	J	9.	U	9.	U
5103-71-9	alpha-Chlordane	34.		5.	U	5.	U	5.	U	4.	U
5103-74-2	gamma-Chlordane	12.	J	5.	U	5.	U	5.	U	2.	J
53494-70-5	Endrin ketone	50.	U	10.	U	9.	U	9.	U	9.	U
58-89-9	gamma-BHC (Lindane)	20.	U	5.	U	5.	U	5.	U	4.	U
60-57-1	Dieldrin	300.		8.		5.	U	5.	U	4.	U
72-20-8	Endrin	20.	U	5.	U	5.	U	5.	U	4.	U
72-43-5	Methoxychlor	200.	U	50.	U	50.	U	50.	U	40.	U
72-54-8	4,4'-DDD	50.	U	10.	U	9.	U	9.	U	9.	U
72-55-9	4,4'-DDE	35.		6.		6.		3.	J	4.	
7421-93-4	Endrin aldehyde	50.	U	10.	U	9.	U	9.	U	9.	U
76-44-8	Heptachlor	20.	U	5.	U	5.	U	5.	U	4.	U
8001-35-2	Toxaphene	900.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	20.	U	5.	U	5.	U	5.	U	4.	U
57-74-9	Chlordane		NR		NR		NR		NR		NR

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST	SAMPLE ID ----->	GDH-S-8004-01	GDH-S-8004-02	GDH-S-8005-01	GDH-S-8006-01	GDH-S-8006-02	GDH-S-8007-01
	ORIGINAL ID ----->	GDHS800401	GDHS800402	GDHS800501	GDHS800601	GDHS800602	GDHS800701
	LAB SAMPLE ID ---->	41665-026	41665-027	41665-028	41665-030	41665-031	41665-032
	ID FROM REPORT -->	092812	092813	092814	092816	092817	092818
	SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94
	DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94
	DATE ANALYZED ---->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/19/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
	UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

CAS #	Parameter	CHS15	VAL								
11097-69-1	Aroclor-1254	40.	U	50.	U	35.	J	40.	U	40.	U
11104-28-2	Aroclor-1221	40.	U	50.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	40.	U	50.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	40.	U	50.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	40.	U	50.	U	40.	U	40.	U	40.	U
12674-11-2	Aroclor-1016	40.	U	50.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	40.	U	50.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	4.	U	5.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	9.	U	9.	U	8.	U	7.	U	7.	U
309-00-2	Aldrin	4.	U	5.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	4.	U	5.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	4.	U	5.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	4.	U	5.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	9.	U	9.	U	8.	U	7.	U	7.	U
50-29-3	4,4'-DDT	9.	U	9.	U	8.	U	7.	U	7.	U
5103-71-9	alpha-Chlordane	4.	U	5.	U	4.	U	4.	U	4.	U
5103-74-2	gamma-Chlordane	4.	U	5.	U	4.	U	4.	U	4.	U
53494-70-5	Endrin ketone	9.	U	9.	U	8.	U	7.	U	7.	U
58-89-9	gamma-BHC (Lindane)	4.	U	5.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	4.	U	5.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	4.	U	5.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	40.	U	50.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	9.	U	9.	U	8.	U	7.	U	7.	U
72-55-9	4,4'-DDE	4.	U	5.	U	8.	U	4.	U	4.	U
7421-93-4	Endrin aldehyde	9.	U	9.	U	8.	U	7.	U	7.	U
76-44-8	Heptachlor	4.	U	5.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	100.	U	100.	U
959-98-8	Endosulfan I	4.	U	5.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR									

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID -----> ORIGINAL ID -----> LAB SAMPLE ID ----> ID FROM REPORT --> SAMPLE DATE -----> DATE EXTRACTED --> DATE ANALYZED ----> MATRIX -----> UNITS ----->	GDH-S-8007-02 GDHS800702 41665-033 092819 09/27/94 10/05/94 10/19/94 Soil UG/KG	GDH-S-8008-01 GDHS800801 41665-034 092820 09/27/94 10/05/94 10/19/94 Soil UG/KG	GDH-S-8008-02 GDHS800802 41665-035 092821 09/27/94 10/05/94 10/19/94 Soil UG/KG	GDH-S-8009-01 GDHS800901 41665-036 092822 09/27/94 10/05/94 10/19/94 Soil UG/KG	GDH-S-8009-02 GDHS800902 41665-038 092824 09/27/94 10/05/94 10/19/94 Soil UG/KG	GDH-S-8010-01 GDHS801001 41666-002 092805 09/27/94 10/07/94 10/20/94 Soil UG/KG					
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS16	VAL
11097-69-1	Aroclor-1254	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
11104-28-2	Aroclor-1221	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
11141-16-5	Aroclor-1232	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
12672-29-6	Aroclor-1248	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
11096-82-5	Aroclor-1260	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
12674-11-2	Aroclor-1016	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
53469-21-9	Aroclor-1242	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
1024-57-3	Heptachlor epoxide	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
1031-07-8	Endosulfan sulfate	9.	U	8.	U	10.	U	8.	U	8.	U	9.	U
309-00-2	Aldrin	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
319-84-6	alpha-BHC	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
319-85-7	beta-BHC	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
319-86-8	delta-BHC	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
33213-65-9	Endosulfan II	9.	U	8.	U	10.	U	8.	U	8.	U	9.	U
50-29-3	4,4'-DDT	9.	U	8.	U	10.	U	8.	U	8.	U	32.	
5103-71-9	alpha-Chlordane	4.	U	7.	J	5.	U	4.	U	4.	U	5.	U
5103-74-2	gamma-Chlordane	4.	U	2.	J	5.	U	4.	U	4.	U	5.	U
53494-70-5	Endrin ketone	9.	U	8.	U	10.	U	8.	U	8.	U	9.	U
58-89-9	gamma-BHC (Lindane)	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
60-57-1	Dieldrin	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
72-20-8	Endrin	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
72-43-5	Methoxychlor	40.	U	40.	U	50.	U	40.	U	40.	U	50.	U
72-54-8	4,4'-DDD	9.	U	8.	U	10.	U	8.	U	8.	U	9.	U
72-55-9	4,4'-DDE	4.	U	4.	U	5.	U	4.	U	4.	U	7.	U
7421-93-4	Endrin aldehyde	9.	U	8.	U	10.	U	8.	U	8.	U	9.	U
76-44-8	Heptachlor	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	4.	U	4.	U	5.	U	4.	U	4.	U	5.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8010-02	GDH-S-8011-01	GDH-S-8011-02	GDH-S-8012-01	GDH-S-8012-02	GDH-S-8013-01					
		ORIGINAL ID ----->	GDHS801002	GDHS801101	GDHS801102	GDHS801201	GDHS801202	GDHS801301					
		LAB SAMPLE ID ---->	41665-037	41667-005	41667-006	41667-007	41667-008	41693-010					
		ID FROM REPORT -->	092823	092825	092826	092827	092828	093003					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/29/94					
		DATE EXTRACTED -->	10/05/94	10/04/94	10/04/94	10/04/94	10/04/94	10/07/94					
		DATE ANALYZED ---->	10/20/94	10/13/94	10/14/94	10/14/94	10/14/94	10/20/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS15	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS16	VAL
11097-69-1	Aroclor-1254	50.	U	40.	U	60.	U	40.	U	40.	U	240.	
11104-28-2	Aroclor-1221	50.	U	40.	U	60.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	50.	U	40.	U	60.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	50.	U	40.	U	60.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	50.	U	40.	U	60.	U	40.	U	40.	U	40.	U
12674-11-2	Aroclor-1016	50.	U	40.	U	60.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	50.	U	40.	U	60.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	10.	U	8.	U	10.	U	7.	U	8.	U	8.	U
309-00-2	Aldrin	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	10.	U	8.	U	10.	U	7.	U	8.	U	8.	U
50-29-3	4,4'-DDT	10.	U	8.	U	10.	U	8.	U	8.	U	12.	
5103-71-9	alpha-Chlordane	5.	U	4.	U	6.	U	3.	J	4.	U	4.	U
5103-74-2	gamma-Chlordane	5.	U	4.	U	6.	U	3.	J	4.	U	4.	U
53494-70-5	Endrin ketone	10.	U	8.	U	10.	U	7.	U	8.	U	8.	U
58-89-9	gamma-BHC (Lindane)	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	5.	U	4.	U	6.	U	4.	U	4.	U	6.	U
72-20-8	Endrin	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	50.	U	40.	U	60.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	7.	J	8.	U	10.	U	7.	U	8.	U	8.	UJ
72-55-9	4,4'-DDE	7.		4.	U	6.	U	12.		2.	J	4.	U
7421-93-4	Endrin aldehyde	10.	U	8.	U	10.	U	7.	U	8.	U	8.	U
76-44-8	Heptachlor	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	100.	U	200.	U	200.	U
959-98-8	Endosulfan I	5.	U	4.	U	6.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8013-02	GDH-S-8014-01	GDH-S-8014-02	GDH-S-8015-01	GDH-S-8015-02	GDH-S-8016-01			
		ORIGINAL ID ----->	GDHSB01302	GDHSB01401	GDHSB01402	GDHSB01501	GDHSB01502	GDHSB01601			
		LAB SAMPLE ID --->	41693-011	41693-012	41693-013	41693-014	41693-015	41693-016			
		ID FROM REPORT -->	093004	093005	093006	093007	093008	093009			
		SAMPLE DATE ----->	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94			
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94			
		DATE ANALYZED --->	10/20/94	10/20/94	10/20/94	10/20/94	10/20/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL
11097-69-1	Aroclor-1254	40.	U	40.	U	70.	U	40.	U	60.	U
11104-28-2	Aroclor-1221	40.	U	40.	U	70.	U	40.	U	60.	U
11141-16-5	Aroclor-1232	40.	U	40.	U	70.	U	40.	U	60.	U
12672-29-6	Aroclor-1248	40.	U	40.	U	70.	U	40.	U	60.	U
11096-82-5	Aroclor-1260	40.	U	110.	U	70.	U	58.	U	60.	U
12674-11-2	Aroclor-1016	40.	U	40.	U	70.	U	40.	U	60.	U
53469-21-9	Aroclor-1242	40.	U	40.	U	70.	U	40.	U	60.	U
1024-57-3	Heptachlor epoxide	4.	U	4.	U	7.	U	8.	U	6.	U
1031-07-8	Endosulfan sulfate	8.	U	7.	U	10.	U	8.	U	10.	U
309-00-2	Aldrin	4.	U	4.	U	7.	U	4.	U	6.	U
319-84-6	alpha-BHC	4.	U	4.	U	7.	U	4.	U	6.	U
319-85-7	beta-BHC	4.	U	4.	U	7.	U	4.	U	6.	U
319-86-8	delta-BHC	4.	U	4.	U	7.	U	4.	U	6.	U
33213-65-9	Endosulfan II	8.	U	7.	U	10.	U	8.	U	10.	U
50-29-3	4,4'-DDT	8.	U	14.	U	10.	U	10.	U	10.	U
5103-71-9	alpha-Chlordane	4.	U	3.	J	7.	U	11.	U	6.	U
5103-74-2	gamma-Chlordane	5.	U	4.	U	7.	U	10.	U	6.	U
53494-70-5	Endrin ketone	8.	U	7.	U	10.	U	8.	U	10.	U
58-89-9	gamma-BHC (Lindane)	4.	U	4.	U	7.	U	4.	U	6.	U
60-57-1	Dieldrin	4.	U	21.	U	7.	U	4.	U	6.	U
72-20-8	Endrin	4.	U	4.	U	7.	U	4.	U	6.	U
72-43-5	Methoxychlor	40.	U	40.	U	70.	U	40.	U	60.	U
72-54-8	4,4'-DDD	8.	UJ	7.	UJ	10.	UJ	8.	UJ	10.	UJ
72-55-9	4,4'-DDE	4.	U	3.	J	7.	U	4.	U	6.	U
7421-93-4	Endrin aldehyde	8.	U	7.	U	10.	U	8.	U	10.	U
76-44-8	Heptachlor	4.	U	4.	U	7.	U	4.	U	6.	U
8001-35-2	Toxaphene	200.	U	100.	U	300.	U	200.	U	200.	U
959-98-8	Endosulfan I	4.	U	4.	U	7.	U	4.	U	6.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GOH-S-B016-02	GDH-S-B017-01	GOH-S-B017-02	GOH-S-B018-01	GDH-S-B019-01	GDH-S-B019-02			
		ORIGINAL ID ----->	GOHSB01602	GDHSB01701	GDHSB01702	GDHSB01801	GDHSB01901	GDHSB01902			
		LAB SAMPLE ID ---->	41693-017	41713-011	41713-012	41713-013	41713-014	41713-015			
		ID FROM REPORT -->	093010	100401	100402	100403	100404	100405			
		SAMPLE DATE ----->	09/29/94	10/03/94	10/03/94	10/03/94	10/03/94	10/03/94			
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94			
		DATE ANALYZED ---->	10/20/94	10/20/94	10/20/94	10/20/94	10/20/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL
11097-69-1	Aroclor-1254	50.	U	40.	U	60.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	50.	U	40.	U	60.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	50.	U	40.	U	60.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	50.	U	40.	U	60.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	200.	U	40.	U	60.	U	40.	U	40.	U
12674-11-2	Aroclor-1016	50.	U	40.	U	60.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	50.	U	40.	U	60.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	5.	U	4.	U	6.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	9.	U	8.	U	10.	U	8.	U	8.	U
309-00-2	Aldrin	5.	U	4.	U	6.	U	4.	U	4.	U
319-84-6	alpha-BHC	5.	U	4.	U	6.	U	4.	U	4.	U
319-85-7	beta-BHC	5.	U	4.	U	6.	U	4.	U	4.	U
319-86-8	delta-BHC	5.	U	4.	U	6.	U	4.	U	4.	U
33213-65-9	Endosulfan II	9.	U	8.	U	10.	U	8.	U	8.	U
50-29-3	4,4'-DDT	9.	U	10.	U	10.	U	9.	U	8.	U
5103-71-9	alpha-Chlordane	3.	J	4.	U	6.	U	4.	U	4.	U
5103-74-2	gamma-Chlordane	5.	U	4.	U	6.	U	4.	U	4.	U
53494-70-5	Endrin ketone	9.	U	8.	U	10.	U	8.	U	8.	U
58-89-9	gamma-BHC (Lindane)	5.	U	4.	U	6.	U	4.	U	4.	U
60-57-1	Dieldrin	5.	U	4.	U	6.	U	4.	U	4.	U
72-20-8	Endrin	5.	U	4.	U	6.	U	4.	U	4.	U
72-43-5	Methoxychlor	50.	U	40.	U	60.	U	40.	U	40.	U
72-54-8	4,4'-DDD	9.	UJ	6.	J	10.	UJ	8.	UJ	8.	UJ
72-55-9	4,4'-DDE	5.	U	7.	U	4.	J	8.	U	2.	J
7421-93-4	Endrin aldehyde	7.	J	8.	U	10.	U	8.	U	8.	U
76-44-8	Heptachlor	5.	U	4.	U	6.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	5.	U	4.	U	6.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8020-01	GDH-S-8020-02	GDH-S-8021-01	GDH-S-8022-01	GDH-S-8023-01	GDH-S-8023-02			
		ORIGINAL ID ----->	GDHS802001	GDHS802002	GDHS802101	GDHS802201	GDHS802301	GDHS802302			
		LAB SAMPLE ID ---->	41713-016	41713-018	41713-017	41713-019	41734-030	41734-031			
		ID FROM REPORT -->	100406	100408	100407	100409	100510	100511			
		SAMPLE DATE ----->	10/03/94	10/03/94	10/03/94	10/03/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/13/94	10/13/94			
		DATE ANALYZED ---->	10/20/94	10/20/94	10/20/94	10/20/94	10/22/94	10/22/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS17	VAL	CHS17	VAL
11097-69-1	Aroclor-1254	40.	U	40.	U	40.	U	40.	U	200.	U
11104-28-2	Aroclor-1221	40.	U	40.	U	40.	U	400.	U	200.	U
11141-16-5	Aroclor-1232	40.	U	40.	U	40.	U	400.	U	200.	U
12672-29-6	Aroclor-1248	40.	U	40.	U	40.	U	400.	U	200.	U
11096-82-5	Aroclor-1260	40.	U	40.	U	40.	U	400.	U	200.	U
12674-11-2	Aroclor-1016	40.	U	40.	U	40.	U	400.	U	200.	U
53469-21-9	Aroclor-1242	40.	U	40.	U	40.	U	400.	U	200.	U
1024-57-3	Heptachlor epoxide	4.	U	4.	U	4.	U	40.	U	20.	U
1031-07-8	Endosulfan sulfate	7.	U	8.	U	8.	U	80.	U	30.	U
309-00-2	Aldrin	4.	U	4.	U	4.	U	40.	U	20.	U
319-84-6	alpha-BHC	4.	U	4.	U	4.	U	40.	U	20.	U
319-85-7	beta-BHC	4.	U	4.	U	4.	U	40.	U	20.	U
319-86-8	delta-BHC	4.	U	4.	U	4.	U	40.	U	20.	U
33213-65-9	Endosulfan II	7.	U	8.	U	8.	U	80.	U	30.	U
50-29-3	4,4'-DDT	7.	U	8.	U	8.	U	80.	U	30.	U
5103-71-9	alpha-Chlordane	3.	J	4.	U	8.	U	4.	U	330.	J
5103-74-2	gamma-Chlordane	5.	U	4.	U	4.	U	4.	U	260.	J
53494-70-5	Endrin ketone	7.	U	8.	U	8.	U	80.	U	30.	U
58-89-9	gamma-BHC (Lindane)	4.	U	4.	U	4.	U	40.	U	20.	U
60-57-1	Dieldrin	4.	U	4.	U	4.	U	40.	U	20.	U
72-20-8	Endrin	4.	U	4.	U	4.	U	40.	U	20.	U
72-43-5	Methoxychlor	40.	U	40.	U	40.	U	400.	U	200.	U
72-54-8	4,4'-DDD	7.	UJ	8.	UJ	8.	UJ	80.	U	120.	U
72-55-9	4,4'-DDE	4.	U	4.	U	4.	U	38.	J	17.	J
7421-93-4	Endrin aldehyde	7.	U	8.	U	8.	U	80.	U	30.	U
76-44-8	Heptachlor	4.	U	4.	U	4.	U	40.	U	20.	U
8001-35-2	Toxaphene	100.	U	200.	U	200.	U	2000.	U	700.	U
959-98-8	Endosulfan I	4.	U	4.	U	4.	U	40.	U	20.	U
57-74-9	Chlordane		NR		NR		NR		NR		NR

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-PEST		SAMPLE ID ----->	GDH-S-8024-01	GDH-S-8025-01	GDH-S-8026-01	GDH-S-8026-02	GDH-S-8027-01	GDH-S-8027-02			
		ORIGINAL ID ----->	GDHS802401	GDHS802501	GDHS802601	GDHS802602	GDHS802701	GDHS802702			
		LAB SAMPLE ID ---->	41734-032	41734-033	41734-034	41734-035	41734-036	41734-037			
		ID FROM REPORT -->	100512	100513	100514	100515	100516	100517			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94			
		DATE ANALYZED ---->	10/22/94	10/21/94	10/22/94	10/21/94	10/24/94	10/24/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
11097-69-1	Aroclor-1254	200.	U	40.	U	40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	200.	U	40.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	200.	U	40.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	200.	U	40.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	200.	U	40.	U	40.	U	110.	U	40.	U
12674-11-2	Aroclor-1016	200.	U	40.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	200.	U	40.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	20.	U	4.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	40.	U	8.	U	9.	U	8.	U	8.	U
309-00-2	Aldrin	20.	U	4.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	20.	U	4.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	20.	U	4.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	20.	U	4.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	40.	U	8.	U	8.	U	8.	U	8.	U
50-29-3	4,4'-DDT	35.	J	8.	U	11.	U	8.	U	10.	U
5103-71-9	alpha-Chlordane	20.	U	4.	U	4.	U	4.	U	4.	U
5103-74-2	gamma-Chlordane	20.	U	4.	U	4.	U	4.	U	4.	U
53494-70-5	Endrin ketone	40.	U	8.	U	8.	U	8.	U	8.	U
58-89-9	gamma-BHC (Lindane)	20.	U	4.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	160.	U	4.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	20.	U	4.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	200.	U	40.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	40.	U	8.	U	8.	U	8.	U	8.	U
72-55-9	4,4'-DDE	140.	U	5.	U	40.	U	4.	U	4.	U
7421-93-4	Endrin aldehyde	40.	U	8.	U	8.	U	8.	U	8.	U
76-44-8	Heptachlor	20.	U	4.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	800.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	20.	U	4.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

DATALCP3
12/14/95

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

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SW846-PEST		SAMPLE ID ----->	GDH-S-B028-01	GDH-S-B029-01	GDH-S-B030-01	GDH-S-B031-01	GDH-S-B031-02	GDH-S-B032-01			
		ORIGINAL ID ----->	GDHSB02801	GDHSB02901	GDHSB03001	GDHSB03101	GDHSB03102	GDHSB03201			
		LAB SAMPLE ID ---->	41734-038	41734-039	41734-040	41734-021	41734-022	41734-023			
		ID FROM REPORT -->	100518	100519	100520	100501	100502	100503			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94			
		DATE ANALYZED -->	10/24/94	10/24/94	10/25/94	10/20/94	10/20/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
11097-69-1	Aroclor-1254	40.	U	40.	U	40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	40.	U	40.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	40.	U	40.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	40.	U	40.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	40.	U	40.	U	58.	U	100.	U	40.	U
12674-11-2	Aroclor-1016	40.	U	40.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	40.	U	40.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	4.	U	4.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	8.	U	8.	U	8.	U	7.	U	8.	U
309-00-2	Aldrin	4.	U	4.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	4.	U	4.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	4.	U	4.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	4.	U	4.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	8.	U	8.	U	8.	U	7.	U	8.	U
50-29-3	4,4'-DDT	29.	U	8.	U	7.	J	17.	U	8.	U
5103-71-9	alpha-Chlordane	5.	U	4.	U	4.	U	4.	U	4.	U
5103-74-2	gamma-Chlordane	3.	J	4.	U	4.	U	4.	U	2.	J
53494-70-5	Endrin ketone	8.	U	8.	U	8.	U	8.	U	7.	U
58-89-9	gamma-BHC (Lindane)	4.	U	4.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	4.	U	4.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	4.	U	4.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	40.	U	40.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	8.	U	8.	U	8.	U	9.	U	7.	U
72-55-9	4,4'-DDE	23.	U	4.	U	8.	U	14.	U	4.	U
7421-93-4	Endrin aldehyde	8.	U	8.	U	8.	U	5.	J	7.	U
76-44-8	Heptachlor	4.	U	4.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	100.	U
959-98-8	Endosulfan I	31.	U	4.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST	SAMPLE ID ----->	GDH-S-8032-02	GDH-S-8033-01	GDH-S-8033-02	GDH-S-8034-01	GDH-S-8034-02	GDH-S-8035-01
	ORIGINAL ID ----->	GDHS803202	GDHS803301	GDHS803302	GDHS803401	GDHS803402	GDHS803501
	LAB SAMPLE ID ---->	41734-024	41734-025	41734-026	41734-027	41734-028	41734-029
	ID FROM REPORT -->	100504	100505	100506	100507	100508	100509
	SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94
	DATE EXTRACTED -->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94
	DATE ANALYZED ---->	10/22/94	11/01/94	11/01/94	10/21/94	10/21/94	10/21/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	

CAS #	Parameter	CHS17	VAL								
11097-69-1	Aroclor-1254	50.	U	200.	U	90.	U	50.	U	70.	U
11104-28-2	Aroclor-1221	50.	U	200.	U	90.	U	50.	U	70.	U
11141-16-5	Aroclor-1232	50.	U	200.	U	90.	U	50.	U	70.	U
12672-29-6	Aroclor-1248	50.	U	200.	U	90.	U	50.	U	70.	U
11096-82-5	Aroclor-1260	50.	U	200.	U	90.	U	50.	U	70.	U
12674-11-2	Aroclor-1016	50.	U	200.	U	90.	U	50.	U	70.	U
53469-21-9	Aroclor-1242	50.	U	200.	U	90.	U	50.	U	70.	U
1024-57-3	Heptachlor epoxide	5.	U	20.	U	9.	U	5.	U	7.	U
1031-07-8	Endosulfan sulfate	10.	U	30.	U	20.	U	9.	U	10.	U
309-00-2	Aldrin	5.	U	20.	U	9.	U	5.	U	7.	U
319-84-6	alpha-BHC	5.	U	20.	U	9.	U	5.	U	7.	U
319-85-7	beta-BHC	5.	U	20.	U	9.	U	5.	U	7.	U
319-86-8	delta-BHC	5.	U	20.	U	9.	U	5.	U	7.	U
33213-65-9	Endosulfan II	10.	U	30.	U	20.	U	9.	U	10.	U
50-29-3	4,4'-DDT	10.	U	30.	U	20.	U	9.	U	10.	U
5103-71-9	alpha-Chlordane	5.	U	110.		19.		5.	U	7.	U
5103-74-2	gamma-Chlordane	5.	U	95.		73.		5.	U	7.	U
53494-70-5	Endrin ketone	10.	U	30.	U	20.	U	9.	U	10.	U
58-89-9	gamma-BHC (Lindane)	5.	U	20.	U	9.	U	5.	U	7.	U
60-57-1	Dieldrin	5.	U	20.	U	9.	U	5.	U	7.	U
72-20-8	Endrin	5.	U	20.	U	9.	U	5.	U	7.	U
72-43-5	Methoxychlor	50.	U	200.	U	90.	U	50.	U	70.	U
72-54-8	4,4'-DDD	10.	U	30.	U	27.		9.	U	10.	U
72-55-9	4,4'-DDE	5.		13.	J	22.		5.	U	7.	U
7421-93-4	Endrin aldehyde	10.	U	30.	U	20.	U	9.	U	10.	U
76-44-8	Heptachlor	5.	U	20.	U	9.	U	5.	U	7.	U
8001-35-2	Toxaphene	200.	U	700.	U	400.	U	200.	U	300.	U
959-98-8	Endosulfan I	5.	U	20.	U	9.	U	5.	U	7.	U
57-74-9	Chlordane	NR									

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8036-01	GDH-S-8037-01	GDH-S-8037-02	GDH-S-8038-01	GDH-S-8038-02	GDH-S-8039-01					
		ORIGINAL ID ----->	GDHSB03601	GDHSB03701	GDHSB03702	GDHSB03801	GDHSB03802	GDHSB03901					
		LAB SAMPLE ID ---->	41733-003	41742-019	41742-020	41742-021	41742-022	41742-023					
		ID FROM REPORT -->	GDHSB03601	GDHSB03701	GDHSB03702	GDHSB03801	GDHSB03802	GDHSB03901					
		SAMPLE DATE ----->	10/04/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94					
		DATE ANALYZED -->	10/25/94	10/25/94	10/25/94	11/01/94	11/01/94	10/25/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL		
11097-69-1	Aroclor-1254	50.	U	40.	U	40.	U	400.	U	50.	U	40.	U
11104-28-2	Aroclor-1221	50.	U	40.	U	40.	U	400.	U	50.	U	40.	U
11141-16-5	Aroclor-1232	50.	U	40.	U	40.	U	400.	U	50.	U	40.	U
12672-29-6	Aroclor-1248	50.	U	40.	U	40.	U	400.	U	50.	U	40.	U
11096-82-5	Aroclor-1260	50.	U	40.	U	40.	U	4000.	U	290.	U	40.	U
12674-11-2	Aroclor-1016	50.	U	40.	U	40.	U	400.	U	50.	U	40.	U
53469-21-9	Aroclor-1242	50.	U	40.	U	40.	U	400.	U	50.	U	40.	U
1024-57-3	Heptachlor epoxide	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
1031-07-8	Endosulfan sulfate	10.	U	7.	U	9.	U	80.	U	10.	U	9.	U
309-00-2	Aldrin	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
319-84-6	alpha-BHC	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
319-85-7	beta-BHC	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
319-86-8	delta-BHC	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
33213-65-9	Endosulfan II	10.	U	7.	U	9.	U	80.	U	10.	U	9.	U
50-29-3	4,4'-DDT	10.	U	7.	U	9.	U	180.	U	21.	U	9.	U
5103-71-9	alpha-Chlordane	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
5103-74-2	gamma-Chlordane	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
53494-70-5	Endrin ketone	10.	U	7.	U	9.	U	80.	U	10.	U	9.	U
58-89-9	gamma-BHC (Lindane)	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
60-57-1	Dieldrin	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
72-20-8	Endrin	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
72-43-5	Methoxychlor	50.	U	40.	U	40.	U	400.	U	50.	U	40.	U
72-54-8	4,4'-DDD	10.	U	7.	U	9.	U	80.	U	10.	U	9.	U
72-55-9	4,4'-DDE	5.	U	4.	U	5.	U	40.	U	19.	U	4.	U
7421-93-4	Endrin aldehyde	10.	U	7.	U	9.	U	80.	U	10.	U	9.	U
76-44-8	Heptachlor	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
8001-35-2	Toxaphene	200.	U	100.	U	200.	U	2000.	U	200.	U	200.	U
959-98-8	Endosulfan I	5.	U	4.	U	4.	U	40.	U	5.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-PEST		SAMPLE ID ----->	GDH-S-8039-02	GDH-S-8040-01	GDH-S-8040-02	GDH-S-8041-01	GDH-S-8042-01	GDH-S-8042-02			
		ORIGINAL ID ----->	GDHSB03902	GDHSB04001	GDHSB04002	GDHSB04101	GDHSB04201	GDHSB04202			
		LAB SAMPLE ID ---->	41742-024	41742-025	41742-026	41742-027	41742-028	41742-029			
		ID FROM REPORT -->	GDHSB03902	GDHSB04001	GDHSB04002	GDHSB04101	GDHSB04201	GDHSB04202			
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED --->	10/25/94	11/01/94	10/25/94	10/25/94	10/25/94	10/25/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
11097-69-1	Aroclor-1254	70.	U	40.	U	50.	U	50.	U	40.	U
11104-28-2	Aroclor-1221	70.	U	40.	U	50.	U	50.	U	40.	U
11141-16-5	Aroclor-1232	70.	U	40.	U	50.	U	50.	U	40.	U
12672-29-6	Aroclor-1248	70.	U	40.	U	50.	U	50.	U	40.	U
11096-82-5	Aroclor-1260	70.	U	91.	U	58.	U	50.	U	40.	U
12674-11-2	Aroclor-1016	70.	U	40.	U	50.	U	50.	U	40.	U
53469-21-9	Aroclor-1242	70.	U	40.	U	50.	U	50.	U	40.	U
1024-57-3	Heptachlor epoxide	7.	U	6.	U	5.	U	5.	U	4.	U
1031-07-8	Endosulfan sulfate	10.	U	8.	U	10.	U	10.	U	8.	U
309-00-2	Aldrin	7.	U	4.	U	5.	U	5.	U	4.	U
319-84-6	alpha-BHC	7.	U	4.	U	5.	U	5.	U	4.	U
319-85-7	beta-BHC	7.	U	4.	U	5.	U	5.	U	4.	U
319-86-8	delta-BHC	7.	U	4.	U	5.	U	5.	U	4.	U
33213-65-9	Endosulfan II	10.	U	8.	U	10.	U	10.	U	8.	U
50-29-3	4,4'-DDT	10.	U	5.	J	10.	U	10.	U	8.	U
5103-71-9	alpha-Chlordane	7.	U	13.	U	16.	U	5.	U	4.	U
5103-74-2	gamma-Chlordane	7.	U	20.	U	26.	U	5.	U	4.	U
53494-70-5	Endrin ketone	10.	U	8.	U	10.	U	10.	U	8.	U
58-89-9	gamma-BHC (Lindane)	7.	U	4.	U	5.	U	5.	U	4.	U
60-57-1	Dieldrin	7.	U	4.	U	5.	U	5.	U	4.	U
72-20-8	Endrin	7.	U	4.	U	5.	U	5.	U	4.	U
72-43-5	Methoxychlor	70.	U	40.	U	50.	U	50.	U	40.	U
72-54-8	4,4'-DDD	10.	U	8.	U	10.	U	10.	U	8.	U
72-55-9	4,4'-DDE	7.	U	4.	U	5.	U	5.	U	4.	U
7421-93-4	Endrin aldehyde	10.	U	8.	U	10.	U	10.	U	8.	U
76-44-8	Heptachlor	7.	U	2.	J	11.	U	5.	U	4.	U
8001-35-2	Toxaphene	300.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	7.	U	4.	U	5.	U	5.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8043-01	GDH-S-8043-02	GDH-S-8044-01	GDH-S-8045-01	GDH-S-8045-02	GDH-S-8046-01			
		ORIGINAL ID ----->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601			
		LAB SAMPLE ID ---->	41742-030	41742-031	41742-032	41742-033	41742-034	41742-035			
		ID FROM REPORT -->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601			
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED ---->	10/25/94	10/25/94	10/25/94	10/25/94	10/25/94	10/25/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
11097-69-1	Aroclor-1254	40.	U	60.	U	40.	U	40.	U	60.	U
11104-28-2	Aroclor-1221	40.	U	60.	U	40.	U	40.	U	60.	U
11141-16-5	Aroclor-1232	40.	U	60.	U	40.	U	40.	U	60.	U
12672-29-6	Aroclor-1248	40.	U	60.	U	40.	U	40.	U	60.	U
11096-82-5	Aroclor-1260	40.	U	60.	U	40.	U	40.	U	60.	U
12674-11-2	Aroclor-1016	40.	U	60.	U	40.	U	40.	U	60.	U
53469-21-9	Aroclor-1242	40.	U	60.	U	40.	U	40.	U	60.	U
1024-57-3	Heptachlor epoxide	4.	U	6.	U	4.	U	4.	U	6.	U
1031-07-8	Endosulfan sulfate	8.	U	10.	U	8.	U	8.	U	10.	U
309-00-2	Aldrin	4.	U	6.	U	4.	U	4.	U	6.	U
319-84-6	alpha-BHC	4.	U	6.	U	4.	U	4.	U	6.	U
319-85-7	beta-BHC	4.	U	6.	U	4.	U	4.	U	6.	U
319-86-8	delta-BHC	4.	U	6.	U	4.	U	4.	U	6.	U
33213-65-9	Endosulfan II	8.	U	10.	U	8.	U	8.	U	10.	U
50-29-3	4,4'-DDT	8.	U	10.	U	8.	U	8.	U	10.	U
5103-71-9	alpha-Chlordane	4.	U	6.	U	4.	U	4.	U	6.	U
5103-74-2	gamma-Chlordane	4.	U	6.	U	4.	U	4.	U	6.	U
53494-70-5	Endrin ketone	8.	U	10.	U	8.	U	8.	U	10.	U
58-89-9	gamma-BHC (Lindane)	4.	U	6.	U	4.	U	4.	U	6.	U
60-57-1	Dieldrin	4.	U	6.	U	4.	U	4.	U	6.	U
72-20-8	Endrin	4.	U	6.	U	4.	U	4.	U	6.	U
72-43-5	Methoxychlor	40.	U	60.	U	40.	U	40.	U	60.	U
72-54-8	4,4'-DDD	8.	U	10.	U	8.	U	8.	U	10.	U
72-55-9	4,4'-DDE	4.	U	6.	U	4.	U	4.	U	6.	U
7421-93-4	Endrin aldehyde	8.	U	10.	U	8.	U	8.	U	10.	U
76-44-8	Heptachlor	4.	U	6.	U	4.	U	4.	U	6.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	4.	U	6.	U	4.	U	4.	U	6.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-PEST		SAMPLE ID ----->	GDH-S-8046-02	GDH-S-8047-01	GDH-S-8047-02	GDH-S-8048-01	GDH-S-8049-01	GDH-S-8050-01			
		ORIGINAL ID ----->	GDHS804602	GDHS804701	GDHS804702	GDHS804801	GDHS804901	GDHS805001			
		LAB SAMPLE ID ---->	41742-036	41760-016	41760-017	41760-018	41760-019	41760-020			
		ID FROM REPORT -->	GDHS804602	100701	100702	100703	100704	100705			
		SAMPLE DATE ----->	10/05/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		DATE EXTRACTED -->	10/14/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94			
		DATE ANALYZED ---->	11/01/94	10/26/94	11/01/94	10/27/94	10/27/94	10/27/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL
11097-69-1	Aroclor-1254	50.	U	40.	U	40.	U	50.	U	50.	U
11104-28-2	Aroclor-1221	50.	U	40.	U	40.	U	50.	U	50.	U
11141-16-5	Aroclor-1232	50.	U	40.	U	40.	U	50.	U	50.	U
12672-29-6	Aroclor-1248	50.	U	40.	U	40.	U	50.	U	50.	U
11096-82-5	Aroclor-1260	50.	U	40.	U	40.	U	50.	U	50.	U
12674-11-2	Aroclor-1016	50.	U	40.	U	40.	U	50.	U	50.	U
53469-21-9	Aroclor-1242	50.	U	40.	U	40.	U	50.	U	50.	U
1024-57-3	Heptachlor epoxide	5.	U	4.	U	4.	U	5.	U	5.	U
1031-07-8	Endosulfan sulfate	10.	U	9.	U	8.	U	10.	U	10.	U
309-00-2	Aldrin	5.	U	4.	U	4.	U	5.	U	5.	U
319-84-6	alpha-BHC	5.	U	4.	U	4.	U	5.	U	5.	U
319-85-7	beta-BHC	5.	U	4.	U	4.	U	5.	U	5.	U
319-86-8	delta-BHC	5.	U	4.	U	4.	U	5.	U	5.	U
33213-65-9	Endosulfan II	10.	U	9.	U	8.	U	10.	U	10.	U
50-29-3	4,4'-DDT	6.	J	9.	U	8.	U	10.	U	10.	U
5103-71-9	alpha-Chlordane	5.	U	4.	U	4.	U	5.	U	5.	U
5103-74-2	gamma-Chlordane	5.	U	4.	U	4.	U	5.	U	5.	U
53494-70-5	Endrin ketone	10.	U	9.	U	8.	U	10.	U	10.	U
58-89-9	gamma-BHC (Lindane)	5.	U	4.	U	4.	U	5.	U	5.	U
60-57-1	Dieldrin	5.	U	4.	U	4.	U	5.	U	5.	U
72-20-8	Endrin	5.	U	4.	U	4.	U	5.	U	5.	U
72-43-5	Methoxychlor	50.	U	40.	U	40.	U	50.	U	50.	U
72-54-8	4,4'-DDD	10.	U	9.	U	8.	U	10.	U	10.	U
72-55-9	4,4'-DDE	7.		4.	U	4.	U	5.	U	5.	U
7421-93-4	Endrin aldehyde	10.	U	9.	U	8.	U	10.	U	10.	U
76-44-8	Heptachlor	5.	U	4.	U	4.	U	5.	U	5.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	5.	U	4.	U	4.	U	5.	U	5.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWS46-PEST		SAMPLE ID ----->	GDH-S-8051-01	GDH-S-8051-02	GDH-S-8052-01	GDH-S-8052-02	GDH-S-8053-01	GDH-S-8053-02			
		ORIGINAL ID ----->	GDHS805101	GDHS805102	GDHS805201	GDHS805202	GDHS805301	GDHS805302			
		LAB SAMPLE ID ---->	41760-021	41760-022	41760-023	41760-024	41760-025	41760-026			
		ID FROM REPORT -->	100706	100707	100708	100709	100710	100711			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94			
		DATE ANALYZED ---->	10/27/94	11/01/94	10/27/94	10/27/94	10/27/94	11/01/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL
11097-69-1	Aroclor-1254	40.	U	50.	U	40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	40.	U	50.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	40.	U	50.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	40.	U	50.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	40.	U	50.	U	40.	U	40.	U	40.	U
12674-11-2	Aroclor-1016	40.	U	50.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	40.	U	50.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	4.	U	5.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	8.	U	9.	U	8.	U	9.	U	7.	U
309-00-2	Aldrin	4.	U	5.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	4.	U	5.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	4.	U	5.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	4.	U	5.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	8.	U	9.	U	8.	U	9.	U	7.	U
50-29-3	4,4'-DDT	8.	U	9.	U	8.	U	9.	U	7.	U
5103-71-9	alpha-Chlordane	4.	U	5.	U	4.	U	4.	U	4.	U
5103-74-2	gamma-Chlordane	4.	U	5.	U	4.	U	4.	U	4.	U
53494-70-5	Endrin ketone	8.	U	9.	U	8.	U	9.	U	7.	U
58-89-9	gamma-BHC (Lindane)	4.	U	5.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	4.	U	5.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	4.	U	5.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	40.	U	50.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	8.	U	9.	U	8.	U	9.	U	7.	U
72-55-9	4,4'-DDE	4.	U	5.	U	4.	U	4.	U	4.	U
7421-93-4	Endrin aldehyde	8.	U	9.	U	8.	U	9.	U	7.	U
76-44-8	Heptachlor	4.	U	5.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	100.	U
959-98-8	Endosulfan I	4.	U	5.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8054-01	GDH-S-8054-02	GDH-S-8055-01	GDH-S-8056-01	GDH-S-8056-02	GDH-S-8057-01					
		ORIGINAL ID ----->	GDHS805401	GDHS805402	GDHS805501	GDHS805601	GDHS805602	GDHS805701					
		LAB SAMPLE ID ---->	41760-027	41760-028	41760-029	41779-006	41779-007	41780-008					
		ID FROM REPORT -->	100712	100713	100714	100807	100808	100814					
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/07/94	10/07/94	10/07/94					
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/19/94					
		DATE ANALYZED ---->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS20	VAL
11097-69-1	Aroclor-1254	40.	U	40.	U	94.		40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	40.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	40.	U	40.	U	40.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	40.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	82.		40.	U	40.	U	65.		71.		40.	U
12674-11-2	Aroclor-1016	40.	U	40.	U	40.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	40.	U	40.	U	40.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	9.		4.	U	4.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	8.	U	8.	U	8.	U	9.	U	9.	U	7.	U
309-00-2	Aldrin	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	8.	U	8.	U	8.	U	9.	U	9.	U	7.	U
50-29-3	4,4'-DDT	5.	J	8.	U	8.	U	9.	U	5.	J	7.	U
5103-71-9	alpha-Chlordane	39.		4.	U	4.		5.		2.	J	4.	U
5103-74-2	gamma-Chlordane	27.		4.	U	1.	J	4.		4.		4.	U
53494-70-5	Endrin ketone	8.	U	8.	U	8.	U	9.	U	9.	U	7.	U
58-89-9	gamma-BHC (Lindane)	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	40.	U	40.	U	40.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	8.	U	8.	U	8.	U	9.	U	9.	U	7.	U
72-55-9	4,4'-DDE	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
7421-93-4	Endrin aldehyde	8.	U	8.	U	8.	U	9.	U	9.	U	7.	U
76-44-8	Heptachlor	4.	U	4.	U	4.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	200.	U	100.	U
959-98-8	Endosulfan I	4.	J	4.	U	4.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SM846-PEST		SAMPLE ID ----->	GDH-S-8058-01	GDH-S-8058-02	GDH-S-8059-01	GDH-S-8060-01	GDH-S-8061-01	GDH-S-8062-01					
		ORIGINAL ID ----->	GDHS805801	GDHS805802	GDHS805901	GDHS806001	GDHS806101	GDHS806201					
		LAB SAMPLE ID ---->	41779-008	41779-009	41780-003	41780-004	41779-010	41784-008					
		ID FROM REPORT -->	100809	100810	100812	100813	100811	101001					
		SAMPLE DATE ----->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/08/94					
		DATE EXTRACTED -->	10/17/94	10/17/94	10/19/94	10/19/94	10/17/94	10/18/94					
		DATE ANALYZED ---->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/03/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS20	VAL	CHS20	VAL	CHS19	VAL	CHS20	VAL
11097-69-1	Aroclor-1254	40.	U	50.	U	40.	U	50.	U	40.	U	50.	U
11104-28-2	Aroclor-1221	40.	U	50.	U	40.	U	50.	U	40.	U	50.	U
11141-16-5	Aroclor-1232	40.	U	50.	U	40.	U	50.	U	40.	U	50.	U
12672-29-6	Aroclor-1248	40.	U	50.	U	40.	U	50.	U	40.	U	50.	U
11096-82-5	Aroclor-1260	40.	U	50.	U	71.	U	50.	U	40.	U	50.	U
12674-11-2	Aroclor-1016	40.	U	50.	U	40.	U	50.	U	40.	U	50.	U
53469-21-9	Aroclor-1242	40.	U	50.	U	40.	U	50.	U	40.	U	50.	U
1024-57-3	Heptachlor epoxide	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
1031-07-8	Endosulfan sulfate	8.	U	10.	U	9.	U	10.	U	8.	U	10.	U
309-00-2	Aldrin	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
319-84-6	alpha-BHC	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
319-85-7	beta-BHC	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
319-86-8	delta-BHC	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
33213-65-9	Endosulfan II	8.	U	10.	U	9.	U	10.	U	8.	U	10.	U
50-29-3	4,4'-DDT	8.	U	10.	U	9.	U	10.	U	8.	U	10.	U
5103-71-9	alpha-Chlordane	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
5103-74-2	gamma-Chlordane	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
53494-70-5	Endrin ketone	8.	U	10.	U	9.	U	10.	U	8.	U	10.	U
58-89-9	gamma-BHC (Lindane)	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
60-57-1	Dieldrin	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
72-20-8	Endrin	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
72-43-5	Methoxychlor	40.	U	50.	U	40.	U	50.	U	40.	U	50.	U
72-54-8	4,4'-DDD	8.	U	10.	U	9.	U	10.	U	8.	U	12.	U
72-55-9	4,4'-DDE	4.	U	5.	U	4.	U	5.	U	4.	U	4.	J
7421-93-4	Endrin aldehyde	8.	U	10.	U	9.	U	10.	U	8.	U	10.	U
76-44-8	Heptachlor	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	4.	U	5.	U	4.	U	5.	U	4.	U	5.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8063-01	GDH-S-8063-02	GDH-S-8064-01	GDH-S-8064-02	GDH-S-8065-01	GDH-S-8066-01			
		ORIGINAL ID ----->	GDHS806301	GDHS806302	GDHS806401	GDHS806402	GDHS806501	GDHS806601			
		LAB SAMPLE ID ---->	41784-009	41784-010	41784-011	41784-012	41784-013	41790-020			
		ID FROM REPORT -->	101002	101003	101004	101005	101006	101112			
		SAMPLE DATE ----->	10/08/94	10/08/94	10/08/94	10/08/94	10/08/94	10/10/94			
		DATE EXTRACTED -->	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94			
		DATE ANALYZED ---->	11/05/94	11/02/94	11/02/94	11/02/94	11/02/94	11/03/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL
11097-69-1	Aroclor-1254	100.	U	40.	U	40.	U	40.	U	30.	U
11104-28-2	Aroclor-1221	100.	U	40.	U	40.	U	40.	U	30.	U
11141-16-5	Aroclor-1232	100.	U	40.	U	40.	U	40.	U	30.	U
12672-29-6	Aroclor-1248	100.	U	40.	U	40.	U	40.	U	30.	U
11096-82-5	Aroclor-1260	100.	U	40.	U	40.	U	40.	U	30.	U
12674-11-2	Aroclor-1016	100.	U	40.	U	40.	U	40.	U	30.	U
53469-21-9	Aroclor-1242	100.	U	40.	U	40.	U	40.	U	30.	U
1024-57-3	Heptachlor epoxide	10.	U	4.	U	2.	J	4.	U	3.	U
1031-07-8	Endosulfan sulfate	30.	U	8.	U	7.	U	9.	U	7.	U
309-00-2	Aldrin	10.	U	4.	U	4.	U	4.	U	3.	U
319-84-6	alpha-BHC	10.	U	4.	U	4.	U	4.	U	3.	U
319-85-7	beta-BHC	10.	U	4.	U	4.	U	4.	U	3.	U
319-86-8	delta-BHC	10.	U	4.	U	4.	U	4.	U	3.	U
33213-65-9	Endosulfan II	30.	U	8.	U	7.	U	9.	U	7.	U
50-29-3	4,4'-DDT	30.	U	8.	U	4.	J	9.	U	10.	U
5103-71-9	alpha-Chlordane	10.	U	4.	U	1.	J	4.	U	3.	U
5103-74-2	gamma-Chlordane	10.	U	4.	U	3.	J	4.	U	3.	U
53494-70-5	Endrin ketone	30.	U	8.	U	7.	U	9.	U	7.	U
58-89-9	gamma-BHC (Lindane)	10.	U	4.	U	4.	U	4.	U	3.	U
60-57-1	Dieldrin	10.	U	4.	U	4.	U	4.	U	3.	U
72-20-8	Endrin	10.	U	4.	U	4.	U	4.	U	3.	U
72-43-5	Methoxychlor	100.	U	40.	U	40.	U	40.	U	30.	U
72-54-8	4,4'-DDD	130.	U	8.	U	7.	U	9.	U	7.	U
72-55-9	4,4'-DDE	43.	U	4.	U	13.	U	4.	U	21.	U
7421-93-4	Endrin aldehyde	30.	U	8.	U	7.	U	9.	U	7.	U
76-44-8	Heptachlor	10.	U	4.	U	4.	U	4.	U	3.	U
8001-35-2	Toxaphene	600.	U	200.	U	100.	U	200.	U	100.	U
959-98-8	Endosulfan I	10.	U	4.	U	4.	U	4.	U	3.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWS46-PEST		SAMPLE ID ----->	GDH-S-8067-01	GDH-S-8067-02	GDH-S-8068-01	GDH-S-8069-01	GDH-S-8070-01	GDH-S-8071-01			
		ORIGINAL ID ----->	GDHSB06701	GDHSB06702	GDHSB06801	GDHSB06901	GDHSB07001	GDHSB07101			
		LAB SAMPLE ID ---->	41806-013	41806-014	41806-015	41806-016	41806-019	41806-020			
		ID FROM REPORT -->	101203	101204	101205	101206	101209	101210			
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		DATE EXTRACTED -->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94			
		DATE ANALYZED ---->	11/07/94	11/05/94	11/05/94	11/05/94	11/09/94	11/05/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL
11097-69-1	Aroclor-1254	400.	UJ	40.	U	40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	400.	UJ	40.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	400.	UJ	40.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	400.	UJ	40.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	400.	UJ	40.	U	40.	U	40.	U	250.	U
12674-11-2	Aroclor-1016	400.	UJ	40.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	400.	UJ	40.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	40.	UJ	4.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	70.	UJ	8.	U	9.	U	8.	U	7.	U
309-00-2	Aldrin	40.	UJ	4.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	40.	UJ	4.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	40.	UJ	4.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	40.	UJ	4.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	70.	UJ	8.	U	9.	U	8.	U	7.	U
50-29-3	4,4'-DDT	76.	J	8.	U	9.	U	8.	U	7.	U
5103-71-9	alpha-Chlordane	40.	UJ	4.	U	4.	U	4.	U	4.	U
5103-74-2	gamma-Chlordane	40.	UJ	4.	U	4.	U	4.	U	4.	U
53494-70-5	Endrin ketone	70.	UJ	8.	U	9.	U	8.	U	7.	U
58-89-9	gamma-BHC (Lindane)	40.	UJ	4.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	40.	UJ	4.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	40.	UJ	4.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	400.	UJ	40.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	70.	UJ	8.	U	9.	U	8.	U	7.	U
72-55-9	4,4'-DDE	270.	J	4.	U	4.	U	4.	U	4.	U
7421-93-4	Endrin aldehyde	70.	UJ	8.	U	9.	U	8.	U	7.	U
76-44-8	Heptachlor	40.	UJ	4.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	1000.	UJ	200.	U	200.	U	200.	U	100.	U
959-98-8	Endosulfan I	40.	UJ	4.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8071-02	GDH-S-8072-01	GDH-S-8072-02	GDH-S-8073-01	GDH-S-8073-02	GDH-S-8074-01			
		ORIGINAL ID ----->	GDHS807102	GDHS807201	GDHS807202	GDHS807301	GDHS807302	GDHS807401			
		LAB SAMPLE ID ---->	41806-021	41806-022	41806-023	41821-009	41821-010	25246.8			
		ID FROM REPORT -->	101211	101212	101213	101303	101304	102204			
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/12/94	10/12/94	10/21/94			
		DATE EXTRACTED -->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	11/01/94			
		DATE ANALYZED ---->	11/07/94	11/09/94	11/09/94	11/08/94	11/09/94	11/09/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS23	VAL
11097-69-1	Aroclor-1254	40.	U	50.	U	50.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	40.	U	50.	U	50.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	40.	U	50.	U	50.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	40.	U	50.	U	50.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	40.	U	50.	U	50.	U	40.	U	40.	U
12674-11-2	Aroclor-1016	40.	U	50.	U	50.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	40.	U	50.	U	50.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	4.	U	5.	U	5.	U	4.	U	2.3	U
1031-07-8	Endosulfan sulfate	8.	U	9.	U	10.	U	7.	U	4.	U
309-00-2	Aldrin	4.	U	5.	U	5.	U	4.	U	1.9	U
319-84-6	alpha-BHC	4.	U	5.	U	5.	U	4.	U	2.	U
319-85-7	beta-BHC	4.	U	5.	U	5.	U	4.	U	1.5	U
319-86-8	delta-BHC	4.	U	5.	U	5.	U	4.	U	2.	U
33213-65-9	Endosulfan II	8.	U	9.	U	10.	U	7.	U	2.3	U
50-29-3	4,4'-DDT	8.	U	9.	U	10.	U	7.	U	3.	U
5103-71-9	alpha-Chlordane	4.	U	5.	U	5.	U	4.	U	2.	U
5103-74-2	gamma-Chlordane	4.	U	5.	U	5.	U	4.	U	2.	U
53494-70-5	Endrin ketone	8.	U	9.	U	10.	U	7.	U	4.5	U
58-89-9	gamma-BHC (Lindane)	4.	U	5.	U	5.	U	4.	U	1.3	U
60-57-1	Dieldrin	4.	U	5.	U	5.	U	4.	U	4.	U
72-20-8	Endrin	4.	U	5.	U	5.	U	4.	U	1.9	U
72-43-5	Methoxychlor	40.	U	50.	U	50.	U	40.	U	15.	U
72-54-8	4,4'-DDD	8.	U	9.	U	7.	J	7.	U	3.	U
72-55-9	4,4'-DDE	4.	U	3.	J	4.	J	4.	U	4.	U
7421-93-4	Endrin aldehyde	8.	U	9.	U	10.	U	7.	U	4.	U
76-44-8	Heptachlor	4.	U	5.	U	5.	U	4.	U	1.9	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	100.	U	200.	U
959-98-8	Endosulfan I	4.	U	5.	U	5.	U	4.	U	2.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8075-01	GDH-S-8076-01	GDH-S-8077-01	GDH-S-8078-01	GDH-S-8078-02	GDH-S-8079-01					
		ORIGINAL ID ----->	GDHS807501	GDHS807601	GDHS807701	GDHS807801	GDHS807802	GDHS807901					
		LAB SAMPLE ID ---->	25247.6	25248.4	25249.2	25250.6	25251.4	25252.2					
		ID FROM REPORT -->	102205	102206	102207	102208	102209	102210					
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94					
		DATE EXTRACTED -->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94					
		DATE ANALYZED ---->	11/09/94	11/09/94	11/09/94	11/09/94	11/09/94	11/15/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL		
11097-69-1	Aroclor-1254	40.	U	37.	U	41.	U	34.	U	36.	U	41.	U
11104-28-2	Aroclor-1221	40.	U	37.	U	41.	U	34.	U	36.	U	41.	U
11141-16-5	Aroclor-1232	40.	U	37.	U	41.	U	34.	U	36.	U	41.	U
12672-29-6	Aroclor-1248	40.	U	37.	U	41.	U	34.	U	36.	U	41.	U
11096-82-5	Aroclor-1260	125.		37.	U	41.	U	63.	U	36.	U	41.	U
12674-11-2	Aroclor-1016	40.	U	37.	U	41.	U	34.	U	36.	U	41.	U
53469-21-9	Aroclor-1242	40.	U	37.	U	41.	U	34.	U	36.	U	41.	U
1024-57-3	Heptachlor epoxide	2.3	U	2.1	U	2.3	U	1.9	U	2.	U	2.3	U
1031-07-8	Endosulfan sulfate	4.	U	3.7	U	4.1	U	3.4	U	3.6	U	4.1	U
309-00-2	Aldrin	1.9	U	1.7	U	1.9	U	1.6	U	1.7	U	1.9	U
319-84-6	alpha-BHC	2.	U	1.9	U	2.	U	1.7	U	1.8	U	2.	U
319-85-7	beta-BHC	1.5	U	1.4	U	1.5	U	1.3	U	1.3	U	1.5	U
319-86-8	delta-BHC	2.	U	1.9	U	2.	U	1.7	U	1.8	U	2.	U
33213-65-9	Endosulfan II	2.3	U	2.1	U	2.3	U	1.9	U	2.	U	2.3	U
50-29-3	4,4'-DDT	2.9	U	2.7	U	3.	U	2.5	U	2.6	U	5.1	
5103-71-9	alpha-Chlordane	2.	U	1.9	U	2.	U	1.7	U	1.8	U	2.	U
5103-74-2	gamma-Chlordane	2.	U	1.9	U	2.	U	1.7	U	1.8	U	2.	U
53494-70-5	Endrin ketone	4.4	U	4.1	U	4.5	U	3.8	U	3.9	U	4.5	U
58-89-9	gamma-BHC (Lindane)	1.3	U	1.2	U	1.4	U	1.1	U	1.2	U	1.4	U
60-57-1	Dieldrin	4.	U	3.7	U	4.1	U	3.4	U	3.6	U	4.1	U
72-20-8	Endrin	1.9	U	15.		1.9	U	1.6	U	1.7	U	2.2	
72-43-5	Methoxychlor	15.	U	14.	U	15.	U	13.	U	13.	U	15.	U
72-54-8	4,4'-DDD	2.9	U	2.7	U	3.	U	2.5	U	2.6	U	3.	U
72-55-9	4,4'-DDE	4.	U	3.7	U	4.1	U	3.4	U	3.6	U	4.1	U
7421-93-4	Endrin aldehyde	4.	U	3.7	U	4.1	U	3.4	U	3.6	U	4.1	U
76-44-8	Heptachlor	1.9	U	1.7	U	1.9	U	1.6	U	1.7	U	1.9	U
8001-35-2	Toxaphene	200.	U	190.	U	200.	U	170.	U	180.	U	200.	U
959-98-8	Endosulfan I	2.	U	1.9	U	2.	U	1.7	U	1.8	U	2.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWS46-PEST		SAMPLE ID ----->	GDH-S-8079-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-8081-01	GDH-S-8082-01	GDH-S-8082-02			
		ORIGINAL ID ----->	GDHS807902	GDHS808001	GDHS808002	GDHS808101	GDHS808201	GDHS808202			
		LAB SAMPLE ID ---->	25253.0	25254.9	25255.7	25256.5	25257.3	25258.1			
		ID FROM REPORT -->	102211	102212	102213	102214	102215	102216			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/22/94	10/22/94			
		DATE EXTRACTED -->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94			
		DATE ANALYZED ---->	11/15/94	11/16/94	11/15/94	11/16/94	11/15/94	11/15/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL
11097-69-1	Aroclor-1254	39.	U	34.	U	43.	U	34.	U	37.	U
11104-28-2	Aroclor-1221	39.	U	34.	U	43.	U	34.	U	37.	U
11141-16-5	Aroclor-1232	39.	U	34.	U	43.	U	34.	U	37.	U
12672-29-6	Aroclor-1248	39.	U	34.	U	43.	U	34.	U	37.	U
11096-82-5	Aroclor-1260	39.	U	34.	U	43.	U	34.	U	37.	U
12674-11-2	Aroclor-1016	39.	U	34.	U	43.	U	34.	U	37.	U
53469-21-9	Aroclor-1242	39.	U	34.	U	43.	U	34.	U	37.	U
1024-57-3	Heptachlor epoxide	2.2	U	1.9	U	2.4	U	1.9	U	2.1	U
1031-07-8	Endosulfan sulfate	3.9	U	3.4	U	4.3	U	3.4	U	3.7	U
309-00-2	Aldrin	1.8	U	1.6	U	2.	U	1.6	U	1.7	U
319-84-6	alpha-BHC	2.	U	1.7	U	2.1	U	1.7	U	1.8	U
319-85-7	beta-BHC	1.4	U	1.3	U	4.2	U	1.2	U	1.3	U
319-86-8	delta-BHC	2.	U	1.7	U	2.1	U	1.7	U	1.8	U
33213-65-9	Endosulfan II	2.2	U	1.9	U	2.4	U	1.9	U	2.1	U
50-29-3	4,4'-DDT	2.9	U	11.		3.1	U	5.9	U	2.7	U
5103-71-9	alpha-Chlordane	2.	U	1.9		2.1	U	1.7	U	1.8	U
5103-74-2	gamma-Chlordane	2.	U	1.8		2.1	U	1.7	U	1.8	U
53494-70-5	Endrin ketone	4.3	U	3.8	U	4.7	U	3.7	U	4.	U
58-89-9	gamma-BHC (Lindane)	1.3	U	1.1	U	1.4	U	1.1	U	1.2	U
60-57-1	Dieldrin	3.9	U	3.4	U	4.3	U	3.4	U	3.7	U
72-20-8	Endrin	1.8	U	1.6	U	2.	U	1.6	U	1.7	U
72-43-5	Methoxychlor	14.	U	13.	U	16.	U	12.	U	13.	U
72-54-8	4,4'-DDD	2.9	U	12.		3.1	U	21.	U	2.7	U
72-55-9	4,4'-DDE	3.9	U	88.		4.3	U	5.7	U	8.9	U
7421-93-4	Endrin aldehyde	3.9	U	3.4	U	4.3	U	3.4	U	3.7	U
76-44-8	Heptachlor	1.8	U	1.6	U	2.	U	1.6	U	1.7	U
8001-35-2	Toxaphene	200.	U	170.	U	210.	U	170.	U	180.	U
959-98-8	Endosulfan I	2.	U	1.7	U	2.1	U	1.7	U	1.8	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-B083-01	GDH-S-B084-01	GDH-S-B084-02	GDH-S-B085-01	GDH-S-B085-02	GDH-S-B086-01			
		ORIGINAL ID ----->	GDHSB08301	GDHSB08401	GDHSB08402	GDHSB08501	GDHSB08502	GDHSB08601			
		LAB SAMPLE ID --->	25259.0	42136-014	42136-015	42136-016	42136-017	42347-007			
		ID FROM REPORT -->	102217	GDHSB08401	GDHSB08402	GDHSB08501	GDHSB08502	GDHSB08601			
		SAMPLE DATE ----->	10/22/94	11/09/94	11/09/94	11/09/94	11/09/94	11/22/94			
		DATE EXTRACTED -->	11/01/94	11/15/94	11/15/94	11/15/94	11/15/94	12/02/94			
		DATE ANALYZED ---->	11/15/94	11/29/94	11/29/94	11/30/94	11/30/94	12/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS25	VAL	CHS25	VAL	CHS25	VAL	CHS27	VAL
11097-69-1	Aroclor-1254	34.	U	40.	U	40.	U	40.	U	50.	U
11104-28-2	Aroclor-1221	34.	U	40.	U	40.	U	40.	U	50.	U
11141-16-5	Aroclor-1232	34.	U	40.	U	40.	U	40.	U	50.	U
12672-29-6	Aroclor-1248	34.	U	40.	U	40.	U	40.	U	50.	U
11096-82-5	Aroclor-1260	34.	U	40.	U	40.	U	40.	U	50.	U
12674-11-2	Aroclor-1016	34.	U	40.	U	40.	U	40.	U	50.	U
53469-21-9	Aroclor-1242	34.	U	40.	U	40.	U	40.	U	50.	U
1024-57-3	Heptachlor epoxide	1.9	U	4.	U	4.	U	4.	U	5.	U
1031-07-8	Endosulfan sulfate	3.4	U	9.	U	9.	U	9.	U	9.	U
309-00-2	Aldrin	1.6	U	4.	U	4.	U	4.	U	5.	U
319-84-6	alpha-BHC	1.7	U	4.	U	4.	U	4.	U	5.	U
319-85-7	beta-BHC	1.3	U	4.	U	4.	U	4.	U	5.	U
319-86-8	delta-BHC	1.7	U	4.	U	4.	U	4.	U	5.	U
33213-65-9	Endosulfan II	1.9	U	9.	U	9.	U	9.	U	9.	U
50-29-3	4,4'-DDT	2.5	U	9.	U	9.	U	9.	U	9.	U
5103-71-9	alpha-Chlordane	1.7	U	4.	U	4.	U	4.	U	5.	U
5103-74-2	gamma-Chlordane	1.7	U	4.	U	4.	U	4.	U	5.	U
53494-70-5	Endrin ketone	3.8	U	9.	U	9.	U	9.	U	9.	U
58-89-9	gamma-BHC (Lindane)	1.1	U	4.	U	4.	U	4.	U	5.	U
60-57-1	Dieldrin	3.4	U	4.	U	4.	U	4.	U	5.	U
72-20-8	Endrin	1.6	U	4.	U	4.	U	4.	U	5.	U
72-43-5	Methoxychlor	13.	U	40.	U	40.	U	40.	U	50.	U
72-54-8	4,4'-DDD	2.5	U	9.	U	9.	U	9.	U	9.	U
72-55-9	4,4'-DDE	3.4	U	4.	U	4.	U	4.	U	5.	U
7421-93-4	Endrin aldehyde	3.4	U	9.	U	9.	U	9.	U	9.	U
76-44-8	Heptachlor	1.6	U	4.	U	4.	U	4.	U	5.	U
8001-35-2	Toxaphene	170.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	1.7	U	4.	U	4.	U	4.	U	5.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8086-02	GDH-S-8087-01	GDH-S-8087-02	GDH-S-8088-01	GDH-S-8088-02	GDH-S-8089-01			
		ORIGINAL ID ----->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		LAB SAMPLE ID --->	42347-008	42347-009	42347-010	42347-011	42347-012	42430-005			
		ID FROM REPORT -->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		SAMPLE DATE ----->	11/22/94	11/22/94	11/22/94	11/22/94	11/22/94	11/30/94			
		DATE EXTRACTED -->	12/02/94	12/02/94	12/02/94	12/02/94	12/02/94	12/07/94			
		DATE ANALYZED --->	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94	12/29/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL
11097-69-1	Aroclor-1254	40.	U	50.	U	50.	U	40.	U	50.	U
11104-28-2	Aroclor-1221	40.	U	50.	U	50.	U	40.	U	50.	U
11141-16-5	Aroclor-1232	40.	U	50.	U	50.	U	40.	U	50.	U
12672-29-6	Aroclor-1248	40.	U	50.	U	50.	U	40.	U	50.	U
11096-82-5	Aroclor-1260	40.	U	50.	U	50.	U	40.	U	100.	U
12674-11-2	Aroclor-1016	40.	U	50.	U	50.	U	40.	U	50.	U
53469-21-9	Aroclor-1242	40.	U	50.	U	50.	U	40.	U	50.	U
1024-57-3	Heptachlor epoxide	4.	U	5.	U	5.	U	4.	U	5.	U
1031-07-8	Endosulfan sulfate	9.	U	9.	U	10.	U	9.	U	10.	U
309-00-2	Aldrin	4.	U	5.	U	5.	U	4.	U	5.	U
319-84-6	alpha-BHC	4.	U	5.	U	5.	U	4.	U	5.	U
319-85-7	beta-BHC	4.	U	5.	U	5.	U	4.	U	5.	U
319-86-8	delta-BHC	4.	U	5.	U	5.	U	4.	U	5.	U
33213-65-9	Endosulfan II	9.	U	9.	U	10.	U	9.	U	10.	U
50-29-3	4,4'-DDT	9.	U	9.	U	10.	U	9.	U	10.	U
5103-71-9	alpha-Chlordane	4.	U	5.	U	5.	U	4.	U	5.	U
5103-74-2	gamma-Chlordane	4.	U	5.	U	5.	U	4.	U	5.	U
53494-70-5	Endrin ketone	9.	U	9.	U	10.	U	9.	U	10.	U
58-89-9	gamma-BHC (Lindane)	4.	U	5.	U	5.	U	4.	U	5.	U
60-57-1	Dieldrin	4.	U	5.	U	5.	U	4.	U	5.	U
72-20-8	Endrin	4.	U	5.	U	5.	U	4.	U	5.	U
72-43-5	Methoxychlor	40.	U	50.	U	50.	U	40.	U	50.	U
72-54-8	4,4'-DDD	9.	U	9.	U	10.	U	9.	U	10.	U
72-55-9	4,4'-DDE	4.	U	5.	U	5.	U	4.	U	5.	U
7421-93-4	Endrin aldehyde	9.	U	9.	U	10.	U	9.	U	10.	U
76-44-8	Heptachlor	4.	U	5.	U	5.	U	4.	U	5.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	200.	U
959-98-8	Endosulfan I	4.	U	5.	U	5.	U	4.	U	5.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8090-01	GDH-S-8091-01	GDH-S-8092-01	GDH-S-8092-02	GDH-S-8093-01	GDH-S-8104-01					
		ORIGINAL ID ----->	GDHS809001	GDHS809101	GDHS809201	GDHS809202	GDHS809301	GDHS810401					
		LAB SAMPLE ID ----->	42430-006	42430-007	42574-005	42574-008	42613-003	42985-005					
		ID FROM REPORT -->	GDHS809001	GDHS809101	GDHS809201	GDHS809202	GDHS809301	GDHS810401					
		SAMPLE DATE ----->	11/30/94	11/30/94	12/14/94	12/14/94	12/19/94	02/06/95					
		DATE EXTRACTED -->	12/07/94	12/07/94	12/16/94	12/16/94	12/22/94	02/14/95					
		DATE ANALYZED -->	12/29/94	12/29/94	01/03/94	01/03/94	01/04/95	02/16/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS28	VAL	CHS28	VAL	CHS28	VAL	CHS34	VAL
11097-69-1	Aroclor-1254	50.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	50.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	50.	U	40.	U	40.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	50.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	46.	J	40.	U	40.	U	40.	U	40.	U	23.	J
12674-11-2	Aroclor-1016	50.	U	40.	U	40.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	50.	U	40.	U	40.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	10.	U	8.	U	9.	U	8.	U	7.	U	8.	U
309-00-2	Aldrin	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	10.	U	8.	U	9.	U	8.	U	7.	U	8.	U
50-29-3	4,4'-DDT	10.	U	8.	U	9.	U	8.	U	7.	U	8.	U
5103-71-9	alpha-Chlordane	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
5103-74-2	gamma-Chlordane	5.	U	4.	U	4.	U	4.	U	4.	U	2.	J
53494-70-5	Endrin ketone	10.	U	8.	U	9.	U	8.	U	7.	U	8.	U
58-89-9	gamma-BHC (Lindane)	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
72-43-5	Methoxychlor	50.	U	40.	U	40.	U	40.	U	40.	U	40.	U
72-54-8	4,4'-DDD	10.	U	8.	U	9.	U	8.	U	7.	U	8.	U
72-55-9	4,4'-DDE	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
7421-93-4	Endrin aldehyde	10.	U	8.	U	9.	U	8.	U	7.	U	8.	U
76-44-8	Heptachlor	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	200.	U	200.	U	200.	U	100.	U	200.	U
959-98-8	Endosulfan I	5.	U	4.	U	4.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8104-02	GDH-S-8105-01	GDH-S-8107-01	GDH-S-8107-02			
		ORIGINAL ID ----->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		LAB SAMPLE ID ---->	42985-006	42985-007	43002-004	43002-005			
		ID FROM REPORT -->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		SAMPLE DATE ----->	02/06/95	02/06/95	02/07/95	02/07/95			
		DATE EXTRACTED -->	02/14/95	02/14/95	02/14/95	02/14/95			
		DATE ANALYZED ---->	02/16/95	02/16/95	02/17/95	02/17/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL
11097-69-1	Aroclor-1254	40.	U	40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	40.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	40.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	40.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	40.	U	40.	U	40.	U	40.	U
12674-11-2	Aroclor-1016	40.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	40.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	4.	U	4.	U	4.	U	4.	U
1031-07-8	Endosulfan sulfate	8.	U	7.	U	7.	U	8.	U
309-00-2	Aldrin	4.	U	4.	U	4.	U	4.	U
319-84-6	alpha-BHC	4.	U	4.	U	4.	U	4.	U
319-85-7	beta-BHC	4.	U	4.	U	4.	U	4.	U
319-86-8	delta-BHC	4.	U	4.	U	4.	U	4.	U
33213-65-9	Endosulfan II	8.	U	7.	U	7.	U	8.	U
50-29-3	4,4'-DDT	8.	U	27.	U	7.	U	8.	U
5103-71-9	alpha-Chlordane	4.	U	4.	U	4.	UJ	4.	UJ
5103-74-2	gamma-Chlordane	4.	U	4.	U	4.	U	3.	J
53494-70-5	Endrin ketone	8.	U	7.	U	7.	U	8.	U
58-89-9	gamma-BHC (Lindane)	4.	U	4.	U	4.	U	4.	U
60-57-1	Dieldrin	4.	U	4.	U	4.	U	4.	U
72-20-8	Endrin	4.	U	4.	U	4.	UJ	4.	UJ
72-43-5	Methoxychlor	40.	U	40.	U	40.	UJ	40.	UJ
72-54-8	4,4'-DDD	8.	U	11.	U	7.	U	8.	U
72-55-9	4,4'-DDE	3.	J	59.	U	2.	J	4.	U
7421-93-4	Endrin aldehyde	8.	U	7.	U	7.	U	8.	U
76-44-8	Heptachlor	4.	U	4.	U	4.	U	4.	U
8001-35-2	Toxaphene	200.	U	100.	U	100.	U	200.	U
959-98-8	Endosulfan I	4.	U	4.	U	4.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-B001-01	GDH-S-B001-02	GDH-S-B002-01	GDH-S-B002-02	GDH-S-B003-01	GDH-S-B003-02			
		ORIGINAL ID ----->	GDHSB00101	GDHSB00102	GDHSB00201	GDHSB00202	GDHSB00301	GDHSB00302			
		LAB SAMPLE ID ---->	41665-020	41665-021	41665-022	41665-023	41665-024	41665-025			
		ID FROM REPORT -->	092806	092807	092808	092809	092810	092811			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/07/94	10/10/94	10/10/94	10/07/94	10/07/94	10/07/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
62-75-9	N-Nitrosodimethylamine	480.	U	510.	U	490.	U	490.	U	450.	U
606-20-2	2,6-Dinitrotoluene	480.	U	510.	U	490.	U	490.	U	450.	U
108-95-2	Phenol	480.	U	510.	U	490.	U	490.	U	450.	U
99-09-2	3-Nitroaniline	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
62-53-3	Aniline	480.	U	510.	U	490.	U	490.	U	450.	U
83-32-9	Acenaphthene	480.	U	510.	U	490.	U	490.	U	450.	U
111-44-4	bis(2-Chloroethyl)ether	480.	U	510.	U	490.	U	490.	U	450.	U
51-28-5	2,4-Dinitrophenol	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
95-57-8	2-Chlorophenol	480.	U	510.	U	490.	U	490.	U	450.	U
100-02-7	4-Nitrophenol	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
541-73-1	1,3-Dichlorobenzene	480.	U	510.	U	490.	U	490.	U	450.	U
132-64-9	Dibenzofuran	480.	U	510.	U	490.	U	490.	U	450.	U
106-46-7	1,4-Dichlorobenzene	480.	U	510.	U	490.	U	490.	U	450.	U
121-14-2	2,4-Dinitrotoluene	480.	U	510.	U	490.	U	490.	U	450.	U
100-51-6	Benzyl alcohol	480.	U	510.	U	490.	U	490.	U	450.	U
84-66-2	Diethylphthalate	480.	U	510.	U	490.	U	490.	U	450.	U
95-50-1	1,2-Dichlorobenzene	480.	U	510.	U	490.	U	490.	U	450.	U
7005-72-3	4-Chlorophenylphenylether	480.	U	510.	U	490.	U	490.	U	450.	U
95-48-7	2-Methylphenol (o-Cresol)	480.	U	510.	U	490.	U	490.	U	450.	U
86-73-7	Fluorene	480.	U	510.	U	490.	U	490.	U	450.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	480.	U	510.	U	490.	U	490.	U	450.	U
100-01-6	4-Nitroaniline	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
106-44-5	4-Methylphenol (p-Cresol)	480.	U	510.	U	490.	U	490.	U	450.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
621-64-7	N-Nitroso-di-n-propylamine	480.	U	510.	U	490.	U	490.	U	450.	U
86-30-6	N-Nitrosodiphenylamine	480.	U	510.	U	490.	U	490.	U	450.	U
67-72-1	Hexachloroethane	480.	U	510.	U	490.	U	490.	U	450.	U
101-55-3	4-Bromophenylphenylether	480.	U	510.	U	490.	U	490.	U	450.	U
98-95-3	Nitrobenzene	480.	U	510.	U	490.	U	490.	U	450.	U
118-74-1	Hexachlorobenzene	480.	U	510.	U	490.	U	490.	U	450.	U
78-59-1	Isophorane	480.	U	510.	U	490.	U	490.	U	450.	U
87-86-5	Pentachlorophenol	480.	U	510.	U	490.	U	490.	U	450.	U
88-75-5	2-Nitrophenol	480.	U	510.	U	490.	U	490.	U	450.	U
85-01-8	Phenanthrene	480.	U	510.	U	490.	U	490.	U	450.	U
105-67-9	2,4-Dimethylphenol	480.	U	510.	U	490.	U	490.	U	450.	U
120-12-7	Anthracene	630.		510.	U	490.	U	490.	U	450.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8001-01	GDH-S-8001-02	GDH-S-8002-01	GDH-S-8002-02	GDH-S-8003-01	GDH-S-8003-02			
		ORIGINAL ID ----->	GDHSB00101	GDHSB00102	GDHSB00201	GDHSB00202	GDHSB00301	GDHSB00302			
		LAB SAMPLE ID ---->	41665-020	41665-021	41665-022	41665-023	41665-024	41665-025			
		ID FROM REPORT -->	092806	092807	092808	092809	092810	092811			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/07/94	10/10/94	10/10/94	10/07/94	10/07/94	10/07/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
65-85-0	Benzoic acid	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
84-74-2	Di-n-butylphthalate	480.	U	510.	U	490.	U	490.	U	450.	U
111-91-1	bis(2-Chloroethoxy)methane	480.	U	510.	U	490.	U	490.	U	450.	U
206-44-0	Fluoranthene	200.	J	510.	U	490.	U	140.	J	450.	U
120-83-2	2,4-Dichlorophenol	480.	U	510.	U	490.	U	490.	U	450.	U
92-87-5	Benidine	2400.	UJ	2600.	UJ	2500.	UJ	2400.	UJ	2300.	UJ
120-82-1	1,2,4-Trichlorobenzene	480.	U	510.	U	490.	U	490.	U	450.	U
129-00-0	Pyrene	860.	U	510.	U	490.	U	120.	J	450.	U
91-20-3	Naphthalene	480.	U	510.	U	490.	U	490.	U	450.	U
85-68-7	Butylbenzylphthalate	480.	U	510.	U	490.	U	490.	U	450.	U
106-47-8	4-Chloroaniline	480.	U	510.	U	490.	U	490.	U	450.	U
91-94-1	3,3'-Dichlorobenzidine	970.	U	1000.	U	990.	U	970.	U	910.	U
87-68-3	Hexachlorobutadiene	480.	U	510.	U	490.	U	490.	U	450.	U
56-55-3	Benzo(a)anthracene	380.	J	510.	U	490.	U	490.	U	450.	U
59-50-7	4-Chloro-3-methylphenol	480.	U	510.	U	490.	U	490.	U	450.	U
218-01-9	Chrysene	810.	U	510.	U	490.	U	490.	U	450.	U
91-57-6	2-Methylnaphthalene	480.	U	510.	U	490.	U	490.	U	450.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	110.	J	510.	UJ	490.	UJ	490.	UJ	450.	UJ
77-47-4	Hexachlorocyclopentadiene	480.	U	510.	U	490.	U	490.	U	450.	U
117-84-0	Di-n-octylphthalate	480.	UJ	510.	UJ	490.	UJ	490.	UJ	450.	UJ
88-06-2	2,4,6-Trichlorophenol	480.	U	510.	U	490.	U	490.	U	450.	U
205-99-2	Benzo(b)fluoranthene	1700.	U	510.	U	490.	U	490.	U	450.	U
95-95-4	2,4,5-Trichlorophenol	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
207-08-9	Benzo(k)fluoranthene	1200.	U	510.	UJ	490.	UJ	490.	U	450.	U
91-58-7	2-Chloronaphthalene	480.	U	510.	U	490.	U	490.	U	450.	U
50-32-8	Benzo(a)pyrene	1400.	U	510.	U	490.	U	490.	U	450.	U
88-74-4	2-Nitroaniline	2400.	U	2600.	U	2500.	U	2400.	U	2300.	U
193-39-5	Indeno(1,2,3-cd)pyrene	650.	U	510.	U	490.	U	490.	U	450.	U
131-11-3	Dimethylphthalate	480.	U	510.	U	490.	U	490.	U	450.	U
53-70-3	Dibenzo(a,h)anthracene	270.	J	510.	U	490.	U	490.	U	450.	U
208-96-8	Acenaphthylene	460.	J	510.	U	490.	U	490.	U	450.	U
191-24-2	Benzo(g,h,i)perylene	660.	U	510.	U	490.	U	490.	U	450.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVQA		SAMPLE ID ----->	GDH-S-8004-01	GDH-S-8004-02	GDH-S-8005-01	GDH-S-8006-01	GDH-S-8006-02	GDH-S-8007-01					
		ORIGINAL ID ----->	GDHSB00401	GDHSB00402	GDHSB00501	GDHSB00601	GDHSB00602	GDHSB00701					
		LAB SAMPLE ID ---->	41665-026	41665-027	41665-028	41665-030	41665-031	41665-032					
		ID FROM REPORT -->	092812	092813	092814	092816	092817	092818					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE ANALYZED ---->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/10/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL		
62-75-9	N-Nitrosodimethylamine	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
606-20-2	2,6-Dinitrotoluene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
108-95-2	Phenol	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
99-09-2	3-Nitroaniline	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U	2000.	U
62-53-3	Aniline	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
83-32-9	Acenaphthene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
111-44-4	bis(2-Chloroethyl)ether	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
51-28-5	2,4-Dinitrophenol	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U	2000.	U
95-57-8	2-Chlorophenol	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
100-02-7	4-Nitrophenol	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U	2000.	U
541-73-1	1,3-Dichlorobenzene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
132-64-9	Dibenzofuran	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
106-46-7	1,4-Dichlorobenzene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
121-14-2	2,4-Dinitrotoluene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
100-51-6	Benzyl alcohol	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
84-66-2	Diethylphthalate	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
95-50-1	1,2-Dichlorobenzene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
7005-72-3	4-Chlorophenylphenylether	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
95-48-7	2-Methylphenol (o-Cresol)	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
86-73-7	Fluorene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
100-01-6	4-Nitroaniline	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U	2000.	U
106-44-5	4-Methylphenol (p-Cresol)	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U	2000.	U
621-64-7	N-Nitroso-di-n-propylamine	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
86-30-6	N-Nitrosodiphenylamine	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
67-72-1	Hexachloroethane	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
101-55-3	4-Bromophenylphenylether	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
98-95-3	Nitrobenzene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
118-74-1	Hexachlorobenzene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
78-59-1	Isophorane	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
87-86-5	Pentachlorophenol	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
88-75-5	2-Nitrophenol	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
85-01-8	Phenanthrene	470.	U	490.	U	400.	U	390.	U	380.	U	160.	J
105-67-9	2,4-Dimethylphenol	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U
120-12-7	Anthracene	470.	U	490.	U	400.	U	390.	U	380.	U	400.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8004-01	GDH-S-8004-02	GDH-S-8005-01	GDH-S-8006-01	GDH-S-8006-02	GDH-S-8007-01			
		ORIGINAL ID ----->	GDHS800401	GDHS800402	GDHS800501	GDHS800601	GDHS800602	GDHS800701			
		LAB SAMPLE ID ---->	41665-026	41665-027	41665-028	41665-030	41665-031	41665-032			
		ID FROM REPORT -->	092812	092813	092814	092816	092817	092818			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/10/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
65-85-0	Benzoic acid	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U
84-74-2	Di-n-butylphthalate	470.	U	490.	U	400.	U	390.	U	380.	U
111-91-1	bis(2-Chloroethoxy)methane	470.	U	490.	U	400.	U	390.	U	380.	U
206-44-0	Fluoranthene	470.	U	490.	U	110.	J	390.	U	380.	U
120-83-2	2,4-Dichlorophenol	470.	U	490.	U	400.	U	390.	U	380.	U
92-87-5	Benzidine	2400.	UJ	2400.	UJ	2000.	UJ	2000.	UJ	1900.	UJ
120-82-1	1,2,4-Trichlorobenzene	470.	U	490.	U	400.	U	390.	U	380.	U
129-00-0	Pyrene	470.	U	490.	U	86.	J	390.	U	380.	U
91-20-3	Naphthalene	470.	U	490.	U	400.	U	390.	U	380.	U
85-68-7	Butylbenzylphthalate	470.	U	490.	U	400.	U	390.	U	380.	U
106-47-8	4-Chloroaniline	470.	U	490.	U	400.	U	390.	U	380.	U
91-94-1	3,3'-Dichlorobenzidine	940.	U	980.	U	790.	U	780.	U	750.	U
87-68-3	Hexachlorobutadiene	470.	U	490.	U	400.	U	390.	U	380.	U
56-55-3	Benzo(a)anthracene	470.	U	490.	U	400.	U	390.	U	380.	U
59-50-7	4-Chloro-3-methylphenol	470.	U	490.	U	400.	U	390.	U	380.	U
218-01-9	Chrysene	470.	U	490.	U	400.	U	390.	U	380.	U
91-57-6	2-Methylnaphthalene	470.	U	490.	U	400.	U	390.	U	380.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	470.	UJ	490.	UJ	110.	J	390.	UJ	380.	UJ
77-47-4	Hexachlorocyclopentadiene	470.	U	490.	U	400.	U	390.	U	380.	U
117-84-0	Di-n-octylphthalate	470.	UJ	490.	UJ	400.	UJ	390.	UJ	380.	UJ
88-06-2	2,4,6-Trichlorophenol	470.	U	490.	U	400.	U	390.	U	380.	U
205-99-2	Benzo(b)fluoranthene	470.	U	490.	U	400.	U	390.	U	380.	U
95-95-4	2,4,5-Trichlorophenol	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U
207-08-9	Benzo(k)fluoranthene	470.	U	490.	U	400.	U	390.	U	380.	U
91-58-7	2-Chloronaphthalene	470.	U	490.	U	400.	U	390.	U	380.	U
50-32-8	Benzo(a)pyrene	470.	U	490.	U	400.	U	390.	U	380.	U
88-74-4	2-Nitroaniline	2400.	U	2400.	U	2000.	U	2000.	U	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	470.	U	490.	U	400.	U	390.	U	380.	U
131-11-3	Dimethylphthalate	470.	U	490.	U	400.	U	390.	U	380.	U
53-70-3	Dibenzo(a,h)anthracene	470.	U	490.	U	400.	U	390.	U	380.	U
208-96-8	Acenaphthylene	470.	U	490.	U	400.	U	390.	U	380.	U
191-24-2	Benzo(g,h,i)perylene	470.	U	490.	U	400.	U	390.	U	380.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SM846-SVDA		SAMPLE ID ----->	GDH-S-8007-02	GDH-S-8008-01	GDH-S-8008-02	GDH-S-8009-01	GDH-S-8009-02	GDH-S-8010-01					
		ORIGINAL ID ----->	GDHSB00702	GDHSB00801	GDHSB00802	GDHSB00901	GDHSB00902	GDHSB01001					
		LAB SAMPLE ID ---->	41665-033	41665-034	41665-035	41665-036	41665-038	41666-002					
		ID FROM REPORT -->	092819	092820	092821	092822	092824	092805					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/07/94					
		DATE ANALYZED -->	10/10/94	10/10/94	10/07/94	10/07/94	10/07/94	10/11/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS16	VAL
62-75-9	N-Nitrosodimethylamine	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
606-20-2	2,6-Dinitrotoluene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
108-95-2	Phenol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
99-09-2	3-Nitroaniline	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
62-53-3	Aniline	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
83-32-9	Acenaphthene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
111-44-4	bis(2-Chloroethyl)ether	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
51-28-5	2,4-Dinitrophenol	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
95-57-8	2-Chlorophenol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
100-02-7	4-Nitrophenol	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
541-73-1	1,3-Dichlorobenzene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
132-64-9	Dibenzofuran	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
106-46-7	1,4-Dichlorobenzene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
121-14-2	2,4-Dinitrotoluene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
100-51-6	Benzyl alcohol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
84-66-2	Diethylphthalate	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
95-50-1	1,2-Dichlorobenzene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
7005-72-3	4-Chlorophenylphenylether	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
95-48-7	2-Methylphenol (o-Cresol)	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
86-73-7	Fluorene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
100-01-6	4-Nitroaniline	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
106-44-5	4-Methylphenol (p-Cresol)	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
621-64-7	N-Nitroso-di-n-propylamine	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
86-30-6	N-Nitrosodiphenylamine	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
67-72-1	Hexachloroethane	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
101-55-3	4-Bromophenylphenylether	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
98-95-3	Nitrobenzene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
118-74-1	Hexachlorobenzene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
78-59-1	Isophorone	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
87-86-5	Pentachlorophenol	450.	UJ	410.	UJ	580.	U	420.	U	410.	U	490.	U
88-75-5	2-Nitrophenol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
85-01-8	Phenanthrene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
105-67-9	2,4-Dimethylphenol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
120-12-7	Anthracene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8007-02	GDH-S-8008-01	GDH-S-8008-02	GDH-S-8009-01	GDH-S-8009-02	GDH-S-8010-01					
		ORIGINAL ID ----->	GDHS800702	GDHS800801	GDHS800802	GDHS800901	GDHS800902	GDHS801001					
		LAB SAMPLE ID ---->	41665-033	41665-034	41665-035	41665-036	41665-038	41666-002					
		ID FROM REPORT -->	092819	092820	092821	092822	092824	092805					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94					
		DATE EXTRACTED -->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/07/94					
		DATE ANALYZED ---->	10/10/94	10/10/94	10/07/94	10/07/94	10/07/94	10/11/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS16	VAL
65-85-0	Benzoic acid	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
84-74-2	Di-n-butylphthalate	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
111-91-1	bis(2-Chloroethoxy)methane	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
206-44-0	Fluoranthene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
120-83-2	2,4-Dichlorophenol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
92-87-5	Benidine	2300.	UJ	2100.	UJ	2900.	UJ	2100.	UJ	2100.	UJ	2400.	U
120-82-1	1,2,4-Trichlorobenzene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
129-00-0	Pyrene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
91-20-3	Naphthalene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
85-68-7	Butylbenzylphthalate	450.	U	580.	U	580.	U	420.	U	410.	U	490.	U
106-47-8	4-Chloroaniline	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
91-94-1	3,3'-Dichlorobenzidine	900.	U	820.	U	1200.	U	830.	U	820.	U	970.	U
87-68-3	Hexachlorobutadiene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
56-55-3	Benzo(a)anthracene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
59-50-7	4-Chloro-3-methylphenol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
218-01-9	Chrysene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
91-57-6	2-Methylnaphthalene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	450.	UJ	390.	J	580.	UJ	420.	UJ	410.	UJ	490.	U
77-47-4	Hexachlorocyclopentadiene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
117-84-0	Di-n-octylphthalate	450.	UJ	410.	UJ	580.	UJ	420.	UJ	410.	UJ	490.	U
88-06-2	2,4,6-Trichlorophenol	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
205-99-2	Benzo(b)fluoranthene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
95-95-4	2,4,5-Trichlorophenol	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
207-08-9	Benzo(k)fluoranthene	450.	UJ	410.	UJ	580.	U	420.	U	410.	U	490.	U
91-58-7	2-Chloronaphthalene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
50-32-8	Benzo(a)pyrene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
88-74-4	2-Nitroaniline	2300.	U	2100.	U	2900.	U	2100.	U	2100.	U	2400.	U
193-39-5	Indeno(1,2,3-cd)pyrene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
131-11-3	Dimethylphthalate	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
53-70-3	Dibenzo(a,h)anthracene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
208-96-8	Acenaphthylene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
191-24-2	Benzo(g,h,i)perylene	450.	U	410.	U	580.	U	420.	U	410.	U	490.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-B010-02	GDH-S-B011-01	GDH-S-B011-02	GDH-S-B012-01	GDH-S-B012-02	GDH-S-B013-01					
		ORIGINAL ID ----->	GDHSB01002	GDHSB01101	GDHSB01102	GDHSB01201	GDHSB01202	GDHSB01301					
		LAB SAMPLE ID ---->	41665-037	41667-005	41667-006	41667-007	41667-008	41693-010					
		ID FROM REPORT -->	092823	092825	092826	092827	092828	093003					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/29/94					
		DATE EXTRACTED -->	10/05/94	10/04/94	10/04/94	10/04/94	10/04/94	10/07/94					
		DATE ANALYZED ---->	10/07/94	10/05/94	10/05/94	10/05/94	10/05/94	10/10/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS15	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS16	VAL
62-75-9	N-Nitrosodimethylamine	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
606-20-2	2,6-Dinitrotoluene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
108-95-2	Phenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
99-09-2	3-Nitroaniline	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
62-53-3	Aniline	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
83-32-9	Acenaphthene	500.	U	410.	U	600.	U	94.	J	450.	U	410.	U
111-44-4	bis(2-Chloroethyl)ether	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
51-28-5	2,4-Dinitrophenol	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
95-57-8	2-Chlorophenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
100-02-7	4-Nitrophenol	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
541-73-1	1,3-Dichlorobenzene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
132-64-9	Dibenzofuran	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
106-46-7	1,4-Dichlorobenzene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
121-14-2	2,4-Dinitrotoluene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
100-51-6	Benzyl alcohol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
84-66-2	Diethylphthalate	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
95-50-1	1,2-Dichlorobenzene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
7005-72-3	4-Chlorophenylphenylether	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
95-48-7	2-Methylphenol (o-Cresol)	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
86-73-7	Fluorene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
100-01-6	4-Nitroaniline	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
106-44-5	4-Methylphenol (p-Cresol)	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
621-64-7	N-Nitroso-di-n-propylamine	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
86-30-6	N-Nitrosodiphenylamine	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
67-72-1	Hexachloroethane	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
101-55-3	4-Bromophenylphenylether	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
98-95-3	Nitrobenzene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
118-74-1	Hexachlorobenzene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
78-59-1	Isophorone	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
87-86-5	Pentachlorophenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	UJ
88-75-5	2-Nitrophenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
85-01-8	Phenanthrene	500.	U	410.	U	600.	U	760.	U	450.	U	410.	U
105-67-9	2,4-Dimethylphenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
120-12-7	Anthracene	500.	U	410.	U	600.	U	180.	J	450.	U	410.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVQA		SAMPLE ID ----->	GDH-S-B010-02	GDH-S-B011-01	GDH-S-B011-02	GDH-S-B012-01	GDH-S-B012-02	GDH-S-B013-01					
		ORIGINAL ID ----->	GDHSB01002	GDHSB01101	GDHSB01102	GDHSB01201	GDHSB01202	GDHSB01301					
		LAB SAMPLE ID ---->	41665-037	41667-005	41667-006	41667-007	41667-008	41693-010					
		ID FROM REPORT -->	092823	092825	092826	092827	092828	093003					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/29/94					
		DATE EXTRACTED -->	10/05/94	10/04/94	10/04/94	10/04/94	10/04/94	10/07/94					
		DATE ANALYZED ---->	10/07/94	10/05/94	10/05/94	10/05/94	10/05/94	10/10/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS15	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS16	VAL
65-85-0	Benzoic acid	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
84-74-2	Di-n-butylphthalate	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
111-91-1	bis(2-Chloroethoxy)methane	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
206-44-0	Fluoranthene	500.	U	410.	U	410.	J	1100.	U	450.	U	410.	U
120-83-2	2,4-Dichlorophenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
92-87-5	Benzidine	2500.	UJ	2000.	UJ	3000.	UJ	1900.	UJ	2200.	UJ	2000.	UJ
120-82-1	1,2,4-Trichlorobenzene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
129-00-0	Pyrene	500.	U	410.	U	420.	J	790.	U	450.	U	410.	U
91-20-3	Naphthalene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
85-68-7	Butylbenzylphthalate	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
106-47-8	4-Chloroaniline	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
91-94-1	3,3'-Dichlorobenzidine	1000.	U	810.	U	1200.	U	780.	U	890.	U	810.	U
87-68-3	Hexachlorobutadiene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
56-55-3	Benzo(a)anthracene	500.	U	410.	U	120.	J	530.	U	450.	U	410.	U
59-50-7	4-Chloro-3-methylphenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
218-01-9	Chrysene	500.	U	410.	U	140.	J	490.	U	450.	U	410.	U
91-57-6	2-Methylnaphthalene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	500.	UJ	410.	UJ	400.	J	180.	J	450.	UJ	410.	UJ
77-47-4	Hexachlorocyclopentadiene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
117-84-0	Di-n-octylphthalate	500.	UJ	410.	U	600.	U	390.	U	450.	U	410.	UJ
88-06-2	2,4,6-Trichlorophenol	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
205-99-2	Benzo(b)fluoranthene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
95-95-4	2,4,5-Trichlorophenol	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
207-08-9	Benzo(k)fluoranthene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	UJ
91-58-7	2-Chloronaphthalene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
50-32-8	Benzo(a)pyrene	500.	U	410.	U	140.	J	410.	U	450.	U	410.	U
88-74-4	2-Nitroaniline	2500.	U	2000.	U	3000.	U	1900.	U	2200.	U	2000.	U
193-39-5	Indeno(1,2,3-cd)pyrene	500.	U	410.	U	600.	U	180.	J	450.	U	410.	U
131-11-3	Dimethylphthalate	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
53-70-3	Dibenzo(a,h)anthracene	500.	U	410.	U	600.	U	84.	J	450.	U	410.	U
208-96-8	Acenaphthylene	500.	U	410.	U	600.	U	390.	U	450.	U	410.	U
191-24-2	Benzo(g,h,i)perylene	500.	U	410.	U	600.	U	170.	J	450.	U	410.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8013-02	GDH-S-8014-01	GDH-S-8014-02	GDH-S-8015-01	GDH-S-8015-02	GDH-S-8016-01			
		ORIGINAL ID ----->	GDHS801302	GDHS801401	GDHS801402	GDHS801501	GDHS801502	GDHS801601			
		LAB SAMPLE ID ---->	41693-011	41693-012	41693-013	41693-014	41693-015	41693-016			
		ID FROM REPORT -->	093004	093005	093006	093007	093008	093009			
		SAMPLE DATE ----->	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94			
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94			
		DATE ANALYZED ---->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL
62-75-9	N-Nitrosodimethylamine	440.	U	390.	U	770.	U	400.	U	600.	U
606-20-2	2,6-Dinitrotoluene	440.	U	390.	U	770.	U	400.	U	600.	U
108-95-2	Phenol	440.	U	390.	U	770.	U	400.	U	600.	U
99-09-2	3-Nitroaniline	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
62-53-3	Aniline	440.	U	390.	U	770.	U	400.	U	600.	U
83-32-9	Acenaphthene	440.	U	390.	U	770.	U	400.	U	600.	U
111-44-4	bis(2-Chloroethyl)ether	440.	U	390.	U	770.	U	400.	U	600.	U
51-28-5	2,4-Dinitrophenol	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
95-57-8	2-Chlorophenol	440.	U	390.	U	770.	U	400.	U	600.	U
100-02-7	4-Nitrophenol	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
541-73-1	1,3-Dichlorobenzene	440.	U	390.	U	770.	U	400.	U	600.	U
132-64-9	Dibenzofuran	440.	U	390.	U	770.	U	400.	U	600.	U
106-46-7	1,4-Dichlorobenzene	440.	U	390.	U	770.	U	400.	U	600.	U
121-14-2	2,4-Dinitrotoluene	440.	U	390.	U	770.	U	400.	U	600.	U
100-51-6	Benzyl alcohol	440.	U	390.	U	770.	U	400.	U	600.	U
84-66-2	Diethylphthalate	440.	U	390.	U	770.	U	400.	U	600.	U
95-50-1	1,2-Dichlorobenzene	440.	U	390.	U	770.	U	400.	U	600.	U
7005-72-3	4-Chlorophenylphenylether	440.	U	390.	U	770.	U	400.	U	600.	U
95-48-7	2-Methylphenol (o-Cresol)	440.	U	390.	U	770.	U	400.	U	600.	U
86-73-7	Fluorene	440.	U	390.	U	770.	U	400.	U	600.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440.	U	390.	U	770.	U	400.	U	600.	U
100-01-6	4-Nitroaniline	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
106-44-5	4-Methylphenol (p-Cresol)	440.	U	390.	U	770.	U	400.	U	600.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
621-64-7	N-Nitroso-di-n-propylamine	440.	U	390.	U	770.	U	400.	U	600.	U
86-30-6	N-Nitrosodiphenylamine	440.	U	390.	U	770.	U	400.	U	600.	U
67-72-1	Hexachloroethane	440.	U	390.	U	770.	U	400.	U	600.	U
101-55-3	4-Bromophenylphenylether	440.	U	390.	U	770.	U	400.	U	600.	U
98-95-3	Nitrobenzene	440.	U	390.	U	770.	U	400.	U	600.	U
118-74-1	Hexachlorobenzene	440.	U	390.	U	770.	U	400.	U	600.	U
78-59-1	Isophorone	440.	U	390.	U	770.	U	400.	U	600.	U
87-86-5	Pentachlorophenol	440.	UJ	390.	UJ	770.	UJ	400.	UJ	600.	UJ
88-75-5	2-Nitrophenol	440.	U	390.	U	770.	U	400.	U	600.	U
85-01-8	Phenanthrene	440.	U	390.	U	770.	U	400.	U	600.	U
105-67-9	2,4-Dimethylphenol	440.	U	390.	U	770.	U	400.	U	600.	U
120-12-7	Anthracene	440.	U	390.	U	770.	U	400.	U	600.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-SV0A		SAMPLE ID ----->	GDH-S-8013-02	GDH-S-8014-01	GDH-S-8014-02	GDH-S-8015-01	GDH-S-8015-02	GDH-S-8016-01			
		ORIGINAL ID ----->	GDHS801302	GDHS801401	GDHS801402	GDHS801501	GDHS801502	GDHS801601			
		LAB SAMPLE ID ---->	41693-011	41693-012	41693-013	41693-014	41693-015	41693-016			
		ID FROM REPORT -->	093004	093005	093006	093007	093008	093009			
		SAMPLE DATE ----->	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94			
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94			
		DATE ANALYZED ---->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL
65-85-0	Benzoic acid	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
84-74-2	Di-n-butylphthalate	440.	U	140.	J	770.	U	400.	U	600.	U
111-91-1	bis(2-Chloroethoxy)methane	440.	U	390.	U	770.	U	400.	U	600.	U
206-44-0	Fluoranthene	440.	U	390.	U	770.	U	190.	J	600.	U
120-83-2	2,4-Dichlorophenol	440.	U	390.	U	770.	U	400.	U	600.	U
92-87-5	Benzidine	2200.	UJ	1900.	UJ	3900.	UJ	2000.	UJ	3000.	UJ
120-82-1	1,2,4-Trichlorobenzene	440.	U	390.	U	770.	U	400.	U	600.	U
129-00-0	Pyrene	440.	U	390.	U	770.	U	170.	J	600.	U
91-20-3	Naphthalene	440.	U	390.	U	770.	U	400.	U	600.	U
85-68-7	Butylbenzylphthalate	440.	U	390.	U	770.	U	83.	J	600.	U
106-47-8	4-Chloroaniline	440.	U	390.	U	770.	U	400.	U	600.	U
91-94-1	3,3'-Dichlorobenzidine	890.	U	780.	U	1500.	U	790.	U	1200.	U
87-68-3	Hexachlorobutadiene	440.	U	390.	U	770.	U	400.	U	600.	U
56-55-3	Benzo(a)anthracene	440.	U	390.	U	770.	U	110.	J	600.	U
59-50-7	4-Chloro-3-methylphenol	440.	U	390.	U	770.	U	400.	U	600.	U
218-01-9	Chrysene	440.	U	390.	U	770.	U	120.	J	600.	U
91-57-6	2-Methylnaphthalene	440.	U	390.	U	770.	U	400.	U	600.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	440.	UJ	680.	J	770.	UJ	150.	J	600.	UJ
77-47-4	Hexachlorocyclopentadiene	440.	U	390.	U	770.	U	400.	U	600.	U
117-84-0	Di-n-octylphthalate	440.	UJ	390.	UJ	770.	UJ	400.	UJ	600.	UJ
88-06-2	2,4,6-Trichlorophenol	440.	U	390.	U	770.	U	400.	U	600.	U
205-99-2	Benzo(b)fluoranthene	440.	U	390.	U	770.	U	110.	J	600.	U
95-95-4	2,4,5-Trichlorophenol	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
207-08-9	Benzo(k)fluoranthene	440.	UJ	390.	UJ	770.	UJ	88.	J	600.	UJ
91-58-7	2-Chloronaphthalene	440.	U	390.	U	770.	U	400.	U	600.	U
50-32-8	Benzo(a)pyrene	440.	U	390.	U	770.	U	82.	J	600.	U
88-74-4	2-Nitroaniline	2200.	U	1900.	U	3900.	U	2000.	U	3000.	U
193-39-5	Indeno(1,2,3-cd)pyrene	440.	U	390.	U	770.	U	400.	U	600.	U
131-11-3	Dimethylphthalate	440.	U	390.	U	770.	U	400.	U	600.	U
53-70-3	Dibenzo(a,h)anthracene	440.	U	390.	U	770.	U	400.	U	600.	U
208-96-8	Acenaphthylene	440.	U	390.	U	770.	U	400.	U	600.	U
191-24-2	Benzo(g,h,i)perylene	440.	U	390.	U	770.	U	400.	U	600.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8016-02	GDH-S-8017-01	GDH-S-8017-02	GDH-S-8018-01	GDH-S-8019-01	GDH-S-8019-02					
		ORIGINAL ID ----->	GDHS801602	GDHS801701	GDHS801702	GDHS801801	GDHS801901	GDHS801902					
		LAB SAMPLE ID ---->	41693-017	41713-011	41713-012	41713-013	41713-014	41713-015					
		ID FROM REPORT -->	093010	100401	100402	100403	100404	100405					
		SAMPLE DATE ----->	09/29/94	10/03/94	10/03/94	10/03/94	10/03/94	10/03/94					
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94					
		DATE ANALYZED ---->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL		
62-75-9	N-Nitrosodimethylamine	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
606-20-2	2,6-Dinitrotoluene	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
108-95-2	Phenol	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
99-09-2	3-Nitroaniline	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U	2100.	U
62-53-3	Aniline	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
83-32-9	Acenaphthene	480.	U	140.	J	640.	U	440.	U	410.	U	420.	U
111-44-4	bis(2-Chloroethyl)ether	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
51-28-5	2,4-Dinitrophenol	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U	2100.	U
95-57-8	2-Chlorophenol	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
100-02-7	4-Nitrophenol	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U	2100.	U
541-73-1	1,3-Dichlorobenzene	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
132-64-9	Dibenzofuran	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
106-46-7	1,4-Dichlorobenzene	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
121-14-2	2,4-Dinitrotoluene	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
100-51-6	Benzyl alcohol	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
84-66-2	Diethylphthalate	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
95-50-1	1,2-Dichlorobenzene	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
7005-72-3	4-Chlorophenylphenylether	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
95-48-7	2-Methylphenol (o-Cresol)	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
86-73-7	Fluorene	480.	U	110.	J	640.	U	440.	U	410.	U	420.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
100-01-6	4-Nitroaniline	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U	2100.	U
106-44-5	4-Methylphenol (p-Cresol)	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U	2100.	U
621-64-7	N-Nitroso-di-n-propylamine	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
86-30-6	N-Nitrosodiphenylamine	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
67-72-1	Hexachloroethane	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
101-55-3	4-Bromophenylphenylether	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
98-95-3	Nitrobenzene	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
118-74-1	Hexachlorobenzene	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
78-59-1	Isophorone	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
87-86-5	Pentachlorophenol	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
88-75-5	2-Nitrophenol	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
85-01-8	Phenanthrene	480.	U	1000.		640.	U	92.	J	410.	U	420.	U
105-67-9	2,4-Dimethylphenol	480.	U	430.	U	640.	U	440.	U	410.	U	420.	U
120-12-7	Anthracene	480.	U	100.	J	640.	U	440.	U	410.	U	420.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8016-02	GDH-S-8017-01	GDH-S-8017-02	GDH-S-8018-01	GDH-S-8019-01	GDH-S-8019-02			
		ORIGINAL ID ----->	GDHS801602	GDHS801701	GDHS801702	GDHS801801	GDHS801901	GDHS801902			
		LAB SAMPLE ID ---->	41693-017	41713-011	41713-012	41713-013	41713-014	41713-015			
		ID FROM REPORT -->	093010	100401	100402	100403	100404	100405			
		SAMPLE DATE ----->	09/29/94	10/03/94	10/03/94	10/03/94	10/03/94	10/03/94			
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94			
		DATE ANALYZED ---->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL
65-85-0	Benzoic acid	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U
84-74-2	Di-n-butylphthalate	480.	U	430.	U	640.	U	440.	U	410.	U
111-91-1	bis(2-Chloroethoxy)methane	480.	U	430.	U	640.	U	440.	U	410.	U
206-44-0	Fluoranthene	480.	U	1200.	U	640.	U	150.	J	410.	U
120-83-2	2,4-Dichlorophenol	480.	U	430.	U	640.	U	440.	U	410.	U
92-87-5	Benzidine	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U
120-82-1	1,2,4-Trichlorobenzene	480.	U	430.	U	640.	U	440.	U	410.	U
129-00-0	Pyrene	480.	U	900.	U	640.	U	120.	J	410.	U
91-20-3	Naphthalene	480.	U	110.	J	640.	U	440.	U	410.	U
85-68-7	Butylbenzylphthalate	480.	U	430.	U	640.	U	100.	J	410.	U
106-47-8	4-Chloroaniline	480.	U	430.	U	640.	U	440.	U	410.	U
91-94-1	3,3'-Dichlorobenzidine	950.	U	860.	U	1300.	U	880.	U	820.	U
87-68-3	Hexachlorobutadiene	480.	U	430.	U	640.	U	440.	U	410.	U
56-55-3	Benzo(a)anthracene	480.	U	330.	J	640.	U	440.	U	410.	U
59-50-7	4-Chloro-3-methylphenol	480.	U	430.	U	640.	U	440.	U	410.	U
218-01-9	Chrysene	480.	U	410.	J	640.	U	440.	U	410.	U
91-57-6	2-Methylnaphthalene	480.	U	430.	U	640.	U	440.	U	410.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	480.	U	430.	U	640.	U	100.	J	180.	J
77-47-4	Hexachlorocyclopentadiene	480.	U	430.	U	640.	U	440.	U	410.	U
117-84-0	Di-n-octylphthalate	480.	U	430.	U	640.	U	440.	U	410.	U
88-06-2	2,4,6-Trichlorophenol	480.	U	430.	U	640.	U	440.	U	410.	U
205-99-2	Benzo(b)fluoranthene	480.	U	380.	J	640.	U	440.	U	410.	U
95-95-4	2,4,5-Trichlorophenol	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U
207-08-9	Benzo(k)fluoranthene	480.	U	250.	J	640.	U	440.	U	410.	U
91-58-7	2-Chloronaphthalene	480.	U	430.	U	640.	U	440.	U	410.	U
50-32-8	Benzo(a)pyrene	480.	U	290.	J	640.	U	440.	U	410.	U
88-74-4	2-Nitroaniline	2400.	U	2200.	U	3200.	U	2200.	U	2000.	U
193-39-5	Indeno(1,2,3-cd)pyrene	480.	U	160.	J	640.	U	440.	U	410.	U
131-11-3	Dimethylphthalate	480.	U	430.	U	640.	U	440.	U	410.	U
53-70-3	Dibenzo(a,h)anthracene	480.	U	430.	U	640.	U	440.	U	410.	U
208-96-8	Acenaphthylene	480.	U	430.	U	640.	U	440.	U	410.	U
191-24-2	Benzo(g,h,i)perylene	480.	U	160.	J	640.	U	440.	U	410.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-B020-01	GDH-S-B020-02	GDH-S-B021-01	GDH-S-B022-01	GDH-S-B023-01	GDH-S-B023-02					
		ORIGINAL ID ----->	GDHSB02001	GDHSB02002	GDHSB02101	GDHSB02201	GDHSB02301	GDHSB02302					
		LAB SAMPLE ID ---->	41713-016	41713-018	41713-017	41713-019	41734-030	41734-031					
		ID FROM REPORT -->	100406	100408	100407	100409	100510	100511					
		SAMPLE DATE ----->	10/03/94	10/03/94	10/03/94	10/03/94	10/04/94	10/04/94					
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/13/94	10/13/94					
		DATE ANALYZED ---->	10/11/94	10/11/94	10/11/94	10/11/94	10/14/94	10/14/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS17	VAL	CHS17	VAL
62-75-9	N-Nitrosodimethylamine	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
606-20-2	2,6-Dinitrotoluene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
108-95-2	Phenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
99-09-2	3-Nitroaniline	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
62-53-3	Aniline	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
83-32-9	Acenaphthene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
111-44-4	bis(2-Chloroethyl)ether	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
51-28-5	2,4-Dinitrophenol	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
95-57-8	2-Chlorophenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
100-02-7	4-Nitrophenol	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
541-73-1	1,3-Dichlorobenzene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
132-64-9	Dibenzofuran	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
106-46-7	1,4-Dichlorobenzene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
121-14-2	2,4-Dinitrotoluene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
100-51-6	Benzyl alcohol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
84-66-2	Diethylphthalate	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
95-50-1	1,2-Dichlorobenzene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
7005-72-3	4-Chlorophenylphenylether	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
95-48-7	2-Methylphenol (o-Cresol)	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
86-73-7	Fluorene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
100-01-6	4-Nitroaniline	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
106-44-5	4-Methylphenol (p-Cresol)	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
621-64-7	N-Nitroso-di-n-propylamine	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
86-30-6	N-Nitrosodiphenylamine	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
67-72-1	Hexachloroethane	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
101-55-3	4-Bromophenylphenylether	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
98-95-3	Nitrobenzene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
118-74-1	Hexachlorobenzene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
78-59-1	Isophorone	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
87-86-5	Pentachlorophenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
88-75-5	2-Nitrophenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
85-01-8	Phenanthrene	380.	U	430.	U	190.	J	430.	U	390.	U	430.	U
105-67-9	2,4-Dimethylphenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
120-12-7	Anthracene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8020-01	GDH-S-8020-02	GDH-S-8021-01	GDH-S-8022-01	GDH-S-8023-01	GDH-S-8023-02					
		ORIGINAL ID ----->	GDHS802001	GDHS802002	GDHS802101	GDHS802201	GDHS802301	GDHS802302					
		LAB SAMPLE ID ---->	41713-016	41713-018	41713-017	41713-019	41734-030	41734-031					
		ID FROM REPORT -->	100406	100408	100407	100409	100510	100511					
		SAMPLE DATE ----->	10/03/94	10/03/94	10/03/94	10/03/94	10/04/94	10/04/94					
		DATE EXTRACTED -->	10/07/94	10/07/94	10/07/94	10/07/94	10/13/94	10/13/94					
		DATE ANALYZED ---->	10/11/94	10/11/94	10/11/94	10/11/94	10/14/94	10/14/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS17	VAL	CHS17	VAL
65-85-0	Benzoic acid	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
84-74-2	Di-n-butylphthalate	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
111-91-1	bis(2-Chloroethoxy)methane	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
206-44-0	Fluoranthene	100.	J	430.	U	290.	J	94.	J	150.	J	430.	U
120-83-2	2,4-Dichlorophenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
92-87-5	Benzidine	1900.	U	2100.	U	2000.	U	2100.	U	1900.	UJ	2200.	UJ
120-82-1	1,2,4-Trichlorobenzene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
129-00-0	Pyrene	87.	J	430.	U	250.	J	430.	U	140.	J	430.	U
91-20-3	Naphthalene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
85-68-7	Butylbenzylphthalate	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
106-47-8	4-Chloroaniline	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
91-94-1	3,3'-Dichlorobenzidine	760.	U	850.	U	810.	U	850.	U	770.	U	870.	U
87-68-3	Hexachlorobutadiene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
56-55-3	Benzo(a)anthracene	380.	U	430.	U	150.	J	430.	U	97.	J	430.	U
59-50-7	4-Chloro-3-methylphenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
218-01-9	Chrysene	380.	U	430.	U	150.	J	430.	U	98.	J	430.	U
91-57-6	2-Methylnaphthalene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	380.	U	430.	U	410.	U	130.	J	390.	U	430.	U
77-47-4	Hexachlorocyclopentadiene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
117-84-0	Di-n-octylphthalate	380.	U	430.	U	410.	U	430.	U	390.	UJ	430.	UJ
88-06-2	2,4,6-Trichlorophenol	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
205-99-2	Benzo(b)fluoranthene	380.	U	430.	U	140.	J	430.	U	390.	U	430.	U
95-95-4	2,4,5-Trichlorophenol	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
207-08-9	Benzo(k)fluoranthene	380.	U	430.	U	100.	J	430.	U	390.	U	430.	U
91-58-7	2-Chloronaphthalene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
50-32-8	Benzo(a)pyrene	380.	U	430.	U	110.	J	430.	U	81.	J	430.	U
88-74-4	2-Nitroaniline	1900.	U	2100.	U	2000.	U	2100.	U	1900.	U	2200.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
131-11-3	Dimethylphthalate	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
53-70-3	Dibenzo(a,h)anthracene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
208-96-8	Acenaphthylene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
191-24-2	Benzo(g,h,i)perylene	380.	U	430.	U	410.	U	430.	U	390.	U	430.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SV846-SVOA		SAMPLE ID ----->	GDH-S-8024-01	GDH-S-8025-01	GDH-S-8026-01	GDH-S-8026-02	GDH-S-8027-01	GDH-S-8027-02			
		ORIGINAL ID ----->	GDHS802401	GDHS802501	GDHS802601	GDHS802602	GDHS802701	GDHS802702			
		LAB SAMPLE ID ---->	41734-032	41734-033	41734-034	41734-035	41734-036	41734-037			
		ID FROM REPORT --->	100512	100513	100514	100515	100516	100517			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED --->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94			
		DATE ANALYZED ---->	10/14/94	10/14/94	10/14/94	10/14/94	10/17/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
62-75-9	N-Nitrosodimethylamine	440.	U	430.	U	410.	U	420.	U	430.	U
606-20-2	2,6-Dinitrotoluene	440.	U	430.	U	410.	U	420.	U	430.	U
108-95-2	Phenol	440.	U	430.	U	410.	U	420.	U	430.	U
99-09-2	3-Nitroaniline	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
62-53-3	Aniline	440.	U	430.	U	410.	U	420.	U	430.	U
83-32-9	Acenaphthene	440.	U	430.	U	590.	U	420.	U	170.	J
111-44-4	bis(2-Chloroethyl)ether	440.	U	430.	U	410.	U	420.	U	430.	U
51-28-5	2,4-Dinitrophenol	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
95-57-8	2-Chlorophenol	440.	U	430.	U	410.	U	420.	U	430.	U
100-02-7	4-Nitrophenol	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
541-73-1	1,3-Dichlorobenzene	440.	U	430.	U	410.	U	420.	U	430.	U
132-64-9	Dibenzofuran	440.	U	430.	U	220.	J	420.	U	430.	U
106-46-7	1,4-Dichlorobenzene	440.	U	430.	U	410.	U	420.	U	430.	U
121-14-2	2,4-Dinitrotoluene	440.	U	430.	U	410.	U	420.	U	430.	U
100-51-6	Benzyl alcohol	440.	U	430.	U	410.	U	420.	U	430.	U
84-66-2	Diethylphthalate	440.	U	430.	U	410.	U	420.	U	430.	U
95-50-1	1,2-Dichlorobenzene	440.	U	430.	U	410.	U	420.	U	430.	U
7005-72-3	4-Chlorophenylphenylether	440.	U	430.	U	410.	U	420.	U	430.	U
95-48-7	2-Methylphenol (o-Cresol)	440.	U	430.	U	410.	U	420.	U	430.	U
86-73-7	Fluorene	440.	U	430.	U	460.	U	420.	U	210.	J
108-60-1	2,2'-oxybis(1-Chloropropane)	440.	U	430.	U	410.	U	420.	U	430.	U
100-01-6	4-Nitroaniline	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
106-44-5	4-Methylphenol (p-Cresol)	440.	U	430.	U	410.	U	420.	U	430.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
621-64-7	N-Nitroso-di-n-propylamine	440.	U	430.	U	410.	U	420.	U	430.	U
86-30-6	N-Nitrosodiphenylamine	440.	U	430.	U	410.	U	420.	U	430.	U
67-72-1	Hexachloroethane	440.	U	430.	U	410.	U	420.	U	430.	U
101-55-3	4-Bromophenylphenylether	440.	U	430.	U	410.	U	420.	U	430.	U
98-95-3	Nitrobenzene	440.	U	430.	U	410.	U	420.	U	430.	U
118-74-1	Hexachlorobenzene	440.	U	430.	U	410.	U	420.	U	430.	U
78-59-1	Isophorone	440.	U	430.	U	410.	U	420.	U	430.	U
87-86-5	Pentachlorophenol	440.	U	430.	U	410.	U	420.	U	430.	U
88-75-5	2-Nitrophenol	440.	U	430.	U	410.	U	420.	U	430.	U
85-01-8	Phenanthrene	240.	J	360.	J	2500.	U	420.	U	1100.	U
105-67-9	2,4-Dimethylphenol	440.	U	430.	U	410.	U	420.	U	430.	U
120-12-7	Anthracene	440.	U	94.	J	840.	U	420.	U	170.	J

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SU846-SVOA		SAMPLE ID -----> ORIGINAL ID -----> LAB SAMPLE ID ----> ID FROM REPORT ---> SAMPLE DATE -----> DATE EXTRACTED ---> DATE ANALYZED ----> MATRIX -----> UNITS ----->	GDH-S-B024-01 GDHSB02401 41734-032 100512 10/04/94 10/13/94 10/14/94 Soil UG/KG	GDH-S-B025-01 GDHSB02501 41734-033 100513 10/04/94 10/13/94 10/14/94 Soil UG/KG	GDH-S-B026-01 GDHSB02601 41734-034 100514 10/04/94 10/13/94 10/14/94 Soil UG/KG	GDH-S-B026-02 GDHSB02602 41734-035 100515 10/04/94 10/13/94 10/14/94 Soil UG/KG	GDH-S-B027-01 GDHSB02701 41734-036 100516 10/04/94 10/13/94 10/17/94 Soil UG/KG	GDH-S-B027-02 GDHSB02702 41734-037 100517 10/04/94 10/13/94 10/17/94 Soil UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
65-85-0	Benzoic acid	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
84-74-2	Di-n-butylphthalate	440.	U	430.	U	410.	U	420.	U	430.	U
111-91-1	bis(2-Chloroethoxy)methane	440.	U	430.	U	410.	U	420.	U	430.	U
206-44-0	Fluoranthene	520.	U	530.	U	3000.	U	420.	U	1700.	U
120-83-2	2,4-Dichlorophenol	440.	U	430.	U	410.	U	420.	U	430.	U
92-87-5	Benzidine	2200.	UJ	2100.	UJ	2100.	UJ	2100.	UJ	2200.	U
120-82-1	1,2,4-Trichlorobenzene	440.	U	430.	U	410.	U	420.	U	430.	U
129-00-0	Pyrene	510.	U	440.	U	2800.	U	420.	U	1400.	U
91-20-3	Naphthalene	440.	U	430.	U	130.	J	420.	U	430.	U
85-68-7	Butylbenzylphthalate	440.	U	430.	U	410.	U	420.	U	430.	U
106-47-8	4-Chloroaniline	440.	U	430.	U	410.	U	420.	U	430.	U
91-94-1	3,3'-Dichlorobenzidine	880.	U	860.	U	830.	U	840.	U	870.	U
87-68-3	Hexachlorobutadiene	440.	U	430.	U	410.	U	420.	U	430.	U
56-55-3	Benzo(a)anthracene	280.	J	230.	J	1900.	U	420.	U	810.	U
59-50-7	4-Chloro-3-methylphenol	440.	U	430.	U	410.	U	420.	U	430.	U
218-01-9	Chrysene	290.	J	210.	J	1700.	U	420.	U	840.	U
91-57-6	2-Methylnaphthalene	440.	U	430.	U	91.	J	420.	U	430.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	440.	U	430.	U	100.	J	420.	U	300.	J
77-47-4	Hexachlorocyclopentadiene	440.	U	430.	U	410.	U	420.	U	430.	U
117-84-0	Di-n-octylphthalate	440.	UJ	430.	UJ	410.	UJ	420.	UJ	430.	U
88-06-2	2,4,6-Trichlorophenol	440.	U	430.	U	410.	U	420.	U	430.	U
205-99-2	Benzo(b)fluoranthene	440.	U	430.	U	1400.	U	420.	U	700.	U
95-95-4	2,4,5-Trichlorophenol	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
207-08-9	Benzo(k)fluoranthene	440.	U	430.	U	1100.	U	420.	U	810.	U
91-58-7	2-Chloronaphthalene	440.	U	430.	U	410.	U	420.	U	430.	U
50-32-8	Benzo(a)pyrene	230.	J	190.	J	1200.	U	420.	U	710.	U
88-74-4	2-Nitroaniline	2200.	U	2100.	U	2100.	U	2100.	U	2200.	U
193-39-5	Indeno(1,2,3-cd)pyrene	94.	J	430.	U	380.	J	420.	U	360.	J
131-11-3	Dimethylphthalate	440.	U	430.	U	410.	U	420.	U	430.	U
53-70-3	Dibenzo(a,h)anthracene	440.	U	430.	U	210.	J	420.	U	160.	J
208-96-8	Acenaphthylene	440.	U	430.	U	410.	U	420.	U	430.	U
191-24-2	Benzo(g,h,i)perylene	440.	U	430.	U	320.	J	420.	U	340.	J
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-B028-01	GDH-S-B029-01	GDH-S-B030-01	GDH-S-B031-01	GDH-S-B031-02	GDH-S-B032-01			
		ORIGINAL ID ----->	GDHSB02801	GDHSB02901	GDHSB03001	GDHSB03101	GDHSB03102	GDHSB03201			
		LAB SAMPLE ID ---->	41734-038	41734-039	41734-040	41734-021	41734-022	41734-023			
		ID FROM REPORT -->	100518	100519	100520	100501	100502	100503			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94			
		DATE ANALYZED ---->	10/17/94	10/17/94	10/17/94	10/14/94	10/14/94	10/14/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
62-75-9	N-Nitrosodimethylamine	440.	U	440.	U	430.	U	420.	U	390.	U
606-20-2	2,6-Dinitrotoluene	440.	U	440.	U	430.	U	420.	U	390.	U
108-95-2	Phenol	440.	U	440.	U	430.	U	420.	U	390.	U
99-09-2	3-Nitroaniline	2200.	U	2200.	U	2100.	U	2100.	U	2000.	U
62-53-3	Aniline	440.	U	440.	U	430.	U	420.	U	390.	U
83-32-9	Acenaphthene	390.	J	440.	U	430.	U	420.	U	390.	U
111-44-4	bis(2-Chloroethyl)ether	440.	U	440.	U	430.	U	420.	U	390.	U
51-28-5	2,4-Dinitrophenol	2200.	U	2200.	U	2100.	U	2100.	U	2000.	U
95-57-8	2-Chlorophenol	440.	U	440.	U	430.	U	420.	U	390.	U
100-02-7	4-Nitrophenol	2200.	U	2200.	U	2100.	U	2100.	U	2000.	U
541-73-1	1,3-Dichlorobenzene	440.	U	440.	U	430.	U	420.	U	390.	U
132-64-9	Dibenzofuran	150.	J	440.	U	430.	U	420.	U	390.	U
106-46-7	1,4-Dichlorobenzene	440.	U	440.	U	430.	U	420.	U	390.	U
121-14-2	2,4-Dinitrotoluene	440.	U	440.	U	430.	U	420.	U	390.	U
100-51-6	Benzyl alcohol	440.	U	440.	U	430.	U	420.	U	390.	U
84-66-2	Diethylphthalate	440.	U	440.	U	430.	U	420.	U	390.	U
95-50-1	1,2-Dichlorobenzene	440.	U	440.	U	430.	U	420.	U	390.	U
7005-72-3	4-Chlorophenylphenylether	440.	U	440.	U	430.	U	420.	U	390.	U
95-48-7	2-Methylphenol (o-Cresol)	440.	U	440.	U	430.	U	420.	U	390.	U
86-73-7	Fluorene	240.	J	440.	U	430.	U	420.	U	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440.	U	440.	U	430.	U	420.	U	390.	U
100-01-6	4-Nitroaniline	2200.	U	2200.	U	2100.	U	2100.	U	2000.	U
106-44-5	4-Methylphenol (p-Cresol)	440.	U	440.	U	430.	U	420.	U	390.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2200.	U	2200.	U	2100.	U	2100.	U	2000.	U
621-64-7	N-Nitroso-di-n-propylamine	440.	U	440.	U	430.	U	420.	U	390.	U
86-30-6	N-Nitrosodiphenylamine	440.	U	440.	U	430.	U	420.	U	390.	U
67-72-1	Hexachloroethane	440.	U	440.	U	430.	U	420.	U	390.	U
101-55-3	4-Bromophenylphenylether	440.	U	440.	U	430.	U	420.	U	390.	U
98-95-3	Nitrobenzene	440.	U	440.	U	430.	U	420.	U	390.	U
118-74-1	Hexachlorobenzene	440.	U	440.	U	430.	U	420.	U	390.	U
78-59-1	Isophorone	440.	U	440.	U	430.	U	420.	U	390.	U
87-86-5	Pentachlorophenol	440.	U	440.	U	430.	U	420.	U	390.	U
88-75-5	2-Nitrophenol	440.	U	440.	U	430.	U	420.	U	390.	U
85-01-8	Phenanthrene	2400.	U	440.	U	430.	U	420.	U	390.	U
105-67-9	2,4-Dimethylphenol	440.	U	440.	U	430.	U	420.	U	390.	U
120-12-7	Anthracene	440.	U	440.	U	430.	U	420.	U	390.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8028-01	GDH-S-8029-01	GDH-S-8030-01	GDH-S-8031-01	GDH-S-8031-02	GDH-S-8032-01	
		ORIGINAL ID ----->	GDHS802801	GDHS802901	GDHS803001	GDHS803101	GDHS803102	GDHS803201	
		LAB SAMPLE ID ---->	41734-038	41734-039	41734-040	41734-021	41734-022	41734-023	
		ID FROM REPORT -->	100518	100519	100520	100501	100502	100503	
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	
		DATE EXTRACTED -->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	
		DATE ANALYZED ---->	10/17/94	10/17/94	10/17/94	10/14/94	10/14/94	10/14/94	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
65-85-0	Benzoic acid	2200.	U	2200.	U	2100.	U	2100.	U
84-74-2	Di-n-butylphthalate	440.	U	440.	U	430.	U	420.	U
111-91-1	bis(2-Chloroethoxy)methane	440.	U	440.	U	430.	U	420.	U
206-44-0	Fluoranthene	3100.	U	440.	U	430.	U	420.	U
120-83-2	2,4-Dichlorophenol	440.	U	440.	U	430.	U	420.	U
92-87-5	Benzydine	2200.	U	2200.	U	2100.	U	2100.	UJ
120-82-1	1,2,4-Trichlorobenzene	440.	U	440.	U	430.	U	420.	U
129-00-0	Pyrene	2800.	U	440.	U	430.	U	420.	U
91-20-3	Naphthalene	440.	U	440.	U	430.	U	420.	U
85-68-7	Butylbenzylphthalate	440.	U	440.	U	430.	U	420.	U
106-47-8	4-Chloroaniline	440.	U	440.	U	430.	U	420.	U
91-94-1	3,3'-Dichlorobenzidine	870.	U	870.	U	860.	U	830.	U
87-68-3	Hexachlorobutadiene	440.	U	440.	U	430.	U	420.	U
56-55-3	Benzo(a)anthracene	1700.	U	440.	U	430.	U	420.	U
59-50-7	4-Chloro-3-methylphenol	440.	U	440.	U	430.	U	420.	U
218-01-9	Chrysene	1700.	U	440.	U	430.	U	420.	U
91-57-6	2-Methylnaphthalene	440.	U	440.	U	430.	U	420.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	440.	U	110.	J	430.	U	420.	U
77-47-4	Hexachlorocyclopentadiene	440.	U	440.	U	430.	U	420.	U
117-84-0	Di-n-octylphthalate	440.	U	440.	U	430.	U	420.	UJ
88-06-2	2,4,6-Trichlorophenol	440.	U	440.	U	430.	U	420.	U
205-99-2	Benzo(b)fluoranthene	1400.	U	440.	U	430.	U	420.	U
95-95-4	2,4,5-Trichlorophenol	2200.	U	2200.	U	2100.	U	2100.	U
207-08-9	Benzo(k)fluoranthene	1700.	U	440.	U	430.	U	420.	U
91-58-7	2-Chloronaphthalene	440.	U	440.	U	430.	U	420.	U
50-32-8	Benzo(a)pyrene	1400.	U	440.	U	430.	U	420.	U
88-74-4	2-Nitroaniline	2200.	U	2200.	U	2100.	U	2100.	U
193-39-5	Indeno(1,2,3-cd)pyrene	580.	U	440.	U	430.	U	420.	U
131-11-3	Dimethylphthalate	440.	U	440.	U	430.	U	420.	U
53-70-3	Dibenzo(a,h)anthracene	220.	J	440.	U	430.	U	420.	U
208-96-8	Acenaphthylene	440.	U	440.	U	430.	U	420.	U
191-24-2	Benzo(g,h,i)perylene	510.	U	440.	U	430.	U	420.	U
103-33-3	Azobenzene	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-B032-02	GDH-S-B033-01	GDH-S-B033-02	GDH-S-B034-01	GDH-S-B034-02	GDH-S-B035-01			
		ORIGINAL ID ----->	GDHSB03202	GDHSB03301	GDHSB03302	GDHSB03401	GDHSB03402	GDHSB03501			
		LAB SAMPLE ID ---->	41734-024	41734-025	41734-026	41734-027	41734-028	41734-029			
		ID FROM REPORT --->	100504	100505	100506	100507	100508	100509			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE EXTRACTED -->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94			
		DATE ANALYZED ---->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
62-75-9	N-Nitrosodimethylamine	550.	U	460.	U	490.	U	490.	U	690.	U
606-20-2	2,6-Dinitrotoluene	550.	U	460.	U	490.	U	490.	U	690.	U
108-95-2	Phenol	550.	U	460.	U	490.	U	490.	U	690.	U
99-09-2	3-Nitroaniline	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U
62-53-3	Aniline	550.	U	460.	U	490.	U	490.	U	690.	U
83-32-9	Acenaphthene	170.	J	460.	U	490.	U	490.	U	690.	U
111-44-4	bis(2-Chloroethyl)ether	550.	U	460.	U	490.	U	490.	U	690.	U
51-28-5	2,4-Dinitrophenol	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U
95-57-8	2-Chlorophenol	550.	U	460.	U	490.	U	490.	U	690.	U
100-02-7	4-Nitrophenol	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U
541-73-1	1,3-Dichlorobenzene	550.	U	460.	U	490.	U	490.	U	690.	U
132-64-9	Dibenzofuran	550.	U	460.	U	490.	U	490.	U	690.	U
106-46-7	1,4-Dichlorobenzene	550.	U	460.	U	490.	U	490.	U	690.	U
121-14-2	2,4-Dinitrotoluene	550.	U	460.	U	490.	U	490.	U	690.	U
100-51-6	Benzyl alcohol	550.	U	460.	U	490.	U	490.	U	690.	U
84-66-2	Diethylphthalate	550.	U	460.	U	490.	U	490.	U	690.	U
95-50-1	1,2-Dichlorobenzene	550.	U	460.	U	490.	U	490.	U	690.	U
7005-72-3	4-Chlorophenylphenylether	550.	U	460.	U	490.	U	490.	U	690.	U
95-48-7	2-Methylphenol (o-Cresol)	550.	U	460.	U	490.	U	490.	U	690.	U
86-73-7	Fluorene	190.	J	460.	U	490.	U	490.	U	690.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	550.	U	460.	U	490.	U	490.	U	690.	U
100-01-6	4-Nitroaniline	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U
106-44-5	4-Methylphenol (p-Cresol)	550.	U	460.	U	490.	U	490.	U	690.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U
621-64-7	N-Nitroso-di-n-propylamine	550.	U	460.	U	490.	U	490.	U	690.	U
86-30-6	N-Nitrosodiphenylamine	550.	U	460.	U	490.	U	490.	U	690.	U
67-72-1	Hexachloroethane	550.	U	460.	U	490.	U	490.	U	690.	U
101-55-3	4-Bromophenylphenylether	550.	U	460.	U	490.	U	490.	U	690.	U
98-95-3	Nitrobenzene	550.	U	460.	U	490.	U	490.	U	690.	U
118-74-1	Hexachlorobenzene	550.	U	460.	U	490.	U	490.	U	690.	U
78-59-1	Isophorone	550.	U	460.	U	490.	U	490.	U	690.	U
87-86-5	Pentachlorophenol	550.	U	460.	U	490.	U	490.	U	690.	U
88-75-5	2-Nitrophenol	550.	U	460.	U	490.	U	490.	U	690.	U
85-01-8	Phenanthrene	1200.	U	460.	U	490.	U	490.	U	690.	U
105-67-9	2,4-Dimethylphenol	550.	U	460.	U	490.	U	490.	U	690.	U
120-12-7	Anthracene	310.	J	460.	U	490.	U	490.	U	690.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVOA		SAMPLE ID ----->	GDH-S-8032-02	GDH-S-8033-01	GDH-S-8033-02	GDH-S-8034-01	GDH-S-8034-02	GDH-S-8035-01					
		ORIGINAL IO ----->	GDHS803202	GDHS803301	GDHS803302	GDHS803401	GDHS803402	GDHS803501					
		LAB SAMPLE ID ---->	41734-024	41734-025	41734-026	41734-027	41734-028	41734-029					
		ID FROM REPORT --->	100504	100505	100506	100507	100508	100509					
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94					
		DATE EXTRACTED --->	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94	10/13/94					
		DATE ANALYZED ---->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL		
65-85-0	Benzoic acid	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U	2800.	U
84-74-2	Di-n-butylphthalate	550.	U	460.	U	490.	U	490.	U	690.	UJ	560.	U
111-91-1	bis(2-Chloroethoxy)methane	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
206-44-0	Fluoranthene	1400.	U	460.	U	490.	U	490.	U	690.	U	560.	U
120-83-2	2,4-Dichlorophenol	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
92-87-5	Benzidine	2800.	UJ	2300.	UJ	2500.	UJ	2500.	UJ	3400.	UJ	2800.	UJ
120-82-1	1,2,4-Trichlorobenzene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
129-00-0	Pyrene	1100.	U	460.	U	490.	U	490.	U	690.	U	560.	U
91-20-3	Naphthalene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
85-68-7	Butylbenzylphthalate	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
106-47-8	4-Chloroaniline	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
91-94-1	3,3'-Dichlorobenzidine	1100.	U	920.	U	980.	U	990.	U	1400.	U	1100.	U
87-68-3	Hexachlorobutadiene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
56-55-3	Benzo(a)anthracene	640.	U	460.	U	490.	U	490.	U	690.	U	560.	U
59-50-7	4-Chloro-3-methylphenol	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
218-01-9	Chrysene	580.	U	460.	U	490.	U	490.	U	690.	U	560.	U
91-57-6	2-Methylnaphthalene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
77-47-4	Hexachlorocyclopentadiene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
117-84-0	Di-n-octylphthalate	550.	UJ	460.	UJ	490.	UJ	490.	UJ	690.	UJ	560.	UJ
88-06-2	2,4,6-Trichlorophenol	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
205-99-2	Benzo(b)fluoranthene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
95-95-4	2,4,5-Trichlorophenol	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U	2800.	U
207-08-9	Benzo(k)fluoranthene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
91-58-7	2-Chloronaphthalene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
50-32-8	Benzo(a)pyrene	480.	J	460.	U	490.	U	490.	U	690.	U	560.	U
88-74-4	2-Nitroaniline	2800.	U	2300.	U	2500.	U	2500.	U	3400.	U	2800.	U
193-39-5	Indeno(1,2,3-cd)pyrene	220.	J	460.	U	490.	U	490.	U	690.	U	560.	U
131-11-3	Dimethylphthalate	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
53-70-3	Dibenzo(a,h)anthracene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
208-96-8	Acenaphthylene	550.	U	460.	U	490.	U	490.	U	690.	U	560.	U
191-24-2	Benzo(g,h,i)perylene	220.	J	460.	U	490.	U	490.	U	690.	U	560.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8036-01	GDH-S-8037-01	GDH-S-8037-02	GDH-S-8038-01	GDH-S-8038-02	GDH-S-8039-01			
		ORIGINAL ID ----->	GDHS803601	GDHS803701	GDHS803702	GDHS803801	GDHS803802	GDHS803901			
		LAB SAMPLE ID ---->	41733-003	41742-019	41742-020	41742-021	41742-022	41742-023			
		ID FROM REPORT -->	GDHS803601	GDHS803701	GDHS803702	GDHS803801	GDHS803802	GDHS803901			
		SAMPLE DATE ----->	10/04/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/17/94	10/14/94	10/14/94	10/14/94	10/17/94	10/17/94			
		DATE ANALYZED ---->	10/18/94	10/18/94	10/17/94	10/18/94	10/18/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
62-75-9	N-Nitrosodimethylamine	510.	U	360.	U	440.	U	390.	U	490.	U
606-20-2	2,6-Dinitrotoluene	510.	U	360.	U	440.	U	390.	U	490.	U
108-95-2	Phenol	510.	U	360.	U	440.	U	390.	U	490.	U
99-09-2	3-Nitroaniline	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
62-53-3	Aniline	510.	U	360.	U	440.	U	390.	U	490.	U
83-32-9	Acenaphthene	510.	U	360.	U	440.	U	390.	U	490.	U
111-44-4	bis(2-Chloroethyl)ether	510.	U	360.	U	440.	U	390.	U	490.	U
51-28-5	2,4-Dinitrophenol	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
95-57-8	2-Chlorophenol	510.	U	360.	U	440.	U	390.	U	490.	U
100-02-7	4-Nitrophenol	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
541-73-1	1,3-Dichlorobenzene	510.	U	360.	U	440.	U	390.	U	490.	U
132-64-9	Dibenzofuran	510.	U	360.	U	440.	U	390.	U	490.	U
106-46-7	1,4-Dichlorobenzene	510.	U	360.	U	440.	U	390.	U	490.	U
121-14-2	2,4-Dinitrotoluene	510.	U	360.	U	440.	U	390.	U	490.	U
100-51-6	Benzyl alcohol	510.	U	360.	U	440.	U	390.	U	490.	U
84-66-2	Diethylphthalate	510.	U	360.	U	440.	U	390.	U	490.	U
95-50-1	1,2-Dichlorobenzene	510.	U	360.	U	440.	U	390.	U	490.	U
7005-72-3	4-Chlorophenylphenylether	510.	U	360.	U	440.	U	390.	U	490.	U
95-48-7	2-Methylphenol (o-Cresol)	510.	U	360.	U	440.	U	390.	U	490.	U
86-73-7	Fluorene	510.	U	360.	U	440.	U	390.	U	490.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	510.	U	360.	U	440.	U	390.	U	490.	U
100-01-6	4-Nitroaniline	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
106-44-5	4-Methylphenol (p-Cresol)	510.	U	360.	U	440.	U	390.	U	490.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
621-64-7	N-Nitroso-di-n-propylamine	510.	U	360.	U	440.	U	390.	U	490.	U
86-30-6	N-Nitrosodiphenylamine	510.	U	360.	U	440.	U	390.	U	490.	U
67-72-1	Hexachloroethane	510.	U	360.	U	440.	U	390.	U	490.	U
101-55-3	4-Bromophenylphenylether	510.	U	360.	U	440.	U	390.	U	490.	U
98-95-3	Nitrobenzene	510.	U	360.	U	440.	U	390.	U	490.	U
118-74-1	Hexachlorobenzene	510.	U	360.	U	440.	U	390.	U	490.	U
78-59-1	Isophorone	510.	U	360.	U	440.	U	390.	U	490.	U
87-86-5	Pentachlorophenol	510.	U	360.	U	440.	U	390.	U	490.	U
88-75-5	2-Nitrophenol	510.	U	360.	U	440.	U	390.	U	490.	U
85-01-8	Phenanthrene	510.	U	360.	U	440.	U	390.	U	490.	U
105-67-9	2,4-Dimethylphenol	510.	U	360.	U	440.	U	390.	U	490.	U
120-12-7	Anthracene	510.	U	360.	U	440.	U	390.	U	490.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8036-01	GDH-S-8037-01	GDH-S-8037-02	GDH-S-8038-01	GDH-S-8038-02	GDH-S-8039-01			
		ORIGINAL ID ----->	GDHS803601	GDHS803701	GDHS803702	GDHS803801	GDHS803802	GDHS803901			
		LAB SAMPLE ID ---->	41733-003	41742-019	41742-020	41742-021	41742-022	41742-023			
		ID FROM REPORT -->	GDHS803601	GDHS803701	GDHS803702	GDHS803801	GDHS803802	GDHS803901			
		SAMPLE DATE ----->	10/04/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/17/94	10/14/94	10/14/94	10/14/94	10/17/94	10/17/94			
		DATE ANALYZED ---->	10/18/94	10/18/94	10/17/94	10/18/94	10/18/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
65-85-0	Benzoic acid	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
84-74-2	Di-n-butylphthalate	510.	U	360.	U	440.	U	390.	U	490.	U
111-91-1	bis(2-Chloroethoxy)methane	510.	U	360.	U	440.	U	390.	U	490.	U
206-44-0	Fluoranthene	510.	U	360.	U	440.	U	390.	U	490.	J
120-83-2	2,4-Dichlorophenol	510.	U	360.	U	440.	U	390.	U	490.	U
92-87-5	Benzidine	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
120-82-1	1,2,4-Trichlorobenzene	510.	U	360.	U	440.	U	390.	U	490.	U
129-00-0	Pyrene	510.	U	360.	U	440.	U	390.	U	490.	J
91-20-3	Naphthalene	510.	U	360.	U	440.	U	390.	U	490.	U
85-68-7	Butylbenzylphthalate	510.	U	360.	U	440.	U	390.	U	490.	U
106-47-8	4-Chloroaniline	510.	U	360.	U	440.	U	390.	U	490.	U
91-94-1	3,3'-Dichlorobenzidine	1000.	U	720.	U	880.	U	780.	U	970.	U
87-68-3	Hexachlorobutadiene	510.	U	360.	U	440.	U	390.	U	490.	U
56-55-3	Benzo(a)anthracene	510.	U	360.	U	440.	U	390.	U	490.	U
59-50-7	4-Chloro-3-methylphenol	510.	U	360.	U	440.	U	390.	U	490.	U
218-01-9	Chrysene	510.	U	360.	U	440.	U	390.	U	490.	J
91-57-6	2-Methylnaphthalene	510.	U	360.	U	440.	U	390.	U	490.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	510.	UJ	360.	UJ	440.	U	390.	UJ	490.	UJ
77-47-4	Hexachlorocyclopentadiene	510.	U	360.	U	440.	U	390.	U	490.	U
117-84-0	Di-n-octylphthalate	510.	UJ	360.	UJ	440.	U	390.	UJ	490.	UJ
88-06-2	2,4,6-Trichlorophenol	510.	U	360.	U	440.	U	390.	U	490.	U
205-99-2	Benzo(b)fluoranthene	510.	U	360.	U	440.	U	390.	U	490.	U
95-95-4	2,4,5-Trichlorophenol	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
207-08-9	Benzo(k)fluoranthene	510.	U	360.	U	440.	U	390.	U	490.	U
91-58-7	2-Chloronaphthalene	510.	U	360.	U	440.	U	390.	U	490.	U
50-32-8	Benzo(a)pyrene	510.	U	360.	U	440.	U	390.	U	490.	U
88-74-4	2-Nitroaniline	2500.	U	1800.	U	2200.	U	2000.	U	2400.	U
193-39-5	Indeno(1,2,3-cd)pyrene	510.	U	360.	U	440.	U	390.	U	490.	U
131-11-3	Dimethylphthalate	510.	U	360.	U	440.	U	390.	U	490.	U
53-70-3	Dibenzo(a,h)anthracene	510.	U	360.	U	440.	U	390.	U	490.	U
208-96-8	Acenaphthylene	510.	U	360.	U	440.	U	390.	U	490.	U
191-24-2	Benzo(g,h,i)perylene	510.	U	360.	U	440.	U	390.	U	490.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB66-SVDA		SAMPLE ID ----->	GDH-S-8039-02	GDH-S-8040-01	GDH-S-8040-02	GDH-S-8041-01	GDH-S-8042-01	GDH-S-8042-02					
		ORIGINAL ID ----->	GDHSB03902	GDHSB04001	GDHSB04002	GDHSB04101	GDHSB04201	GDHSB04202					
		LAB SAMPLE ID ---->	41742-024	41742-025	41742-026	41742-027	41742-028	41742-029					
		ID FROM REPORT -->	GDHSB03902	GDHSB04001	GDHSB04002	GDHSB04101	GDHSB04201	GDHSB04202					
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE EXTRACTED -->	10/17/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94					
		DATE ANALYZED ---->	10/18/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL		
62-75-9	N-Nitrosodimethylamine	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
606-20-2	2,6-Dinitrotoluene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
108-95-2	Phenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
99-09-2	3-Nitroaniline	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
62-53-3	Aniline	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
83-32-9	Acenaphthene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
111-44-4	bis(2-Chloroethyl)ether	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
51-28-5	2,4-Dinitrophenol	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
95-57-8	2-Chlorophenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
100-02-7	4-Nitrophenol	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
541-73-1	1,3-Dichlorobenzene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
132-64-9	Dibenzofuran	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
106-46-7	1,4-Dichlorobenzene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
121-14-2	2,4-Dinitrotoluene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
100-51-6	Benzyl alcohol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
84-66-2	Diethylphthalate	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
95-50-1	1,2-Dichlorobenzene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
7005-72-3	4-Chlorophenylphenylether	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
95-48-7	2-Methylphenol (o-Cresol)	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
86-73-7	Fluorene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
100-01-6	4-Nitroaniline	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
106-44-5	4-Methylphenol (p-Cresol)	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
621-64-7	N-Nitroso-di-n-propylamine	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
86-30-6	N-Nitrosodiphenylamine	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
67-72-1	Hexachloroethane	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
101-55-3	4-Bromophenylphenylether	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
98-95-3	Nitrobenzene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
118-74-1	Hexachlorobenzene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
78-59-1	Isophorone	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
87-86-5	Pentachlorophenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
88-75-5	2-Nitrophenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
85-01-8	Phenanthrene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
105-67-9	2,4-Dimethylphenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
120-12-7	Anthracene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8039-02	GDH-S-8040-01	GDH-S-8040-02	GDH-S-8041-01	GDH-S-8042-01	GDH-S-8042-02					
		ORIGINAL ID ----->	GDHS803902	GDHS804001	GDHS804002	GDHS804101	GDHS804201	GDHS804202					
		LAB SAMPLE ID ---->	41742-024	41742-025	41742-026	41742-027	41742-028	41742-029					
		ID FROM REPORT -->	GDHS803902	GDHS804001	GDHS804002	GDHS804101	GDHS804201	GDHS804202					
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE EXTRACTED -->	10/17/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94					
		DATE ANALYZED ---->	10/18/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL		
65-85-0	Benzoic acid	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
84-74-2	Di-n-butylphthalate	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
111-91-1	bis(2-Chloroethoxy)methane	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
206-44-0	Fluoranthene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
120-83-2	2,4-Dichlorophenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
92-87-5	Benzdine	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
120-82-1	1,2,4-Trichlorobenzene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
129-00-0	Pyrene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
91-20-3	Naphthalene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
85-68-7	Butylbenzylphthalate	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
106-47-8	4-Chloroaniline	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
91-94-1	3,3'-Dichlorobenzidine	1500.	U	760.	U	980.	U	990.	U	780.	U	910.	U
87-68-3	Hexachlorobutadiene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
56-55-3	Benzo(a)anthracene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
59-50-7	4-Chloro-3-methylphenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
218-01-9	Chrysene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
91-57-6	2-Methylnaphthalene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	760.	UJ	380.	U	490.	U	490.	U	340.	J	460.	U
77-47-4	Hexachlorocyclopentadiene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
117-84-0	Di-n-octylphthalate	760.	UJ	380.	U	490.	U	490.	U	660.	U	460.	U
88-06-2	2,4,6-Trichlorophenol	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
205-99-2	Benzo(b)fluoranthene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
95-95-4	2,4,5-Trichlorophenol	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
207-08-9	Benzo(k)fluoranthene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
91-58-7	2-Chloronaphthalene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
50-32-8	Benzo(a)pyrene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
88-74-4	2-Nitroaniline	3800.	U	1900.	U	2500.	U	2500.	U	1900.	U	2300.	U
193-39-5	Indeno(1,2,3-cd)pyrene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
131-11-3	Dimethylphthalate	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
53-70-3	Dibenzo(a,h)anthracene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
208-96-8	Acenaphthylene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
191-24-2	Benzo(g,h,i)perylene	760.	U	380.	U	490.	U	490.	U	390.	U	460.	U
103-33-3	Azobenzene		NR		NR		NR		NR		NR		NR

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SV846-SV0A		SAMPLE ID ----->	GDH-S-8043-01	GDH-S-8043-02	GDH-S-8044-01	GDH-S-8045-01	GDH-S-8045-02	GDH-S-8046-01					
		ORIGINAL ID ----->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601					
		LAB SAMPLE ID ---->	41742-030	41742-031	41742-032	41742-033	41742-034	41742-035					
		ID FROM REPORT -->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601					
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94					
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94					
		DATE ANALYZED ---->	10/17/94	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL		
62-75-9	N-Nitrosodimethylamine	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
606-20-2	2,6-Dinitrotoluene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
108-95-2	Phenol	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
99-09-2	3-Nitroaniline	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U	2000.	U
62-53-3	Aniline	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
83-32-9	Acenaphthene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
111-44-4	bis(2-Chloroethyl)ether	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
51-28-5	2,4-Dinitrophenol	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U	2000.	U
95-57-8	2-Chlorophenol	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
100-02-7	4-Nitrophenol	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U	2000.	U
541-73-1	1,3-Dichlorobenzene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
132-64-9	Dibenzofuran	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
106-46-7	1,4-Dichlorobenzene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
121-14-2	2,4-Dinitrotoluene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
100-51-6	Benzyl alcohol	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
84-66-2	Diethylphthalate	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
95-50-1	1,2-Dichlorobenzene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
7005-72-3	4-Chlorophenylphenylether	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
95-48-7	2-Methylphenol (o-Cresol)	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
86-73-7	Fluorene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
100-01-6	4-Nitroaniline	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U	2000.	U
106-44-5	4-Methylphenol (p-Cresol)	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U	2000.	U
621-64-7	N-Nitroso-di-n-propylamine	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
86-30-6	N-Nitrosodiphenylamine	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
67-72-1	Hexachloroethane	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
101-55-3	4-Bromophenylphenylether	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
98-95-3	Nitrobenzene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
118-74-1	Hexachlorobenzene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
78-59-1	Isophorone	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
87-86-5	Pentachlorophenol	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
88-75-5	2-Nitrophenol	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
85-01-8	Phenanthrene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
105-67-9	2,4-Dimethylphenol	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U
120-12-7	Anthracene	410.	U	580.	U	390.	U	380.	U	570.	U	390.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-B043-01	GDH-S-B043-02	GDH-S-B044-01	GDH-S-B045-01	GDH-S-B045-02	GDH-S-B046-01			
		ORIGINAL ID ----->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601			
		LAB SAMPLE ID ---->	41742-030	41742-031	41742-032	41742-033	41742-034	41742-035			
		ID FROM REPORT -->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601			
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94	10/14/94			
		DATE ANALYZED ---->	10/17/94	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
65-85-0	Benzoic acid	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U
84-74-2	Di-n-butylphthalate	410.	U	580.	U	390.	U	380.	U	570.	U
111-91-1	bis(2-Chloroethoxy)methane	410.	U	580.	U	390.	U	380.	U	570.	U
206-44-0	Fluoranthene	410.	U	580.	U	390.	U	380.	U	570.	U
120-83-2	2,4-Dichlorophenol	410.	U	580.	U	390.	U	380.	U	570.	U
92-87-5	Benidine	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U	580.	U	390.	U	380.	U	570.	U
129-00-0	Pyrene	410.	U	580.	U	390.	U	380.	U	570.	U
91-20-3	Naphthalene	410.	U	580.	U	390.	U	380.	U	570.	U
85-68-7	Butylbenzylphthalate	410.	U	580.	U	390.	U	380.	U	570.	U
106-47-8	4-Chloroaniline	410.	U	580.	U	390.	U	380.	U	570.	U
91-94-1	3,3'-Dichlorobenzidine	820.	U	1200.	U	780.	U	760.	U	1100.	U
87-68-3	Hexachlorobutadiene	410.	U	580.	U	390.	U	380.	U	570.	U
56-55-3	Benzo(a)anthracene	410.	U	580.	U	390.	U	380.	U	570.	U
59-50-7	4-Chloro-3-methylphenol	410.	U	580.	U	390.	U	380.	U	570.	U
218-01-9	Chrysene	410.	U	580.	U	390.	U	380.	U	570.	U
91-57-6	2-Methylnaphthalene	410.	U	580.	U	390.	U	380.	U	570.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	410.	U	580.	UJ	390.	UJ	380.	UJ	570.	UJ
77-47-4	Hexachlorocyclopentadiene	410.	U	580.	U	390.	U	380.	U	570.	U
117-84-0	Di-n-octylphthalate	410.	U	580.	UJ	390.	UJ	380.	UJ	570.	UJ
88-06-2	2,4,6-Trichlorophenol	410.	U	580.	U	390.	U	380.	U	570.	U
205-99-2	Benzo(b)fluoranthene	410.	U	580.	U	390.	U	380.	U	570.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U
207-08-9	Benzo(k)fluoranthene	410.	U	580.	U	390.	U	380.	U	570.	U
91-58-7	2-Chloronaphthalene	410.	U	580.	U	390.	U	380.	U	570.	U
50-32-8	Benzo(a)pyrene	410.	U	580.	U	390.	U	380.	U	570.	U
88-74-4	2-Nitroaniline	2100.	U	2900.	U	2000.	U	1900.	U	2800.	U
193-39-5	Indeno(1,2,3-cd)pyrene	410.	U	580.	U	390.	U	380.	U	570.	U
131-11-3	Dimethylphthalate	410.	U	580.	U	390.	U	380.	U	570.	U
53-70-3	Dibenzo(a,h)anthracene	410.	U	580.	U	390.	U	380.	U	570.	U
208-96-8	Acenaphthylene	410.	U	580.	U	390.	U	380.	U	570.	U
191-24-2	Benzo(g,h,i)perylene	410.	U	580.	U	390.	U	380.	U	570.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-B046-02	GDH-S-B047-01	GDH-S-B047-02	GDH-S-B048-01	GDH-S-B049-01	GDH-S-B050-01			
		ORIGINAL ID ----->	GDHSB04602	GDHSB04701	GDHSB04702	GDHSB04801	GDHSB04901	GDHSB05001			
		LAB SAMPLE ID ---->	41742-036	41760-016	41760-017	41760-018	41760-019	41760-020			
		ID FROM REPORT -->	GDHSB04602	100701	100702	100703	100704	100705			
		SAMPLE DATE ----->	10/05/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94			
		DATE ANALYZED ---->	10/18/94	10/19/94	10/19/94	10/19/94	10/19/94	10/19/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL
62-75-9	N-Nitrosodimethylamine	560.	U	450.	U	440.	U	540.	U	520.	U
606-20-2	2,6-Dinitrotoluene	560.	U	450.	U	440.	U	540.	U	520.	U
108-95-2	Phenol	560.	U	450.	U	440.	U	540.	U	520.	U
99-09-2	3-Nitroaniline	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
62-53-3	Aniline	560.	U	450.	U	440.	U	540.	U	520.	U
83-32-9	Acenaphthene	560.	U	450.	U	440.	U	540.	U	520.	U
111-44-4	bis(2-Chloroethyl)ether	560.	U	450.	U	440.	U	540.	U	520.	U
51-28-5	2,4-Dinitrophenol	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
95-57-8	2-Chlorophenol	560.	U	450.	U	440.	U	540.	U	520.	U
100-02-7	4-Nitrophenol	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
541-73-1	1,3-Dichlorobenzene	560.	U	450.	U	440.	U	540.	U	520.	U
132-64-9	Dibenzofuran	560.	U	450.	U	440.	U	540.	U	520.	U
106-46-7	1,4-Dichlorobenzene	560.	U	450.	U	440.	U	540.	U	520.	U
121-14-2	2,4-Dinitrotoluene	560.	U	450.	U	440.	U	540.	U	520.	U
100-51-6	Benzyl alcohol	560.	U	450.	U	440.	U	540.	U	520.	U
84-66-2	Diethylphthalate	560.	U	450.	U	440.	U	540.	U	520.	U
95-50-1	1,2-Dichlorobenzene	560.	U	450.	U	440.	U	540.	U	520.	U
7005-72-3	4-Chlorophenylphenylether	560.	U	450.	U	440.	U	540.	U	520.	U
95-48-7	2-Methylphenol (o-Cresol)	560.	U	450.	U	440.	U	540.	U	520.	U
86-73-7	Fluorene	560.	U	450.	U	440.	U	540.	U	520.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	560.	U	450.	U	440.	U	540.	U	520.	U
100-01-6	4-Nitroaniline	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
106-44-5	4-Methylphenol (p-Cresol)	560.	U	450.	U	440.	U	540.	U	520.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
621-64-7	N-Nitroso-di-n-propylamine	560.	U	450.	U	440.	U	540.	U	520.	U
86-30-6	N-Nitrosodiphenylamine	560.	U	450.	U	440.	U	540.	U	520.	U
67-72-1	Hexachloroethane	560.	U	450.	U	440.	U	540.	U	520.	U
101-55-3	4-Bromophenylphenylether	560.	U	450.	U	440.	U	540.	U	520.	U
98-95-3	Nitrobenzene	560.	U	450.	U	440.	U	540.	U	520.	U
118-74-1	Hexachlorobenzene	560.	U	450.	U	440.	U	540.	U	520.	U
78-59-1	Isophorone	560.	U	450.	U	440.	U	540.	U	520.	U
87-86-5	Pentachlorophenol	560.	U	450.	U	440.	U	540.	U	520.	U
88-75-5	2-Nitrophenol	560.	U	450.	U	440.	U	540.	U	520.	U
85-01-8	Phenanthrene	560.	U	450.	U	440.	U	540.	U	520.	U
105-67-9	2,4-Dimethylphenol	560.	U	450.	U	440.	U	540.	U	520.	U
120-12-7	Anthracene	560.	U	450.	U	440.	U	540.	U	520.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8046-02	GDH-S-8047-01	GDH-S-8047-02	GDH-S-8048-01	GDH-S-8049-01	GDH-S-8050-01			
		ORIGINAL ID ----->	GDHS804602	GDHS804701	GDHS804702	GDHS804801	GDHS804901	GDHS805001			
		LAB SAMPLE ID ---->	41742-036	41760-016	41760-017	41760-018	41760-019	41760-020			
		ID FROM REPORT -->	GDHS804602	100701	100702	100703	100704	100705			
		SAMPLE DATE ----->	10/05/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94			
		DATE ANALYZED ---->	10/18/94	10/19/94	10/19/94	10/19/94	10/19/94	10/19/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL
65-85-0	Benzoic acid	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
84-74-2	Di-n-butylphthalate	560.	U	450.	U	440.	U	540.	U	520.	U
111-91-1	bis(2-Chloroethoxy)methane	560.	U	450.	U	440.	U	540.	U	520.	U
206-44-0	Fluoranthene	560.	U	450.	U	440.	U	540.	U	520.	U
120-83-2	2,4-Dichlorophenol	560.	U	450.	U	440.	U	540.	U	520.	U
92-87-5	Benzidine	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
120-82-1	1,2,4-Trichlorobenzene	560.	U	450.	U	440.	U	540.	U	520.	U
129-00-0	Pyrene	560.	U	450.	U	440.	U	540.	U	520.	U
91-20-3	Naphthalene	560.	U	450.	U	440.	U	540.	U	520.	U
85-68-7	Butylbenzylphthalate	560.	U	450.	U	440.	U	540.	U	520.	U
106-47-8	4-Chloroaniline	560.	U	450.	U	440.	U	540.	U	520.	U
91-94-1	3,3'-Dichlorobenzidine	1100.	U	890.	U	890.	U	1100.	U	1000.	U
87-68-3	Hexachlorobutadiene	560.	U	450.	U	440.	U	540.	U	520.	U
56-55-3	Benzo(a)anthracene	560.	U	450.	U	440.	U	540.	U	520.	U
59-50-7	4-Chloro-3-methylphenol	560.	U	450.	U	440.	U	540.	U	520.	U
218-01-9	Chrysene	560.	U	450.	U	440.	U	540.	U	520.	U
91-57-6	2-Methylnaphthalene	560.	U	450.	U	440.	U	540.	U	520.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	560.	UJ	450.	U	440.	U	540.	U	520.	U
77-47-4	Hexachlorocyclopentadiene	560.	U	450.	U	440.	U	540.	U	520.	U
117-84-0	Di-n-octylphthalate	560.	UJ	450.	U	440.	U	540.	U	520.	U
88-06-2	2,4,6-Trichlorophenol	560.	U	450.	U	440.	U	540.	U	520.	U
205-99-2	Benzo(b)fluoranthene	560.	U	450.	U	440.	U	540.	U	520.	U
95-95-4	2,4,5-Trichlorophenol	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
207-08-9	Benzo(k)fluoranthene	560.	U	450.	U	440.	U	540.	U	520.	U
91-58-7	2-Chloronaphthalene	560.	U	450.	U	440.	U	540.	U	520.	U
50-32-8	Benzo(a)pyrene	560.	U	450.	U	440.	U	540.	U	520.	U
88-74-4	2-Nitroaniline	2800.	U	2200.	U	2200.	U	2700.	U	2600.	U
193-39-5	Indeno(1,2,3-cd)pyrene	560.	U	450.	U	440.	U	540.	U	520.	U
131-11-3	Dimethylphthalate	560.	U	450.	U	440.	U	540.	U	520.	U
53-70-3	Dibenzo(a,h)anthracene	560.	U	450.	U	440.	U	540.	U	520.	U
208-96-8	Acenaphthylene	560.	U	450.	U	440.	U	540.	U	520.	U
191-24-2	Benzo(g,h,i)perylene	560.	U	450.	U	440.	U	540.	U	520.	U
103-33-3	Azobenzene		NR		NR		NR		NR		NR

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVOA		SAMPLE ID ----->	GDH-S-B051-01	GDH-S-B051-02	GDH-S-B052-01	GDH-S-B052-02	GDH-S-B053-01	GDH-S-B053-02					
		ORIGINAL ID ----->	GDHSB05101	GDHSB05102	GDHSB05201	GDHSB05202	GDHSB05301	GDHSB05302					
		LAB SAMPLE ID ---->	41760-021	41760-022	41760-023	41760-024	41760-025	41760-026					
		ID FROM REPORT -->	100706	100707	100708	100709	100710	100711					
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94					
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94					
		DATE ANALYZED ---->	10/19/94	10/19/94	10/19/94	10/19/94	10/21/94	10/19/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL		
62-75-9	N-Nitrosodimethylamine	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
606-20-2	2,6-Dinitrotoluene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
108-95-2	Phenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
99-09-2	3-Nitroaniline	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
62-53-3	Aniline	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
83-32-9	Acenaphthene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
111-44-4	bis(2-Chloroethyl)ether	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
51-28-5	2,4-Dinitrophenol	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
95-57-8	2-Chlorophenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
100-02-7	4-Nitrophenol	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
541-73-1	1,3-Dichlorobenzene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
132-64-9	Dibenzofuran	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
106-46-7	1,4-Dichlorobenzene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
121-14-2	2,4-Dinitrotoluene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
100-51-6	Benzyl alcohol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
84-66-2	Diethylphthalate	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
95-50-1	1,2-Dichlorobenzene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
7005-72-3	4-Chlorophenylphenylether	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
95-48-7	2-Methylphenol (o-Cresol)	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
86-73-7	Fluorene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
100-01-6	4-Nitroaniline	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
106-44-5	4-Methylphenol (p-Cresol)	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
621-64-7	N-Nitroso-di-n-propylamine	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
86-30-6	N-Nitrosodiphenylamine	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
67-72-1	Hexachloroethane	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
101-55-3	4-Bromophenylphenylether	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
98-95-3	Nitrobenzene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
118-74-1	Hexachlorobenzene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
78-59-1	Isophorone	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
87-86-5	Pentachlorophenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
88-75-5	2-Nitrophenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
85-01-8	Phenanthrene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
105-67-9	2,4-Dimethylphenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
120-12-7	Anthracene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-SYDA		SAMPLE ID ----->	GDH-S-8051-01	GDH-S-8051-02	GDH-S-8052-01	GDH-S-8052-02	GDH-S-8053-01	GDH-S-8053-02					
		ORIGINAL ID ----->	GDHS805101	GDHS805102	GDHS805201	GDHS805202	GDHS805301	GDHS805302					
		LAB SAMPLE ID --->	41760-021	41760-022	41760-023	41760-024	41760-025	41760-026					
		ID FROM REPORT -->	100706	100707	100708	100709	100710	100711					
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94					
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94					
		DATE ANALYZED --->	10/19/94	10/19/94	10/19/94	10/19/94	10/21/94	10/19/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL		
65-85-0	Benzoic acid	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
84-74-2	Di-n-butylphthalate	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
111-91-1	bis(2-Chloroethoxy)methane	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
206-44-0	Fluoranthene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
120-83-2	2,4-Dichlorophenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
92-87-5	Benzdine	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
129-00-0	Pyrene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
91-20-3	Naphthalene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
85-68-7	Butylbenzylphthalate	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
106-47-8	4-Chloroaniline	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
91-94-1	3,3'-Dichlorobenzidine	830.	U	980.	U	860.	U	870.	U	930.	U	760.	U
87-68-3	Hexachlorobutadiene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
56-55-3	Benzo(a)anthracene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
59-50-7	4-Chloro-3-methylphenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
218-01-9	Chrysene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
91-57-6	2-Methylnaphthalene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	410.	U	490.	U	430.	U	440.	U	99.	J	380.	U
77-47-4	Hexachlorocyclopentadiene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
117-84-0	Di-n-octylphthalate	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
88-06-2	2,4,6-Trichlorophenol	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
205-99-2	Benzo(b)fluoranthene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
207-08-9	Benzo(k)fluoranthene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
91-58-7	2-Chloronaphthalene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
50-32-8	Benzo(a)pyrene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
88-74-4	2-Nitroaniline	2100.	U	2500.	U	2200.	U	2200.	U	2300.	U	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
131-11-3	Dimethylphthalate	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
53-70-3	Dibenzo(a,h)anthracene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
208-96-8	Acenaphthylene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
191-24-2	Benzo(g,h,i)perylene	410.	U	490.	U	430.	U	440.	U	460.	U	380.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8054-01	GDH-S-8054-02	GDH-S-8055-01	GDH-S-8056-01	GDH-S-8056-02	GDH-S-8057-01			
		ORIGINAL ID ----->	GDHS805401	GDHS805402	GDHS805501	GDHS805601	GDHS805602	GDHS805701			
		LAB SAMPLE ID ---->	41760-027	41760-028	41760-029	41779-006	41779-007	41780-008			
		ID FROM REPORT -->	100712	100713	100714	100807	100808	100814			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/07/94	10/07/94	10/07/94			
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/19/94			
		DATE ANALYZED ---->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/24/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS20	VAL
62-75-9	N-Nitrosodimethylamine	400.	U	400.	U	420.	U	470.	U	910.	U
606-20-2	2,6-Dinitrotoluene	400.	U	400.	U	420.	U	470.	U	910.	U
108-95-2	Phenol	400.	U	400.	U	420.	U	470.	U	910.	U
99-09-2	3-Nitroaniline	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
62-53-3	Aniline	400.	U	400.	U	420.	U	470.	U	910.	U
83-32-9	Acenaphthene	400.	U	400.	U	420.	U	130.	J	910.	U
111-44-4	bis(2-Chloroethyl)ether	400.	U	400.	U	420.	U	470.	U	910.	U
51-28-5	2,4-Dinitrophenol	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
95-57-8	2-Chlorophenol	400.	U	400.	U	420.	U	470.	U	910.	U
100-02-7	4-Nitrophenol	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
541-73-1	1,3-Dichlorobenzene	400.	U	400.	U	420.	U	470.	U	910.	U
132-64-9	Dibenzofuran	400.	U	400.	U	420.	U	470.	U	910.	U
106-46-7	1,4-Dichlorobenzene	400.	U	400.	U	420.	U	470.	U	910.	U
121-14-2	2,4-Dinitrotoluene	400.	U	400.	U	420.	U	470.	U	910.	U
100-51-6	Benzyl alcohol	400.	U	400.	U	420.	U	470.	U	910.	U
84-66-2	Diethylphthalate	400.	U	400.	U	420.	U	470.	U	910.	U
95-50-1	1,2-Dichlorobenzene	400.	U	400.	U	420.	U	470.	U	910.	U
7005-72-3	4-Chlorophenylphenylether	400.	U	400.	U	420.	U	470.	U	910.	U
95-48-7	2-Methylphenol (o-Cresol)	400.	U	400.	U	420.	U	470.	U	910.	U
86-73-7	Fluorene	400.	U	400.	U	420.	U	100.	J	910.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U	400.	U	420.	U	470.	U	910.	U
100-01-6	4-Nitroaniline	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
106-44-5	4-Methylphenol (p-Cresol)	400.	U	400.	U	420.	U	470.	U	910.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U	400.	U	420.	U	470.	U	910.	U
86-30-6	N-Nitrosodiphenylamine	400.	U	400.	U	420.	U	470.	U	910.	U
67-72-1	Hexachloroethane	400.	U	400.	U	420.	U	470.	U	910.	U
101-55-3	4-Bromophenylphenylether	400.	U	400.	U	420.	U	470.	U	910.	U
98-95-3	Nitrobenzene	400.	U	400.	U	420.	U	470.	U	910.	U
118-74-1	Hexachlorobenzene	400.	U	400.	U	420.	U	470.	U	910.	U
78-59-1	Isophorone	400.	U	400.	U	420.	U	470.	U	910.	U
87-86-5	Pentachlorophenol	400.	U	400.	U	420.	U	470.	U	910.	U
88-75-5	2-Nitrophenol	400.	U	400.	U	420.	U	470.	U	910.	U
85-01-8	Phenanthrene	86.	J	400.	U	420.	U	800.		910.	U
105-67-9	2,4-Dimethylphenol	400.	U	400.	U	420.	U	470.	U	910.	U
120-12-7	Anthracene	400.	U	400.	U	420.	U	220.	J	910.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8054-01	GDH-S-8054-02	GDH-S-8055-01	GDH-S-8056-01	GDH-S-8056-02	GDH-S-8057-01			
		ORIGINAL ID ----->	GDHSB05401	GDHSB05402	GDHSB05501	GDHSB05601	GDHSB05602	GDHSB05701			
		LAB SAMPLE ID ---->	41760-027	41760-028	41760-029	41779-006	41779-007	41780-008			
		ID FROM REPORT -->	100712	100713	100714	100807	100808	100814			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/07/94	10/07/94	10/07/94			
		DATE EXTRACTED -->	10/17/94	10/17/94	10/17/94	10/17/94	10/17/94	10/19/94			
		DATE ANALYZED ---->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/24/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS20	VAL
65-85-0	Benzoic acid	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
84-74-2	Di-n-butylphthalate	400.	U	400.	U	420.	U	470.	U	910.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U	400.	U	420.	U	470.	U	910.	U
206-44-0	Fluoranthene	120.	J	400.	U	420.	U	1300.	U	910.	U
120-83-2	2,4-Dichlorophenol	400.	U	400.	U	420.	U	470.	U	910.	U
92-87-5	Benzidine	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
120-82-1	1,2,4-Trichlorobenzene	400.	U	400.	U	420.	U	470.	U	910.	U
129-00-0	Pyrene	400.	U	400.	U	420.	U	1200.	U	910.	U
91-20-3	Naphthalene	400.	U	400.	U	420.	U	470.	U	910.	U
85-68-7	Butylbenzylphthalate	400.	U	400.	U	420.	U	470.	U	910.	U
106-47-8	4-Chloroaniline	400.	U	400.	U	420.	U	470.	U	910.	U
91-94-1	3,3'-Dichlorobenzidine	810.	U	800.	U	850.	U	930.	U	1800.	U
87-68-3	Hexachlorobutadiene	400.	U	400.	U	420.	U	470.	U	910.	U
56-55-3	Benzo(a)anthracene	400.	U	400.	U	420.	U	880.	U	910.	U
59-50-7	4-Chloro-3-methylphenol	400.	U	400.	U	420.	U	470.	U	910.	U
218-01-9	Chrysene	400.	U	400.	U	420.	U	830.	U	910.	U
91-57-6	2-Methylnaphthalene	400.	U	400.	U	420.	U	470.	U	910.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	170.	J	400.	U	94.	J	470.	U	910.	U
77-47-4	Hexachlorocyclopentadiene	400.	U	400.	U	420.	U	470.	U	910.	U
117-84-0	Di-n-octylphthalate	400.	U	400.	U	420.	U	470.	U	910.	U
88-06-2	2,4,6-Trichlorophenol	400.	U	400.	U	420.	U	470.	U	910.	U
205-99-2	Benzo(b)fluoranthene	400.	U	400.	U	420.	U	710.	U	910.	U
95-95-4	2,4,5-Trichlorophenol	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
207-08-9	Benzo(k)fluoranthene	400.	U	400.	U	420.	U	790.	U	910.	U
91-58-7	2-Chloronaphthalene	400.	U	400.	U	420.	U	470.	U	910.	U
50-32-8	Benzo(a)pyrene	400.	U	400.	U	420.	U	860.	U	910.	U
88-74-4	2-Nitroaniline	2000.	U	2000.	U	2100.	U	2300.	U	4500.	U
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U	400.	U	420.	U	400.	J	910.	U
131-11-3	Dimethylphthalate	400.	U	400.	U	420.	U	470.	U	910.	U
53-70-3	Dibenzo(a,h)anthracene	400.	U	400.	U	420.	U	190.	J	910.	U
208-96-8	Acenaphthylene	400.	U	400.	U	420.	U	470.	U	910.	U
191-24-2	Benzo(g,h,i)perylene	400.	U	400.	U	420.	U	400.	J	910.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8058-01	GDH-S-8058-02	GDH-S-8059-01	GDH-S-B060-01	GDH-S-B061-01	GDH-S-B062-01					
		ORIGINAL ID ----->	GDHS805801	GDKS805802	GDHS805901	GDHS806001	GDHS806101	GDHS806201					
		LAB SAMPLE ID ---->	41779-008	41779-009	41780-003	41780-004	41779-010	41784-008					
		ID FROM REPORT -->	100809	100810	100812	100813	100811	101001					
		SAMPLE DATE ----->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/08/94					
		DATE EXTRACTED -->	10/17/94	10/17/94	10/19/94	10/19/94	10/17/94	10/18/94					
		DATE ANALYZED ---->	10/21/94	10/21/94	10/24/94	10/24/94	10/21/94	10/24/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS20	VAL	CHS20	VAL	CHS19	VAL	CHS20	VAL
62-75-9	N-Nitrosodimethylamine	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
606-20-2	2,6-Dinitrotoluene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
108-95-2	Phenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
99-09-2	3-Nitroaniline	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
62-53-3	Aniline	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
83-32-9	Acenaphthene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
111-44-4	bis(2-Chloroethyl)ether	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
51-28-5	2,4-Dinitrophenol	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
95-57-8	2-Chlorophenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
100-02-7	4-Nitrophenol	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
541-73-1	1,3-Dichlorobenzene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
132-64-9	Oibenzofuran	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
106-46-7	1,4-Dichlorobenzene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
121-14-2	2,4-Dinitrotoluene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
100-51-6	Benzyl alcohol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
84-66-2	Diethylphthalate	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
95-50-1	1,2-Dichlorobenzene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
7005-72-3	4-Chlorophenylphenylether	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
95-48-7	2-Methylphenol (o-Cresol)	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
86-73-7	Fluorene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
100-01-6	4-Nitroaniline	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
106-44-5	4-Methylphenol (p-Cresol)	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
621-64-7	N-Nitroso-di-n-propylamine	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
86-30-6	N-Nitrosodiphenylamine	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
67-72-1	Hexachloroethane	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
101-55-3	4-Bromophenylphenylether	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
98-95-3	Nitrobenzene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
118-74-1	Hexachlorobenzene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
78-59-1	Isophorone	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
87-86-5	Pentachlorophenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
88-75-5	2-Nitrophenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
85-01-8	Phenanthrene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
105-67-9	2,4-Dimethylphenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
120-12-7	Anthracene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8058-01	GDH-S-8058-02	GDH-S-8059-01	GDH-S-8060-01	GDH-S-8061-01	GDH-S-8062-01					
		ORIGINAL ID ----->	GDHS805801	GDHS805802	GDHS805901	GDHS806001	GDHS806101	GDHS806201					
		LAB SAMPLE ID ---->	41779-008	41779-009	41780-003	41780-004	41779-010	41784-008					
		ID FROM REPORT -->	100809	100810	100812	100813	100811	101001					
		SAMPLE DATE ----->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/08/94					
		DATE EXTRACTED -->	10/17/94	10/17/94	10/19/94	10/19/94	10/17/94	10/18/94					
		DATE ANALYZED ---->	10/21/94	10/21/94	10/24/94	10/24/94	10/21/94	10/24/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS20	VAL	CHS20	VAL	CHS19	VAL	CHS20	VAL
65-85-0	Benzoic acid	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
84-74-2	Di-n-butylphthalate	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
111-91-1	bis(2-Chloroethoxy)methane	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
206-44-0	Fluoranthene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
120-83-2	2,4-Dichlorophenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
92-87-5	Benidine	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
120-82-1	1,2,4-Trichlorobenzene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
129-00-0	Pyrene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
91-20-3	Naphthalene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
85-68-7	Butylbenzylphthalate	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
106-47-8	4-Chloroaniline	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
91-94-1	3,3'-Dichlorobenzidine	880.	U	1100.	U	930.	U	1100.	U	860.	U	1100.	U
87-68-3	Hexachlorobutadiene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
56-55-3	Benzo(a)anthracene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
59-50-7	4-Chloro-3-methylphenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
218-01-9	Chrysene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
91-57-6	2-Methylnaphthalene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	440.	U	530.	U	460.	U	530.	U	290.	J	540.	U
77-47-4	Hexachlorocyclopentadiene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
117-84-0	Di-n-octylphthalate	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
88-06-2	2,4,6-Trichlorophenol	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
205-99-2	Benzo(b)fluoranthene	440.	U	530.	U	460.	UJ	530.	UJ	430.	U	540.	UJ
95-95-4	2,4,5-Trichlorophenol	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
207-08-9	Benzo(k)fluoranthene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
91-58-7	2-Chloronaphthalene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
50-32-8	Benzo(a)pyrene	440.	U	530.	U	460.	UJ	530.	UJ	430.	U	540.	UJ
88-74-4	2-Nitroaniline	2200.	U	2600.	U	2300.	U	2600.	U	2100.	U	2700.	U
193-39-5	Indeno(1,2,3-cd)pyrene	440.	U	530.	U	460.	UJ	530.	UJ	430.	U	540.	UJ
131-11-3	Dimethylphthalate	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
53-70-3	Dibenzo(a,h)anthracene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
208-96-8	Acenaphthylene	440.	U	530.	U	460.	U	530.	U	430.	U	540.	U
191-24-2	Benzo(g,h,i)perylene	440.	U	530.	U	460.	UJ	530.	UJ	430.	U	540.	UJ
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SU846-SV0A		SAMPLE ID ----->	GDH-S-8063-01	GDH-S-8063-02	GDH-S-8064-01	GDH-S-8064-02	GDH-S-8065-01	GDH-S-8066-01			
		ORIGINAL ID ----->	GDHS806301	GDHS806302	GDHS806401	GDHS806402	GDHS806501	GDHS806601			
		LAB SAMPLE ID ---->	41784-009	41784-010	41784-011	41784-012	41784-013	41790-020			
		ID FROM REPORT -->	101002	101003	101004	101005	101006	101112			
		SAMPLE DATE ----->	10/08/94	10/08/94	10/08/94	10/08/94	10/08/94	10/10/94			
		DATE EXTRACTED -->	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94	10/19/94			
		DATE ANALYZED ---->	10/25/94	10/24/94	10/24/94	10/24/94	10/24/94	10/25/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL
62-75-9	N-Nitrosodimethylamine	760.	U	430.	U	370.	U	460.	U	370.	U
606-20-2	2,6-Dinitrotoluene	760.	U	430.	U	370.	U	460.	U	370.	U
108-95-2	Phenol	760.	U	430.	U	370.	U	460.	U	370.	U
99-09-2	3-Nitroaniline	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U
62-53-3	Aniline	760.	U	430.	U	370.	U	460.	U	370.	U
83-32-9	Acenaphthene	6600.	J	100.	J	370.	U	460.	U	370.	U
111-44-4	bis(2-Chloroethyl)ether	760.	U	430.	U	370.	U	460.	U	370.	U
51-28-5	2,4-Dinitrophenol	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U
95-57-8	2-Chlorophenol	760.	U	430.	U	370.	U	460.	U	370.	U
100-02-7	4-Nitrophenol	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U
541-73-1	1,3-Dichlorobenzene	760.	U	430.	U	370.	U	460.	U	370.	U
132-64-9	Dibenzofuran	4300.	U	430.	U	370.	U	460.	U	370.	U
106-46-7	1,4-Dichlorobenzene	760.	U	430.	U	370.	U	460.	U	370.	U
121-14-2	2,4-Dinitrotoluene	760.	U	430.	U	370.	U	460.	U	370.	U
100-51-6	Benzyl alcohol	760.	UJ	430.	U	370.	U	460.	U	370.	UJ
84-66-2	Diethylphthalate	760.	U	430.	U	370.	U	460.	U	370.	U
95-50-1	1,2-Dichlorobenzene	760.	U	430.	U	370.	U	460.	U	370.	U
7005-72-3	4-Chlorophenylphenylether	760.	U	430.	U	370.	U	460.	U	370.	U
95-48-7	2-Methylphenol (o-Cresol)	760.	U	430.	U	370.	U	460.	U	370.	U
86-73-7	Fluorene	4500.	J	120.	J	370.	U	460.	U	370.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	760.	U	430.	U	370.	U	460.	U	370.	U
100-01-6	4-Nitroaniline	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U
106-44-5	4-Methylphenol (p-Cresol)	760.	U	430.	U	370.	U	460.	U	370.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U
621-64-7	N-Nitroso-di-n-propylamine	760.	U	430.	U	370.	U	460.	U	370.	U
86-30-6	N-Nitrosodiphenylamine	760.	U	430.	U	370.	U	460.	U	370.	U
67-72-1	Hexachloroethane	760.	U	430.	U	370.	U	460.	U	370.	U
101-55-3	4-Bromophenylphenylether	760.	U	430.	U	370.	U	460.	U	370.	U
98-95-3	Nitrobenzene	760.	U	430.	U	370.	U	460.	U	370.	U
118-74-1	Hexachlorobenzene	760.	U	430.	U	370.	U	460.	U	370.	U
78-59-1	Isophorone	760.	U	430.	U	370.	U	460.	U	370.	U
87-86-5	Pentachlorophenol	760.	U	430.	U	370.	U	460.	U	370.	U
88-75-5	2-Nitrophenol	760.	U	430.	U	370.	U	460.	U	370.	U
85-01-8	Phenanthrene	2900.	J	350.	J	370.	U	460.	U	370.	U
105-67-9	2,4-Dimethylphenol	760.	U	430.	U	370.	U	460.	U	370.	U
120-12-7	Anthracene	230.	J	430.	U	370.	U	460.	U	370.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8063-01	GDH-S-8063-02	GDH-S-8064-01	GDH-S-8064-02	GDH-S-8065-01	GDH-S-8066-01					
		ORIGINAL ID ----->	GDHS806301	GDHS806302	GDHS806401	GDHS806402	GDHS806501	GDHS806601					
		LAB SAMPLE ID ---->	41784-009	41784-010	41784-011	41784-012	41784-013	41790-020					
		ID FROM REPORT -->	101002	101003	101004	101005	101006	101112					
		SAMPLE DATE ----->	10/08/94	10/08/94	10/08/94	10/08/94	10/08/94	10/10/94					
		DATE EXTRACTED -->	10/18/94	10/18/94	10/18/94	10/18/94	10/18/94	10/19/94					
		DATE ANALYZED ---->	10/25/94	10/24/94	10/24/94	10/24/94	10/24/94	10/25/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL		
65-85-0	Benzoic acid	3800.	UJ	2200.	U	1900.	U	2300.	U	1800.	U	1900.	UJ
84-74-2	Di-n-butylphthalate	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
111-91-1	bis(2-Chloroethoxy)methane	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
206-44-0	Fluoranthene	760.	U	130.	J	370.	U	460.	U	370.	U	380.	U
120-83-2	2,4-Dichlorophenol	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
92-87-5	Benidine	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U	1900.	U
120-82-1	1,2,4-Trichlorobenzene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
129-00-0	Pyrene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
91-20-3	Naphthalene	7500.	U	430.	U	370.	U	460.	U	370.	U	380.	U
85-68-7	Butylbenzylphthalate	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
106-47-8	4-Chloroaniline	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
91-94-1	3,3'-Dichlorobenzidine	1500.	U	870.	U	750.	U	910.	U	740.	U	770.	U
87-68-3	Hexachlorobutadiene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
56-55-3	Benzo(a)anthracene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
59-50-7	4-Chloro-3-methylphenol	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
218-01-9	Chrysene	760.	U	430.	UJ	370.	U	460.	U	370.	U	380.	U
91-57-6	2-Methylnaphthalene	4200.	U	430.	U	370.	U	460.	U	370.	U	380.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
77-47-4	Hexachlorocyclopentadiene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
117-84-0	Di-n-octylphthalate	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
88-06-2	2,4,6-Trichlorophenol	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
205-99-2	Benzo(b)fluoranthene	760.	U	430.	UJ	370.	UJ	460.	UJ	370.	UJ	380.	U
95-95-4	2,4,5-Trichlorophenol	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U	1900.	U
207-08-9	Benzo(k)fluoranthene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
91-58-7	2-Chloronaphthalene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
50-32-8	Benzo(a)pyrene	760.	U	430.	UJ	370.	UJ	460.	UJ	370.	UJ	380.	U
88-74-4	2-Nitroaniline	3800.	U	2200.	U	1900.	U	2300.	U	1800.	U	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	760.	U	430.	UJ	370.	UJ	460.	UJ	370.	UJ	380.	U
131-11-3	Dimethylphthalate	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
53-70-3	Dibenzo(a,h)anthracene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
208-96-8	Acenaphthylene	760.	U	430.	U	370.	U	460.	U	370.	U	380.	U
191-24-2	Benzo(g,h,i)perylene	760.	U	430.	UJ	370.	UJ	460.	UJ	370.	UJ	380.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

DATALCP3
12/14/95

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

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SW846-SVDA		SAMPLE ID ----->	GDH-S-B067-01	GDH-S-B067-02	GDH-S-B068-01	GDH-S-B069-01	GDH-S-B070-01	GDH-S-B071-01			
		ORIGINAL ID ----->	GDHSB06701	GDHSB06702	GDHSB06801	GDHSB06901	GDHSB07001	GDHSB07101			
		LAB SAMPLE ID ---->	41806-013	41806-014	41806-015	41806-016	41806-019	41806-020			
		ID FROM REPORT -->	101203	101204	101205	101206	101209	101210			
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		DATE EXTRACTED -->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94			
		DATE ANALYZED ---->	10/26/94	10/26/94	10/26/94	10/26/94	10/26/94	10/26/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL
62-75-9	N-Nitrosodimethylamine	390.	U	410.	U	470.	U	410.	U	390.	U
606-20-2	2,6-Dinitrotoluene	390.	U	410.	U	470.	U	410.	U	390.	U
108-95-2	Phenol	390.	U	410.	U	470.	U	410.	U	390.	U
99-09-2	3-Nitroaniline	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
62-53-3	Aniline	390.	U	410.	U	470.	U	410.	U	390.	U
83-32-9	Acenaphthene	390.	U	410.	U	470.	U	410.	U	390.	U
111-44-4	bis(2-Chloroethyl)ether	390.	U	410.	U	470.	U	410.	U	390.	U
51-28-5	2,4-Dinitrophenol	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
95-57-8	2-Chlorophenol	390.	U	410.	U	470.	U	410.	U	390.	U
100-02-7	4-Nitrophenol	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
541-73-1	1,3-Dichlorobenzene	390.	U	410.	U	470.	U	410.	U	390.	U
132-64-9	Dibenzofuran	390.	U	410.	U	470.	U	410.	U	390.	U
106-46-7	1,4-Dichlorobenzene	390.	U	410.	U	470.	U	410.	U	390.	U
121-14-2	2,4-Dinitrotoluene	390.	U	410.	U	470.	U	410.	U	390.	U
100-51-6	Benzyl alcohol	390.	U	410.	U	470.	U	410.	U	390.	U
84-66-2	Diethylphthalate	390.	U	410.	U	470.	U	410.	U	390.	U
95-50-1	1,2-Dichlorobenzene	390.	U	410.	U	470.	U	410.	U	390.	U
7005-72-3	4-Chlorophenylphenylether	390.	U	410.	U	470.	U	410.	U	390.	U
95-48-7	2-Methylphenol (o-Cresol)	390.	U	410.	U	470.	U	410.	U	390.	U
86-73-7	Fluorene	390.	U	410.	U	470.	U	410.	U	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390.	U	410.	U	470.	U	410.	U	390.	U
100-01-6	4-Nitroaniline	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
106-44-5	4-Methylphenol (p-Cresol)	390.	U	410.	U	470.	U	410.	U	390.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
621-64-7	N-Nitroso-di-n-propylamine	390.	U	410.	U	470.	U	410.	U	390.	U
86-30-6	N-Nitrosodiphenylamine	390.	U	410.	U	470.	U	410.	U	390.	U
67-72-1	Hexachloroethane	390.	U	410.	U	470.	U	410.	U	390.	U
101-55-3	4-Bromophenylphenylether	390.	U	410.	U	470.	U	410.	U	390.	U
98-95-3	Nitrobenzene	390.	U	410.	U	470.	U	410.	U	390.	U
118-74-1	Hexachlorobenzene	390.	U	410.	U	470.	U	410.	U	390.	U
78-59-1	Isophorone	390.	U	410.	U	470.	U	410.	U	390.	U
87-86-5	Pentachlorophenol	390.	U	410.	U	470.	U	410.	U	390.	U
88-75-5	2-Nitrophenol	390.	U	410.	U	470.	U	410.	U	390.	U
85-01-8	Phenanthrene	390.	U	410.	U	470.	U	410.	U	390.	U
105-67-9	2,4-Dimethylphenol	390.	U	410.	U	470.	U	410.	U	390.	U
120-12-7	Anthracene	390.	U	410.	U	470.	U	410.	U	390.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8067-01	GDH-S-8067-02	GDH-S-8068-01	GDH-S-8069-01	GDH-S-8070-01	GDH-S-8071-01			
		ORIGINAL ID ----->	GDHS806701	GDHS806702	GDHS806801	GDHS806901	GDHS807001	GDHS807101			
		LAB SAMPLE ID ---->	41806-013	41806-014	41806-015	41806-016	41806-019	41806-020			
		ID FROM REPORT -->	101203	101204	101205	101206	101209	101210			
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		DATE EXTRACTED -->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94			
		DATE ANALYZED ---->	10/26/94	10/26/94	10/26/94	10/26/94	10/26/94	10/26/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL
65-85-0	Benzoic acid	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
84-74-2	Di-n-butylphthalate	390.	U	410.	U	470.	U	410.	U	390.	U
111-91-1	bis(2-Chloroethoxy)methane	390.	U	410.	U	470.	U	410.	U	390.	U
206-44-0	Fluoranthene	390.	U	410.	U	470.	U	410.	U	390.	J
120-83-2	2,4-Dichlorophenol	390.	U	410.	U	470.	U	410.	U	390.	U
92-87-5	Benzidine	2000.	UJ	2100.	UJ	2300.	UJ	2000.	UJ	1900.	UJ
120-82-1	1,2,4-Trichlorobenzene	390.	U	410.	U	470.	U	410.	U	390.	U
129-00-0	Pyrene	390.	U	410.	U	470.	U	410.	U	390.	J
91-20-3	Naphthalene	390.	U	410.	U	470.	U	410.	U	390.	U
85-68-7	Butylbenzylphthalate	390.	U	410.	U	470.	U	410.	U	390.	U
106-47-8	4-Chloroaniline	390.	U	410.	U	470.	U	410.	U	390.	U
91-94-1	3,3'-Dichlorobenzidine	780.	U	820.	U	930.	U	820.	U	770.	U
87-68-3	Hexachlorobutadiene	390.	U	410.	U	470.	U	410.	U	390.	U
56-55-3	Benzo(a)anthracene	390.	U	410.	U	470.	U	410.	U	390.	U
59-50-7	4-Chloro-3-methylphenol	390.	U	410.	U	470.	U	410.	U	390.	J
218-01-9	Chrysene	390.	U	410.	U	470.	U	410.	U	390.	U
91-57-6	2-Methylnaphthalene	390.	U	410.	U	470.	U	410.	U	390.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	390.	U	410.	U	360.	J	410.	U	390.	U
77-47-4	Hexachlorocyclopentadiene	390.	U	410.	U	470.	U	410.	U	390.	U
117-84-0	Di-n-octylphthalate	390.	U	410.	U	470.	U	410.	U	390.	U
88-06-2	2,4,6-Trichlorophenol	390.	U	410.	U	470.	U	410.	U	390.	U
205-99-2	Benzo(b)fluoranthene	390.	U	410.	U	470.	U	410.	U	390.	U
95-95-4	2,4,5-Trichlorophenol	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
207-08-9	Benzo(k)fluoranthene	390.	U	410.	U	470.	U	410.	U	390.	U
91-58-7	2-Chloronaphthalene	390.	U	410.	U	470.	U	410.	U	390.	U
50-32-8	Benzo(a)pyrene	390.	U	410.	U	470.	U	410.	U	390.	U
88-74-4	2-Nitroaniline	2000.	U	2100.	U	2300.	U	2000.	U	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	390.	U	410.	U	470.	U	410.	U	390.	U
131-11-3	Dimethylphthalate	390.	U	410.	U	470.	U	410.	U	390.	U
53-70-3	Dibenzo(a,h)anthracene	390.	U	410.	U	470.	U	410.	U	390.	U
208-96-8	Acenaphthylene	390.	U	410.	U	470.	U	410.	U	390.	U
191-24-2	Benzo(g,h,i)perylene	390.	U	410.	U	470.	U	410.	U	390.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8071-02	GDH-S-8072-01	GDH-S-8072-02	GDH-S-8073-01	GDH-S-8073-02	GDH-S-8074-01					
		ORIGINAL ID ----->	GDHS807102	GDHS807201	GDHS807202	GDHS807301	GDHS807302	GDHS807401					
		LAB SAMPLE ID ---->	41806-021	41806-022	41806-023	41821-009	41821-010	25246.8					
		ID FROM REPORT -->	101211	101212	101213	101303	101304	102204					
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/12/94	10/12/94	10/21/94					
		DATE EXTRACTED -->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	11/01/94					
		DATE ANALYZED ---->	10/26/94	10/26/94	10/26/94	10/27/94	10/27/94	11/14/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS23	VAL		
62-75-9	N-Nitrosodimethylamine	420.	U	490.	U	530.	U	380.	U	530.	U	NR	
606-20-2	2,6-Dinitrotoluene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
108-95-2	Phenol	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
99-09-2	3-Nitroaniline	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U	2200.	U
62-53-3	Aniline	420.	U	490.	U	530.	U	380.	U	530.	U	NR	
83-32-9	Acenaphthene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
111-44-4	bis(2-Chloroethyl)ether	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
51-28-5	2,4-Dinitrophenol	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U	2200.	UJ
95-57-8	2-Chlorophenol	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
100-02-7	4-Nitrophenol	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U	2200.	UJ
541-73-1	1,3-Dichlorobenzene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
132-64-9	Dibenzofuran	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
106-46-7	1,4-Dichlorobenzene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
121-14-2	2,4-Dinitrotoluene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
100-51-6	Benzyl alcohol	420.	U	490.	U	530.	U	380.	U	530.	U	NR	
84-66-2	Diethylphthalate	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
95-50-1	1,2-Dichlorobenzene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
7005-72-3	4-Chlorophenylphenylether	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
95-48-7	2-Methylphenol (o-Cresol)	420.	U	490.	U	530.	UJ	380.	UJ	530.	UJ	410.	U
86-73-7	Fluorene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
100-01-6	4-Nitroaniline	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U	2200.	U
106-44-5	4-Methylphenol (p-Cresol)	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U	2200.	U
621-64-7	N-Nitroso-di-n-propylamine	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
86-30-6	N-Nitrosodiphenylamine	420.	U	490.	U	530.	U	380.	U	530.	U	420.	U
67-72-1	Hexachloroethane	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
101-55-3	4-Bromophenylphenylether	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
98-95-3	Nitrobenzene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
118-74-1	Hexachlorobenzene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
78-59-1	Isophorone	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
87-86-5	Pentachlorophenol	420.	U	490.	U	530.	U	380.	U	530.	U	1400.	U
88-75-5	2-Nitrophenol	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
85-01-8	Phenanthrene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U
105-67-9	2,4-Dimethylphenol	420.	U	490.	U	530.	U	380.	U	530.	U	820.	U
120-12-7	Anthracene	420.	U	490.	U	530.	U	380.	U	530.	U	410.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8071-02	GDH-S-8072-01	GDH-S-8072-02	GDH-S-8073-01	GDH-S-8073-02	GDH-S-8074-01			
		ORIGINAL ID ----->	GDHS807102	GDHS807201	GDHS807202	GDHS807301	GDHS807302	GDHS807401			
		LAB SAMPLE ID ---->	41806-021	41806-022	41806-023	41821-009	41821-010	25246.8			
		ID FROM REPORT -->	101211	101212	101213	101303	101304	102204			
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/12/94	10/12/94	10/21/94			
		DATE EXTRACTED -->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	11/01/94			
		DATE ANALYZED ---->	10/26/94	10/26/94	10/26/94	10/27/94	10/27/94	11/14/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS23	VAL
65-85-0	Benzoic acid	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U
84-74-2	Di-n-butylphthalate	420.	U	490.	U	530.	U	380.	U	530.	U
111-91-1	bis(2-Chloroethoxy)methane	420.	U	490.	U	530.	U	380.	U	530.	U
206-44-0	Fluoranthene	420.	U	490.	U	530.	U	380.	U	530.	U
120-83-2	2,4-Dichlorophenol	420.	U	490.	U	530.	U	380.	U	530.	U
92-87-5	Benzidine	2100.	UJ	2500.	UJ	2700.	UJ	1900.	U	2600.	U
120-82-1	1,2,4-Trichlorobenzene	420.	U	490.	U	530.	U	380.	U	530.	U
129-00-0	Pyrene	420.	U	490.	U	530.	U	380.	U	530.	U
91-20-3	Naphthalene	420.	U	490.	U	530.	U	380.	U	530.	U
85-68-7	Butylbenzylphthalate	420.	U	490.	U	530.	U	380.	U	530.	U
106-47-8	4-Chloroaniline	420.	U	490.	U	530.	U	380.	U	530.	U
91-94-1	3,3'-Dichlorobenzidine	840.	U	980.	U	1100.	U	760.	U	1100.	U
87-68-3	Hexachlorobutadiene	420.	U	490.	U	530.	U	380.	U	530.	U
56-55-3	Benzo(a)anthracene	420.	U	490.	U	530.	U	380.	U	530.	U
59-50-7	4-Chloro-3-methylphenol	420.	U	490.	U	530.	U	380.	U	530.	U
218-01-9	Chrysene	420.	U	490.	U	530.	U	380.	U	530.	U
91-57-6	2-Methylnaphthalene	420.	U	490.	U	530.	U	380.	U	530.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	420.	U	490.	U	530.	U	380.	U	530.	U
77-47-4	Hexachlorocyclopentadiene	420.	U	490.	U	530.	UJ	380.	UJ	530.	UJ
117-84-0	Di-n-octylphthalate	420.	U	490.	U	530.	U	380.	U	530.	U
88-06-2	2,4,6-Trichlorophenol	420.	U	490.	U	530.	U	380.	U	530.	U
205-99-2	Benzo(b)fluoranthene	420.	U	490.	U	530.	U	380.	U	530.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U
207-08-9	Benzo(k)fluoranthene	420.	U	490.	U	530.	U	380.	U	530.	U
91-58-7	2-Chloronaphthalene	420.	U	490.	U	530.	U	380.	U	530.	U
50-32-8	Benzo(a)pyrene	420.	U	490.	U	530.	U	380.	U	530.	U
88-74-4	2-Nitroaniline	2100.	U	2500.	U	2700.	U	1900.	U	2600.	U
193-39-5	Indeno(1,2,3-cd)pyrene	420.	U	490.	U	530.	U	380.	U	530.	U
131-11-3	Dimethylphthalate	420.	U	490.	U	530.	U	380.	U	530.	U
53-70-3	Dibenzo(a,h)anthracene	420.	U	490.	U	530.	U	380.	U	530.	U
208-96-8	Acenaphthylene	420.	U	490.	U	530.	U	380.	U	530.	U
191-24-2	Benzo(g,h,i)perylene	420.	U	490.	U	530.	U	380.	U	530.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLES. A - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-SV0A		SAMPLE ID ----->	GDH-S-8075-01	GDH-S-8076-01	GDH-S-8077-01	GDH-S-8078-01	GDH-S-8078-02	GDH-S-8079-01	
		ORIGINAL ID ----->	GDHS807501	GDHS807601	GDHS807701	GDHS807801	GDHS807802	GDHS807901	
		LAB SAMPLE ID ---->	25247.6	25248.4	25249.2	25250.6	25251.4	25252.2	
		ID FROM REPORT -->	102205	102206	102207	102208	102209	102210	
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	
		DATE EXTRACTED -->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	
		DATE ANALYZED ---->	11/14/94	11/14/94	11/14/94	11/15/94	11/14/94	11/14/94	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL
62-75-9	N-Nitrosodimethylamine	NR		NR		NR		NR	
606-20-2	2,6-Dinitrotoluene	400.	U	370.	U	410.	U	360.	U
108-95-2	Phenol	400.	U	370.	U	410.	U	360.	U
99-09-2	3-Nitroaniline	2100.	U	2000.	U	2200.	U	1800.	U
62-53-3	Aniline	NR		NR		NR		NR	
83-32-9	Acenaphthene	400.	U	370.	U	410.	U	360.	U
111-44-4	bis(2-Chloroethyl) ether	400.	U	370.	U	410.	U	360.	U
51-28-5	2,4-Dinitrophenol	2100.	UJ	2000.	UJ	2200.	UJ	1800.	U
95-57-8	2-Chlorophenol	400.	U	370.	U	410.	U	360.	U
100-02-7	4-Nitrophenol	2100.	UJ	2000.	UJ	2200.	UJ	1800.	U
541-73-1	1,3-Dichlorobenzene	400.	U	370.	U	410.	U	360.	U
132-64-9	Dibenzofuran	400.	U	370.	U	410.	U	360.	U
106-46-7	1,4-Dichlorobenzene	400.	U	370.	U	410.	U	360.	U
121-14-2	2,4-Dinitrotoluene	400.	U	370.	U	410.	U	360.	U
100-51-6	Benzyl alcohol	NR		NR		NR		NR	
84-66-2	Diethylphthalate	400.	U	370.	U	410.	U	360.	U
95-50-1	1,2-Dichlorobenzene	400.	U	370.	U	410.	U	360.	U
7005-72-3	4-Chlorophenylphenylether	400.	U	370.	U	410.	U	360.	U
95-48-7	2-Methylphenol (o-Cresol)	400.	U	370.	U	410.	U	360.	U
86-73-7	Fluorene	400.	U	370.	U	410.	U	360.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400.	U	370.	U	410.	U	360.	U
100-01-6	4-Nitroaniline	2100.	U	2000.	U	2200.	U	1800.	U
106-44-5	4-Methylphenol (p-Cresol)	400.	U	370.	U	410.	U	360.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	U	2000.	U	2200.	U	1800.	U
621-64-7	N-Nitroso-di-n-propylamine	400.	U	370.	U	410.	U	360.	U
86-30-6	N-Nitrosodiphenylamine	410.	U	380.	U	420.	U	360.	U
67-72-1	Hexachloroethane	400.	U	370.	U	410.	U	360.	U
101-55-3	4-Bromophenylphenylether	400.	U	370.	U	410.	U	360.	U
98-95-3	Nitrobenzene	400.	U	370.	U	410.	U	360.	U
118-74-1	Hexachlorobenzene	400.	U	370.	U	410.	U	360.	U
78-59-1	Isophorone	400.	U	370.	U	410.	U	360.	U
87-86-5	Pentachlorophenol	1300.	U	1200.	U	1400.	U	1100.	U
88-75-5	2-Nitrophenol	400.	U	370.	U	410.	U	360.	U
85-01-8	Phenanthrene	110.	J	370.	U	410.	U	360.	U
105-67-9	2,4-Dimethylphenol	810.	U	750.	U	820.	U	700.	U
120-12-7	Anthracene	400.	U	370.	U	410.	U	360.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8075-01	GDH-S-8076-01	GDH-S-8077-01	GDH-S-8078-01	GDH-S-8078-02	GDH-S-8079-01			
		ORIGINAL ID ----->	GDHS807501	GDHS807601	GDHS807701	GDHS807801	GDHS807802	GDHS807901			
		LAB SAMPLE ID ---->	25247.6	25248.4	25249.2	25250.6	25251.4	25252.2			
		ID FROM REPORT -->	102205	102206	102207	102208	102209	102210			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94			
		DATE EXTRACTED -->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94			
		DATE ANALYZED ---->	11/14/94	11/14/94	11/14/94	11/15/94	11/14/94	11/14/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL
65-85-0	Benzoic acid	NR		NR		NR		NR		NR	
84-74-2	Di-n-butylphthalate	400.	U	370.	U	410.	U	340.	U	360.	U
111-91-1	bis(2-Chloroethoxy)methane	400.	U	370.	U	410.	U	340.	U	360.	U
206-44-0	Fluoranthene	400.	U	370.	U	410.	U	340.	U	360.	U
120-83-2	2,4-Dichlorophenol	400.	U	370.	U	410.	U	340.	U	360.	U
92-87-5	Benzidine	NR		NR		NR		NR		NR	
120-82-1	1,2,4-Trichlorobenzene	400.	U	370.	U	410.	U	340.	U	360.	U
129-00-0	Pyrene	84.	J	370.	U	410.	U	340.	U	360.	U
91-20-3	Naphthalene	400.	U	370.	U	410.	U	340.	U	360.	U
85-68-7	Butylbenzylphthalate	400.	U	370.	U	410.	U	340.	U	360.	U
106-47-8	4-Chloroaniline	400.	U	370.	U	410.	U	340.	U	360.	U
91-94-1	3,3'-Dichlorobenzidine	800.	U	740.	U	810.	U	690.	U	710.	U
87-68-3	Hexachlorobutadiene	400.	UJ	370.	UJ	410.	UJ	340.	UJ	360.	UJ
56-55-3	Benzo(a)anthracene	48.	J	370.	U	410.	U	340.	U	360.	U
59-50-7	4-Chloro-3-methylphenol	400.	U	370.	U	410.	U	340.	U	360.	U
218-01-9	Chrysene	50.	J	370.	U	410.	U	340.	U	360.	U
91-57-6	2-Methylnaphthalene	400.	U	370.	U	410.	U	340.	U	360.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	400.	U	370.	U	410.	U	210.	J	360.	U
77-47-4	Hexachlorocyclopentadiene	430.	UJ	400.	UJ	430.	UJ	370.	UJ	380.	UJ
117-84-0	Di-n-octylphthalate	400.	U	370.	U	410.	U	200.	J	360.	U
88-06-2	2,4,6-Trichlorophenol	410.	U	380.	U	420.	U	360.	U	370.	U
205-99-2	Benzo(b)fluoranthene	68.	J	370.	U	410.	U	340.	UJ	360.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U	2000.	U	2200.	U	1800.	U	1900.	U
207-08-9	Benzo(k)fluoranthene	400.	U	370.	U	410.	U	340.	UJ	360.	U
91-58-7	2-Chloronaphthalene	430.	U	400.	U	430.	U	370.	U	380.	U
50-32-8	Benzo(a)pyrene	400.	U	370.	U	410.	U	340.	UJ	360.	U
88-74-4	2-Nitroaniline	2100.	U	2000.	U	2200.	U	1800.	U	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	400.	U	370.	U	410.	U	340.	UJ	360.	U
131-11-3	Dimethylphthalate	400.	U	370.	U	410.	U	340.	U	360.	U
53-70-3	Dibenzo(a,h)anthracene	430.	U	400.	U	430.	U	370.	UJ	380.	U
208-96-8	Acenaphthylene	400.	U	370.	U	410.	U	340.	U	360.	U
191-24-2	Benzo(g,h,i)perylene	440.	U	410.	U	450.	U	380.	UJ	390.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8079-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-8081-01	GDH-S-8082-01	GDH-S-8082-02			
		ORIGINAL ID ----->	GDHSB07902	GDHSB08001	GDHSB08002	GDHSB08101	GDHSB08201	GDHSB08202			
		LAB SAMPLE ID ---->	25253.0	25254.9	25255.7	25256.5	25257.3	25258.1			
		ID FROM REPORT -->	102211	102212	102213	102214	102215	102216			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/22/94	10/22/94			
		DATE EXTRACTED -->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94			
		DATE ANALYZED ---->	11/14/94	11/14/94	11/15/94	11/15/94	11/15/94	11/15/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL
62-75-9	N-Nitrosodimethylamine		NR		NR		NR		NR		NR
606-20-2	2,6-Dinitrotoluene	390.	U	340.	U	430.	U	1700.	U	370.	U
108-95-2	Phenol	390.	U	340.	U	430.	U	1700.	U	370.	U
99-09-2	3-Nitroaniline	2100.	U	1800.	U	2300.	U	9100.	U	2000.	U
62-53-3	Aniline		NR		NR		NR		NR		NR
83-32-9	Acenaphthene	390.	U	340.	U	430.	U	1700.	U	370.	U
111-44-4	bis(2-Chloroethyl)ether	390.	U	340.	U	430.	U	1700.	U	370.	U
51-28-5	2,4-Dinitrophenol	2100.	UJ	1800.	UJ	2300.	U	9100.	U	2000.	U
95-57-8	2-Chlorophenol	390.	U	340.	U	430.	U	1700.	U	370.	U
100-02-7	4-Nitrophenol	2100.	UJ	1800.	UJ	2300.	U	9100.	U	2000.	U
541-73-1	1,3-Dichlorobenzene	390.	U	340.	U	430.	U	1700.	U	370.	U
132-64-9	Dibenzofuran	390.	U	340.	U	430.	U	1700.	U	370.	U
106-46-7	1,4-Dichlorobenzene	390.	U	340.	U	430.	U	1700.	U	370.	U
121-14-2	2,4-Dinitrotoluene	390.	U	340.	U	430.	U	1700.	U	370.	U
100-51-6	Benzyl alcohol		NR		NR		NR		NR		NR
84-66-2	Diethylphthalate	390.	U	340.	U	430.	U	1700.	U	370.	U
95-50-1	1,2-Dichlorobenzene	390.	U	340.	U	430.	U	1700.	U	370.	U
7005-72-3	4-Chlorophenylphenylether	390.	U	340.	U	430.	U	1700.	U	370.	U
95-48-7	2-Methylphenol (o-Cresol)	390.	U	340.	U	430.	U	1700.	U	370.	U
86-73-7	Fluorene	390.	U	340.	U	430.	U	1700.	U	370.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390.	U	340.	U	430.	U	1700.	U	370.	U
100-01-6	4-Nitroaniline	2100.	U	1800.	U	2300.	U	9100.	U	2000.	U
106-44-5	4-Methylphenol (p-Cresol)	390.	U	340.	U	430.	U	1700.	U	370.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	U	1800.	U	2300.	U	9100.	U	2000.	U
621-64-7	N-Nitroso-di-n-propylamine	390.	U	340.	U	430.	U	1700.	U	370.	U
86-30-6	N-Nitrosodiphenylamine	410.	U	350.	U	440.	U	1800.	U	380.	U
67-72-1	Hexachloroethane	390.	U	340.	U	430.	U	1700.	U	370.	U
101-55-3	4-Bromophenylphenylether	390.	U	340.	U	430.	U	1700.	U	370.	U
98-95-3	Nitrobenzene	390.	U	340.	U	430.	U	1700.	U	370.	U
118-74-1	Hexachlorobenzene	390.	U	340.	U	430.	U	1700.	U	370.	U
78-59-1	Isophorone	390.	U	340.	U	430.	U	1700.	U	370.	U
87-86-5	Pentachlorophenol	1300.	U	1100.	U	1400.	U	5700.	U	1200.	U
88-75-5	2-Nitrophenol	390.	U	340.	U	430.	U	1700.	U	370.	U
85-01-8	Phenanthrene	390.	U	380.	U	460.	U	970.	J	370.	U
105-67-9	2,4-Dimethylphenol	800.	U	690.	U	870.	U	3500.	U	750.	U
120-12-7	Anthracene	390.	U	94.	J	74.	J	290.	J	370.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVOA		SAMPLE ID ----->	GDH-S-8079-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-8081-01	GDH-S-8082-01	GDH-S-8082-02	
		ORIGINAL ID ----->	GDHS807902	GDHS808001	GDHS808002	GDHS808101	GDHS808201	GDHS808202	
		LAB SAMPLE ID --->	25253.0	25254.9	25255.7	25256.5	25257.3	25258.1	
		ID FROM REPORT -->	102211	102212	102213	102214	102215	102216	
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/22/94	10/22/94	
		DATE EXTRACTED -->	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	
		DATE ANALYZED --->	11/14/94	11/14/94	11/15/94	11/15/94	11/15/94	11/15/94	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL
65-85-0	Benzoic acid	NR		NR		NR		NR	
84-74-2	Di-n-butylphthalate	390.	U	340.	U	430.	U	1700.	U
111-91-1	bis(2-Chloroethoxy)methane	390.	U	340.	U	430.	U	1700.	U
206-44-0	Fluoranthene	390.	U	480.	U	490.	J	1300.	J
120-83-2	2,4-Dichlorophenol	390.	U	340.	U	430.	U	1700.	U
92-87-5	Benidine	NR		NR		NR		NR	
120-82-1	1,2,4-Trichlorobenzene	390.	U	340.	U	430.	U	1700.	U
129-00-0	Pyrene	390.	U	410.	J	420.	J	1200.	J
91-20-3	Naphthalene	390.	U	340.	U	430.	U	1700.	U
85-68-7	Butylbenzylphthalate	390.	U	340.	U	430.	U	1700.	U
106-47-8	4-Chloroaniline	390.	U	340.	U	430.	U	1700.	U
91-94-1	3,3'-Dichlorobenzidine	790.	U	680.	U	860.	U	3400.	U
87-68-3	Hexachlorobutadiene	390.	UJ	340.	UJ	430.	UJ	1700.	UJ
56-55-3	Benzo(a)anthracene	390.	U	220.	J	190.	J	630.	J
59-50-7	4-Chloro-3-methylphenol	390.	U	340.	U	430.	U	1700.	U
218-01-9	Chrysene	390.	U	230.	J	200.	J	560.	J
91-57-6	2-Methylnaphthalene	390.	U	340.	U	430.	U	1700.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEP)	390.	U	39.	J	430.	U	1700.	U
77-47-4	Hexachlorocyclopentadiene	420.	UJ	360.	UJ	460.	UJ	1800.	UJ
117-84-0	Di-n-octylphthalate	390.	U	340.	U	430.	U	1700.	U
88-06-2	2,4,6-Trichlorophenol	410.	U	350.	U	440.	U	1800.	U
205-99-2	Benzo(b)fluoranthene	390.	U	300.	J	270.	J	840.	J
95-95-4	2,4,5-Trichlorophenol	2100.	U	1800.	U	2300.	U	9100.	U
207-08-9	Benzo(k)fluoranthene	390.	U	140.	J	430.	U	1700.	U
91-58-7	2-Chloronaphthalene	420.	U	360.	U	460.	U	1800.	U
50-32-8	Benzo(a)pyrene	390.	U	200.	J	180.	J	620.	J
88-74-4	2-Nitroaniline	2100.	U	1800.	U	2300.	U	9100.	U
193-39-5	Indeno(1,2,3-cd)pyrene	390.	U	98.	J	430.	U	1700.	U
131-11-3	Dimethylphthalate	390.	U	340.	U	430.	U	1700.	U
53-70-3	Dibenzo(a,h)anthracene	420.	U	360.	U	460.	U	1800.	U
208-96-8	Acenaphthylene	390.	U	340.	U	430.	U	1700.	U
191-24-2	Benzo(g,h,i)perylene	430.	U	97.	J	470.	U	1900.	U
103-33-3	Azobenzene	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-SV0A		SAMPLE ID ----->	GDH-S-8083-01	GDH-S-8084-01	GDH-S-8084-02	GDH-S-8085-01	GDH-S-8085-02	GDH-S-8086-01			
		ORIGINAL ID ----->	GDHS808301	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601			
		LAB SAMPLE ID --->	25259.0	42136-014	42136-015	42136-016	42136-017	42347-007			
		ID FROM REPORT -->	102217	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601			
		SAMPLE DATE ----->	10/22/94	11/09/94	11/09/94	11/09/94	11/09/94	11/22/94			
		DATE EXTRACTED -->	11/01/94	11/15/94	11/15/94	11/15/94	11/15/94	12/02/94			
		DATE ANALYZED --->	11/14/94	11/28/94	11/28/94	11/28/94	11/28/94	12/08/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS25	VAL	CHS25	VAL	CHS25	VAL	CHS27	VAL
62-75-9	N-Nitrosodimethylamine		NR	470.	U	470.	U	460.	U	480.	U
606-20-2	2,6-Dinitrotoluene	1700.	U	470.	U	470.	U	460.	U	480.	U
108-95-2	Phenol	1700.	U	470.	U	470.	U	460.	U	480.	U
99-09-2	3-Nitroaniline	9200.	U	2400.	U	2400.	U	2300.	U	2400.	U
62-53-3	Aniline		NR	470.	U	470.	U	460.	U	480.	U
83-32-9	Acenaphthene	1700.	U	470.	U	470.	U	460.	U	480.	U
111-44-4	bis(2-Chloroethyl)ether	1700.	U	470.	U	470.	U	460.	U	480.	U
51-28-5	2,4-Dinitrophenol	9200.	UJ	2400.	U	2400.	U	2300.	U	2400.	UJ
95-57-8	2-Chlorophenol	1700.	U	470.	U	470.	U	460.	U	480.	U
100-02-7	4-Nitrophenol	9200.	UJ	2400.	U	2400.	U	2300.	U	2400.	U
541-73-1	1,3-Dichlorobenzene	1700.	U	470.	U	470.	U	460.	U	480.	U
132-64-9	Dibenzofuran	1700.	U	470.	U	470.	U	460.	U	480.	U
106-46-7	1,4-Dichlorobenzene	1700.	U	470.	U	470.	U	460.	U	480.	U
121-14-2	2,4-Dinitrotoluene	1700.	U	470.	U	470.	U	460.	U	480.	U
100-51-6	Benzyl alcohol		NR	470.	U	470.	U	460.	U	480.	U
84-66-2	Diethylphthalate	1700.	U	470.	U	470.	U	460.	U	480.	U
95-50-1	1,2-Dichlorobenzene	1700.	U	470.	U	470.	U	460.	U	480.	U
7005-72-3	4-Chlorophenylphenylether	1700.	U	470.	U	470.	U	460.	U	480.	U
95-48-7	2-Methylphenol (o-Cresol)	1700.	U	470.	U	470.	U	460.	U	480.	U
86-73-7	Fluorene	1700.	U	470.	U	470.	U	460.	U	480.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1700.	U	470.	U	470.	U	460.	U	480.	U
100-01-6	4-Nitroaniline	9200.	U	2400.	U	2400.	U	2300.	U	2400.	U
106-44-5	4-Methylphenol (p-Cresol)	1700.	U	470.	U	470.	U	460.	U	480.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	9200.	U	2400.	U	2400.	U	2300.	U	2400.	U
621-64-7	N-Nitroso-di-n-propylamine	1700.	U	470.	U	470.	U	460.	U	480.	U
86-30-6	N-Nitrosodiphenylamine	1800.	U	470.	U	470.	U	460.	U	480.	U
67-72-1	Hexachloroethane	1700.	U	470.	U	470.	U	460.	U	480.	U
101-55-3	4-Bromophenylphenylether	1700.	U	470.	U	470.	U	460.	U	480.	U
98-95-3	Nitrobenzene	1700.	U	470.	U	470.	U	460.	U	480.	U
118-74-1	Hexachlorobenzene	1700.	U	470.	U	470.	U	460.	U	480.	U
78-59-1	Isophorone	1700.	U	470.	U	470.	U	460.	U	480.	U
87-86-5	Pentachlorophenol	5700.	U	470.	U	470.	U	460.	U	480.	U
88-75-5	2-Nitrophenol	1700.	U	470.	U	470.	U	460.	U	480.	U
85-01-8	Phenanthrene	1700.	U	470.	U	470.	U	460.	U	480.	U
105-67-9	2,4-Dimethylphenol	3500.	U	470.	U	470.	U	460.	U	480.	U
120-12-7	Anthracene	1700.	U	470.	U	470.	U	460.	U	480.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-S-8083-01	GDH-S-8084-01	GDH-S-8084-02	GDH-S-8085-01	GDH-S-8085-02	GDH-S-8086-01			
		ORIGINAL ID ----->	GDHSB08301	GDHSB08401	GDHSB08402	GDHSB08501	GDHSB08502	GDHSB08601			
		LAB SAMPLE ID ---->	25259.0	42136-014	42136-015	42136-016	42136-017	42347-007			
		ID FROM REPORT -->	102217	GDHSB08401	GDHSB08402	GDHSB08501	GDHSB08502	GDHSB08601			
		SAMPLE DATE ----->	10/22/94	11/09/94	11/09/94	11/09/94	11/09/94	11/22/94			
		DATE EXTRACTED -->	11/01/94	11/15/94	11/15/94	11/15/94	11/15/94	12/02/94			
		DATE ANALYZED ---->	11/14/94	11/28/94	11/28/94	11/28/94	11/28/94	12/08/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS25	VAL	CHS25	VAL	CHS25	VAL	CHS27	VAL
65-85-0	Benzoic acid	NR		2400.	UJ	2400.	UJ	2300.	UJ	2400.	UJ
84-74-2	Di-n-butylphthalate	1700.	U	470.	U	470.	U	460.	U	480.	U
111-91-1	bis(2-Chloroethoxy)methane	1700.	U	470.	U	470.	U	460.	U	480.	U
206-44-0	Fluoranthene	1700.	U	470.	U	470.	U	460.	U	480.	U
120-83-2	2,4-Dichlorophenol	1700.	U	470.	U	470.	U	460.	U	480.	U
92-87-5	Benzdine	NR		2400.	U	2400.	U	2300.	U	2400.	U
120-82-1	1,2,4-Trichlorobenzene	1700.	U	470.	U	470.	U	460.	U	480.	U
129-00-0	Pyrene	1700.	U	470.	U	470.	U	460.	U	480.	U
91-20-3	Naphthalene	1700.	U	470.	U	470.	U	460.	U	480.	U
85-68-7	Butylbenzylphthalate	1700.	U	470.	U	470.	U	460.	U	480.	U
106-47-8	4-Chloroaniline	1700.	U	470.	U	470.	U	460.	U	480.	U
91-94-1	3,3'-Dichlorobenzidine	3400.	U	950.	U	940.	U	910.	U	970.	U
87-68-3	Hexachlorobutadiene	1700.	U	470.	U	470.	U	460.	U	480.	U
56-55-3	Benzo(a)anthracene	1700.	U	470.	U	470.	U	460.	U	480.	U
59-50-7	4-Chloro-3-methylphenol	1700.	U	470.	U	470.	U	460.	U	480.	U
218-01-9	Chrysene	1700.	U	470.	U	470.	U	460.	U	480.	U
91-57-6	2-Methylnaphthalene	1700.	U	470.	U	470.	U	460.	U	480.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	1700.	U	470.	U	470.	U	460.	U	480.	U
77-47-4	Hexachlorocyclopentadiene	1800.	UJ	470.	U	470.	U	460.	U	480.	U
117-84-0	Di-n-octylphthalate	1700.	U	470.	U	470.	U	460.	U	480.	U
88-06-2	2,4,6-Trichlorophenol	1800.	U	470.	U	470.	U	460.	U	480.	U
205-99-2	Benzo(b)fluoranthene	1700.	U	470.	U	470.	U	460.	U	480.	U
95-95-4	2,4,5-Trichlorophenol	9200.	U	2400.	U	2400.	U	2300.	U	2400.	U
207-08-9	Benzo(k)fluoranthene	1700.	U	470.	U	470.	U	460.	U	480.	U
91-58-7	2-Chloronaphthalene	1800.	U	470.	U	470.	U	460.	U	480.	U
50-32-8	Benzo(a)pyrene	1700.	U	470.	U	470.	U	460.	U	480.	U
88-74-4	2-Nitroaniline	1800.	U	2400.	U	2400.	U	2300.	U	2400.	U
193-39-5	Indeno(1,2,3-cd)pyrene	1700.	U	470.	U	470.	U	460.	U	480.	U
131-11-3	Dimethylphthalate	1700.	U	470.	U	470.	U	460.	U	480.	U
53-70-3	Dibenzo(a,h)anthracene	1800.	U	470.	U	470.	U	460.	U	480.	U
208-96-8	Acenaphthylene	1700.	U	470.	U	470.	U	460.	U	480.	U
191-24-2	Benzo(g,h,i)perylene	1900.	U	470.	U	470.	U	460.	U	480.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLES A - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SVDM		SAMPLE ID ----->	GDH-S-8086-02	GDH-S-8087-01	GDH-S-8087-02	GDH-S-8088-01	GDH-S-8088-02	GDH-S-8089-01			
		ORIGINAL ID ----->	GDHSB08602	GDHSB08701	GDHSB08702	GDHSB08801	GDHSB08802	GDHSB08901			
		LAB SAMPLE ID ---->	42347-008	42347-009	42347-010	42347-011	42347-012	42430-005			
		ID FROM REPORT -->	GDHSB08602	GDHSB08701	GDHSB08702	GDHSB08801	GDHSB08802	GDHSB08901			
		SAMPLE DATE ----->	11/22/94	11/22/94	11/22/94	11/22/94	11/22/94	11/30/94			
		DATE EXTRACTED -->	12/02/94	12/02/94	12/02/94	12/02/94	12/02/94	12/07/94			
		DATE ANALYZED -->	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL
62-75-9	N-Nitrosodimethylamine	460.	U	480.	U	540.	U	470.	U	500.	U
606-20-2	2,6-Dinitrotoluene	460.	U	480.	U	540.	U	470.	U	500.	U
108-95-2	Phenol	460.	U	480.	U	540.	U	470.	U	500.	U
99-09-2	3-Nitroaniline	2300.	U	2400.	U	2700.	U	2300.	U	2500.	U
62-53-3	Aniline	460.	U	480.	U	540.	U	470.	U	500.	U
83-32-9	Acenaphthene	460.	U	480.	U	540.	U	470.	U	500.	U
111-44-4	bis(2-Chloroethyl)ether	460.	U	480.	U	540.	U	470.	U	500.	U
51-28-5	2,4-Dinitrophenol	2300.	UJ	2400.	UJ	2700.	UJ	2300.	UJ	2500.	UJ
95-57-8	2-Chlorophenol	460.	U	480.	U	540.	U	470.	U	500.	U
100-02-7	4-Nitrophenol	2300.	U	2400.	U	2700.	U	2300.	U	2500.	U
541-73-1	1,3-Dichlorobenzene	460.	U	480.	U	540.	U	470.	U	500.	U
132-64-9	Dibenzofuran	460.	U	480.	U	540.	U	470.	U	500.	U
106-46-7	1,4-Dichlorobenzene	460.	U	480.	U	540.	U	470.	U	500.	U
121-14-2	2,4-Dinitrotoluene	460.	U	480.	U	540.	U	470.	U	500.	U
100-51-6	Benzyl alcohol	460.	U	480.	U	540.	U	470.	U	500.	U
84-66-2	Diethylphthalate	460.	U	480.	U	540.	U	470.	U	500.	U
95-50-1	1,2-Dichlorobenzene	460.	U	480.	U	540.	U	470.	U	500.	U
7005-72-3	4-Chlorophenylphenylether	460.	U	480.	U	540.	U	470.	U	500.	U
95-48-7	2-Methylphenol (o-Cresol)	460.	U	480.	U	540.	U	470.	U	500.	U
86-73-7	Fluorene	460.	U	480.	U	540.	U	470.	U	500.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460.	U	480.	U	540.	U	470.	U	500.	U
100-01-6	4-Nitroaniline	2300.	U	2400.	U	2700.	U	2300.	U	2500.	U
106-44-5	4-Methylphenol (p-Cresol)	460.	U	480.	U	540.	U	470.	U	500.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2300.	U	2400.	U	2700.	U	2300.	U	2500.	U
621-64-7	N-Nitroso-di-n-propylamine	460.	U	480.	U	540.	U	470.	U	500.	U
86-30-6	N-Nitrosodiphenylamine	460.	U	480.	U	540.	U	470.	U	500.	U
67-72-1	Hexachloroethane	460.	U	480.	U	540.	U	470.	U	500.	U
101-55-3	4-Bromophenylphenylether	460.	U	480.	U	540.	U	470.	U	500.	U
98-95-3	Nitrobenzene	460.	U	480.	U	540.	U	470.	U	500.	U
118-74-1	Hexachlorobenzene	460.	U	480.	U	540.	U	470.	U	500.	U
78-59-1	Isophorone	460.	U	480.	U	540.	U	470.	U	500.	U
87-86-5	Pentachlorophenol	460.	U	480.	U	540.	U	470.	U	500.	U
88-75-5	2-Nitrophenol	460.	U	480.	U	540.	U	470.	U	500.	U
85-01-8	Phenanthrene	460.	U	480.	U	540.	U	470.	U	500.	U
105-67-9	2,4-Dimethylphenol	460.	U	480.	U	540.	U	470.	U	500.	U
120-12-7	Anthracene	460.	U	480.	U	540.	U	470.	U	500.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-SV0A		SAMPLE ID ----->	GDH-S-8086-02	GDH-S-8087-01	GDH-S-8087-02	GDH-S-8088-01	GDH-S-8088-02	GDH-S-8089-01			
		ORIGINAL ID ----->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		LAB SAMPLE ID ---->	42347-008	42347-009	42347-010	42347-011	42347-012	42430-005			
		ID FROM REPORT -->	GDHS808602	GDHS808701	GDHS808702	GDHS808801	GDHS808802	GDHS808901			
		SAMPLE DATE ----->	11/22/94	11/22/94	11/22/94	11/22/94	11/22/94	11/30/94			
		DATE EXTRACTED -->	12/02/94	12/02/94	12/02/94	12/02/94	12/02/94	12/07/94			
		DATE ANALYZED ---->	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL
65-85-0	Benzoic acid	2300.	UR	2400.	UR	2700.	UR	2300.	UR	2500.	UR
84-74-2	Di-n-butylphthalate	460.	U	480.	U	540.	U	470.	U	500.	U
111-91-1	bis(2-Chloroethoxy)methane	460.	U	480.	U	540.	U	470.	U	500.	U
206-44-0	Fluoranthene	460.	U	480.	U	540.	U	470.	U	500.	U
120-83-2	2,4-Dichlorophenol	460.	U	480.	U	540.	U	470.	U	500.	U
92-87-5	Benzidine	2300.	U	2400.	U	2700.	U	2300.	U	2500.	U
120-82-1	1,2,4-Trichlorobenzene	460.	U	480.	U	540.	U	470.	U	500.	U
129-00-0	Pyrene	460.	U	480.	U	540.	U	470.	U	500.	U
91-20-3	Naphthalene	460.	U	480.	U	540.	U	470.	U	500.	U
85-68-7	Butylbenzylphthalate	460.	U	480.	U	540.	U	470.	U	500.	U
106-47-8	4-Chloroaniline	460.	U	480.	U	540.	U	470.	U	500.	U
91-94-1	3,3'-Dichlorobenzidine	910.	U	950.	U	1100.	U	940.	U	990.	U
87-68-3	Hexachlorobutadiene	460.	U	480.	U	540.	U	470.	U	500.	U
56-55-3	Benzo(a)anthracene	460.	U	480.	U	540.	U	470.	U	500.	U
59-50-7	4-Chloro-3-methylphenol	460.	U	480.	U	540.	U	470.	U	500.	U
218-01-9	Chrysene	460.	U	480.	U	540.	U	470.	U	500.	U
91-57-6	2-Methylnaphthalene	460.	U	480.	U	540.	U	470.	U	500.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	460.	U	480.	U	540.	U	470.	U	500.	U
77-47-4	Hexachlorocyclopentadiene	460.	U	480.	U	540.	U	470.	U	500.	U
117-84-0	Di-n-octylphthalate	460.	U	480.	U	540.	U	470.	U	500.	U
88-06-2	2,4,6-Trichlorophenol	460.	U	480.	U	540.	U	470.	U	500.	U
205-99-2	Benzo(b)fluoranthene	460.	U	480.	U	540.	U	470.	U	500.	U
95-95-4	2,4,5-Trichlorophenol	2300.	U	2400.	U	2700.	U	2300.	U	2500.	U
207-08-9	Benzo(k)fluoranthene	460.	U	480.	U	540.	U	470.	U	500.	U
91-58-7	2-Chloronaphthalene	460.	U	480.	U	540.	U	470.	U	500.	U
50-32-8	Benzo(a)pyrene	460.	U	480.	U	540.	U	470.	U	500.	U
88-74-4	2-Nitroaniline	2300.	U	2400.	U	2700.	U	2300.	U	2500.	U
193-39-5	Indeno(1,2,3-cd)pyrene	460.	U	480.	U	540.	U	470.	U	500.	U
131-11-3	Dimethylphthalate	460.	U	480.	U	540.	U	470.	U	500.	U
53-70-3	Dibenzo(a,h)anthracene	460.	U	480.	U	540.	U	470.	U	500.	U
208-96-8	Acenaphthylene	460.	U	480.	U	540.	U	470.	U	500.	U
191-24-2	Benzo(g,h,i)perylene	460.	U	480.	U	540.	U	470.	U	500.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWS46-SVDA		SAMPLE ID ----->	GDH-S-B090-01	GDH-S-B091-01	GDH-S-B092-01	GDH-S-B092-02	GDH-S-B093-01	GDH-S-B104-01					
		ORIGINAL ID ----->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		LAB SAMPLE ID ---->	42430-006	42430-007	42574-005	42574-008	42613-003	42985-005					
		ID FROM REPORT -->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		SAMPLE DATE ----->	11/30/94	11/30/94	12/14/94	12/14/94	12/19/94	02/06/95					
		DATE EXTRACTED -->	12/07/94	12/07/94	12/16/94	12/16/94	12/23/94	02/14/95					
		DATE ANALYZED ---->	12/08/94	12/08/94	12/19/94	12/19/94	01/03/95	02/15/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS28	VAL	CHS28	VAL	CHS28	VAL	CHS34	VAL
62-75-9	N-Nitrosodimethylamine	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
606-20-2	2,6-Dinitrotoluene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
108-95-2	Phenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
99-09-2	3-Nitroaniline	2700.	U	2200.	U	2400.	U	2200.	U	2000.	U	2000.	U
62-53-3	Aniline	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
83-32-9	Acenaphthene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
111-44-4	bis(2-Chloroethyl)ether	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
51-28-5	2,4-Dinitrophenol	2700.	UJ	2200.	UJ	2400.	U	2200.	U	2000.	U	2000.	UJ
95-57-8	2-Chlorophenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
100-02-7	4-Nitrophenol	2700.	U	2200.	U	2400.	U	2200.	U	2000.	U	2000.	U
541-73-1	1,3-Dichlorobenzene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
132-64-9	Oibenzofuran	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
106-46-7	1,4-Dichlorobenzene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
121-14-2	2,4-Dinitrotoluene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
100-51-6	Benzyl alcohol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
84-66-2	Diethylphthalate	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
95-50-1	1,2-Dichlorobenzene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
7005-72-3	4-Chlorophenylphenylether	550.	U	440.	U	470.	U	440.	U	390.	UJ	410.	U
95-48-7	2-Methylphenol (o-Cresol)	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
86-73-7	Fluorene	550.	U	440.	U	470.	U	440.	U	390.	UJ	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
100-01-6	4-Nitroaniline	2700.	U	2200.	U	2400.	U	2200.	U	2000.	U	2000.	U
106-44-5	4-Methylphenol (p-Cresol)	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2700.	U	2200.	U	2400.	U	2200.	U	2000.	U	2000.	UJ
621-64-7	N-Nitroso-di-n-propylamine	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
86-30-6	N-Nitrosodiphenylamine	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
67-72-1	Hexachloroethane	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
101-55-3	4-Bromophenylphenylether	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
98-95-3	Nitrobenzene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
118-74-1	Hexachlorobenzene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
78-59-1	Isophorone	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
87-86-5	Pentachlorophenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	UJ
88-75-5	2-Nitrophenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
85-01-8	Phenanthrene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
105-67-9	2,4-Dimethylphenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
120-12-7	Anthracene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-8090-01	GDH-S-8091-01	GDH-S-8092-01	GDH-S-8092-02	GDH-S-8093-01	GDH-S-8104-01					
		ORIGINAL ID ----->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		LAB SAMPLE ID ---->	42430-006	42430-007	42574-005	42574-008	42613-003	42985-005					
		ID FROM REPORT -->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		SAMPLE DATE ----->	11/30/94	11/30/94	12/14/94	12/14/94	12/19/94	02/06/95					
		DATE EXTRACTED -->	12/07/94	12/07/94	12/16/94	12/16/94	12/23/94	02/14/95					
		DATE ANALYZED --->	12/08/94	12/08/94	12/19/94	12/19/94	01/03/95	02/15/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS28	VAL	CHS28	VAL	CHS28	VAL	CHS34	VAL
65-85-0	Benzoic acid	2700.	UR	2200.	UR	2400.	U	2200.	U	2000.	U	2000.	UJ
84-74-2	Di-n-butylphthalate	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
111-91-1	bis(2-Chloroethoxy)methane	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
206-44-0	Fluoranthene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
120-83-2	2,4-Dichlorophenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
92-87-5	Benzidine	2700.	U	2200.	U	2400.	UJ	2200.	UJ	2000.	UJ	2000.	U
120-82-1	1,2,4-Trichlorobenzene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
129-00-0	Pyrene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
91-20-3	Naphthalene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
85-68-7	Butylbenzylphthalate	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
106-47-8	4-Chloroaniline	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
91-94-1	3,3'-Dichlorobenzidine	1100.	U	890.	U	950.	U	880.	U	780.	U	810.	U
87-68-3	Hexachlorobutadiene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
56-55-3	Benzo(a)anthracene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
59-50-7	4-Chloro-3-methylphenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
218-01-9	Chrysene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
91-57-6	2-Methylnaphthalene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	550.	U	440.	U	160.	J	440.	U	390.	U	410.	U
77-47-4	Hexachlorocyclopentadiene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
117-84-0	Di-n-octylphthalate	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
88-06-2	2,4,6-Trichlorophenol	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
205-99-2	Benzo(b)fluoranthene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
95-95-4	2,4,5-Trichlorophenol	2700.	U	2200.	U	2400.	U	2200.	U	2000.	U	2000.	U
207-08-9	Benzo(k)fluoranthene	550.	U	440.	U	470.	UJ	440.	UJ	390.	U	410.	U
91-58-7	2-Chloronaphthalene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
50-32-8	Benzo(a)pyrene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
88-74-4	2-Nitroaniline	2700.	U	2200.	U	2400.	U	2200.	U	2000.	U	2000.	U
193-39-5	Indeno(1,2,3-cd)pyrene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
131-11-3	Dimethylphthalate	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
53-70-3	Dibenzo(a,h)anthracene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
208-96-8	Acenaphthylene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
191-24-2	Benzo(g,h,i)perylene	550.	U	440.	U	470.	U	440.	U	390.	U	410.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-S-B104-02	GDH-S-B105-01	GDH-S-B107-01	GDH-S-B107-02			
		ORIGINAL ID ----->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		LAB SAMPLE ID ---->	42985-006	42985-007	43002-004	43002-005			
		ID FROM REPORT -->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		SAMPLE DATE ----->	02/06/95	02/06/95	02/07/95	02/07/95			
		DATE EXTRACTED -->	02/14/95	02/14/95	02/14/95	02/14/95			
		DATE ANALYZED ---->	02/15/95	02/15/95	02/14/95	02/14/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL
62-75-9	N-Nitrosodimethylamine	430.	U	380.	U	380.	UJ	420.	UJ
606-20-2	2,6-Dinitrotoluene	430.	U	380.	U	380.	U	420.	U
108-95-2	Phenol	430.	U	380.	U	380.	UJ	420.	UJ
99-09-2	3-Nitroaniline	2100.	U	1900.	U	1900.	U	2100.	U
62-53-3	Aniline	430.	U	380.	U	380.	U	420.	U
83-32-9	Acenaphthene	430.	U	380.	U	380.	U	420.	U
111-44-4	bis(2-Chloroethyl)ether	430.	U	380.	U	380.	UJ	420.	UJ
51-28-5	2,4-Dinitrophenol	2100.	UJ	1900.	UJ	1900.	UJ	2100.	UJ
95-57-8	2-Chlorophenol	430.	U	380.	U	380.	U	420.	U
100-02-7	4-Nitrophenol	2100.	U	1900.	U	1900.	U	2100.	U
541-73-1	1,3-Dichlorobenzene	430.	U	380.	U	380.	U	420.	U
132-64-9	Oibenzofuran	430.	U	380.	U	380.	U	420.	U
106-46-7	1,4-Dichlorobenzene	430.	U	380.	U	380.	U	420.	U
121-14-2	2,4-Dinitrotoluene	430.	U	380.	U	380.	U	420.	U
100-51-6	Benzyl alcohol	430.	U	380.	U	380.	U	420.	U
84-66-2	Diethylphthalate	430.	U	380.	U	380.	U	420.	U
95-50-1	1,2-Dichlorobenzene	430.	U	380.	U	380.	U	420.	U
7005-72-3	4-Chlorophenylphenylether	430.	U	380.	U	380.	U	420.	U
95-48-7	2-Methylphenol (o-Cresol)	430.	U	380.	U	380.	U	420.	U
86-73-7	Fluorene	430.	U	380.	U	380.	U	420.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430.	U	380.	U	380.	U	420.	U
100-01-6	4-Nitroaniline	2100.	U	1900.	U	1900.	U	2100.	U
106-44-5	4-Methylphenol (p-Cresol)	430.	U	380.	U	380.	U	420.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	UJ	1900.	UJ	1900.	UJ	2100.	UJ
621-64-7	N-Nitroso-di-n-propylamine	430.	U	380.	U	380.	U	420.	U
86-30-6	N-Nitrosodiphenylamine	430.	U	380.	U	380.	U	420.	U
67-72-1	Hexachloroethane	430.	U	380.	U	380.	U	420.	U
101-55-3	4-Bromophenylphenylether	430.	U	380.	U	380.	U	420.	U
98-95-3	Nitrobenzene	430.	U	380.	U	380.	U	420.	U
118-74-1	Hexachlorobenzene	430.	U	380.	U	380.	U	420.	U
78-59-1	Isophorone	430.	U	380.	U	380.	U	420.	U
87-86-5	Pentachlorophenol	430.	UJ	380.	UJ	380.	UJ	420.	UJ
88-75-5	2-Nitrophenol	430.	U	380.	U	380.	U	420.	U
85-01-8	Phenanthrene	430.	U	380.	U	380.	U	420.	U
105-67-9	2,4-Dimethylphenol	430.	U	380.	U	380.	U	420.	U
120-12-7	Anthracene	430.	U	380.	U	380.	U	420.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-SV0A		SAMPLE ID ----->	GDH-S-8104-02	GDH-S-8105-01	GDH-S-8107-01	GDH-S-8107-02			
		ORIGINAL ID ----->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		LAB SAMPLE ID ---->	42985-006	42985-007	43002-004	43002-005			
		ID FROM REPORT -->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		SAMPLE DATE ----->	02/06/95	02/06/95	02/07/95	02/07/95			
		DATE EXTRACTED -->	02/14/95	02/14/95	02/14/95	02/14/95			
		DATE ANALYZED ---->	02/15/95	02/15/95	02/14/95	02/14/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL
65-85-0	Benzoic acid	2100.	UJ	1900.	UJ	1900.	UJ	2100.	UJ
84-74-2	Di-n-butylphthalate	430.	U	380.	U	380.	U	420.	U
111-91-1	bis(2-Chloroethoxy)methane	430.	U	380.	U	380.	U	420.	U
206-44-0	Fluoranthene	430.	U	380.	U	380.	U	420.	U
120-83-2	2,4-Dichlorophenol	430.	U	380.	U	380.	U	420.	U
92-87-5	Benzidine	2100.	U	1900.	U	1900.	U	2100.	U
120-82-1	1,2,4-Trichlorobenzene	430.	U	380.	U	380.	U	420.	U
129-00-0	Pyrene	430.	U	380.	U	380.	U	420.	U
91-20-3	Naphthalene	430.	U	380.	U	380.	U	420.	U
85-68-7	Butylbenzylphthalate	430.	U	380.	U	380.	U	420.	U
106-47-8	4-Chloroaniline	430.	U	380.	U	380.	U	420.	U
91-94-1	3,3'-Dichlorobenzidine	860.	U	760.	U	760.	U	840.	U
87-68-3	Hexachlorobutadiene	430.	U	380.	U	380.	U	420.	U
56-55-3	Benzo(a)anthracene	430.	U	380.	U	380.	U	420.	U
59-50-7	4-Chloro-3-methylphenol	430.	U	380.	U	380.	U	420.	U
218-01-9	Chrysene	430.	U	380.	U	380.	U	420.	U
91-57-6	2-Methylnaphthalene	430.	U	380.	U	380.	U	420.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	430.	U	92.	J	210.	J	420.	U
77-47-4	Hexachlorocyclopentadiene	430.	U	380.	U	380.	U	420.	U
117-84-0	Di-n-octylphthalate	430.	U	380.	UJ	380.	U	420.	U
88-06-2	2,4,6-Trichlorophenol	430.	U	380.	U	380.	U	420.	U
205-99-2	Benzo(b)fluoranthene	430.	U	380.	UJ	380.	U	420.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U	1900.	U	1900.	U	2100.	U
207-08-9	Benzo(k)fluoranthene	430.	U	380.	UJ	380.	U	420.	U
91-58-7	2-Chloronaphthalene	430.	U	380.	U	380.	U	420.	U
50-32-8	Benzo(a)pyrene	430.	U	380.	UJ	380.	U	420.	U
88-74-4	2-Nitroaniline	2100.	U	1900.	U	1900.	U	2100.	U
193-39-5	Indeno(1,2,3-cd)pyrene	430.	U	380.	UJ	380.	U	420.	U
131-11-3	Dimethylphthalate	430.	U	380.	U	380.	U	420.	U
53-70-3	Dibenzo(a,h)anthracene	430.	U	380.	UJ	380.	U	420.	U
208-96-8	Acenaphthylene	430.	U	380.	U	380.	U	420.	U
191-24-2	Benzo(g,h,i)perylene	430.	U	380.	UJ	380.	U	420.	U
103-33-3	Azobenzene	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-V0A		SAMPLE ID ----->	GDH-S-8001-01	GDH-S-8001-02	GDH-S-8002-01	GDH-S-8002-02	GDH-S-8003-01	GDH-S-8003-02	
		ORIGINAL ID ----->	GDHS800101	GDHS800102	GDHS800201	GDHS800202	GDHS800301	GDHS800302	
		LAB SAMPLE ID ---->	41665-001	41665-002	41665-003	41665-004	41665-005	41665-006	
		ID FROM REPORT -->	092806	092807	092808	092809	092810	092811	
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	
		DATE ANALYZED ---->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/11/94	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
100-41-4	Ethylbenzene	7.	U	7.	U	7.	U	6.	U
100-42-5	Styrene	7.	U	7.	U	7.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	7.	U	7.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	7.	U	7.	U	6.	U
107-06-2	1,2-Dichloroethane	7.	U	7.	U	7.	U	6.	U
108-05-4	Vinyl acetate	13.	U	14.	U	14.	U	13.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	33.	U	34.	U	35.	U	32.	U
108-88-3	Toluene	7.	U	6.	J	7.	U	6.	U
108-90-7	Chlorobenzene	7.	U	7.	U	7.	U	6.	U
109-99-9	Tetrahydrofuran	33.	U	34.	U	35.	U	32.	U
124-48-1	Dibromochloromethane	7.	U	7.	U	7.	U	6.	U
127-18-4	Tetrachloroethene	7.	U	7.	U	7.	U	6.	U
1330-20-7	Xylene (Total)	7.	U	7.	U	7.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	7.	U	7.	U	7.	U	6.	U
56-23-5	Carbon tetrachloride	7.	U	7.	U	7.	U	6.	U
591-78-6	2-Hexanone	33.	U	34.	U	35.	U	32.	U
67-64-1	Acetone	33.	U	44.	U	35.	U	78.	U
67-66-3	Chloroform	7.	U	7.	U	7.	U	6.	U
71-43-2	Benzene	7.	U	7.	U	7.	U	6.	U
71-55-6	1,1,1-Trichloroethane	7.	U	7.	U	7.	U	6.	U
74-83-9	Bromomethane	13.	U	14.	U	14.	U	13.	U
74-87-3	Chloromethane	13.	UJ	14.	UJ	14.	UJ	13.	UJ
75-00-3	Chloroethane	7.	U	7.	U	7.	U	6.	U
75-01-4	Vinyl chloride	13.	U	14.	U	14.	U	13.	U
75-09-2	Methylene chloride	4.4	J	13.	J	7.	J	13.	UJ
75-15-0	Carbon disulfide	7.	U	7.	U	7.	U	6.	U
75-25-2	Bromoform	7.	U	7.	U	7.	U	6.	U
75-27-4	Bromodichloromethane	7.	U	7.	U	7.	U	6.	U
75-34-3	1,1-Dichloroethane	7.	U	7.	U	7.	U	6.	U
75-35-4	1,1-Dichloroethylene	7.	U	7.	U	7.	U	6.	U
75-69-4	Trichlorofluoromethane	7.	U	7.	U	7.	U	6.	U
78-87-5	1,2-Dichloropropane	7.	U	7.	U	7.	U	6.	U
78-93-3	2-Butanone (MEK)	33.	U	34.	U	35.	U	32.	U
79-00-5	1,1,2-Trichloroethane	7.	U	7.	U	7.	U	6.	U
79-01-6	Trichloroethene	7.	U	7.	U	7.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	7.	U	7.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-V0A		SAMPLE ID ----->	GDH-S-8004-01	GDH-S-8004-02	GDH-S-8005-01	GDH-S-8006-01	GDH-S-8006-02	GDH-S-8007-01			
		ORIGINAL ID ----->	GDHS800401	GDHS800402	GDHS800501	GDHS800601	GDHS800602	GDHS800701			
		LAB SAMPLE ID ---->	41665-007	41665-008	41665-009	41665-011	41665-012	41665-013			
		ID FROM REPORT -->	092812	092813	092814	092816	092817	092818			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE ANALYZED ---->	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94	10/10/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL
100-41-4	Ethylbenzene	7.	U	7.	UJ	6.	U	5.	U	6.	U
100-42-5	Styrene	7.	U	7.	UJ	6.	U	5.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	7.	U	6.	U	5.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	7.	U	6.	U	5.	U	6.	U
107-06-2	1,2-Dichloroethane	7.	U	7.	U	6.	U	5.	U	6.	U
108-05-4	Vinyl acetate	14.	U	13.	U	12.	U	11.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	34.	U	34.	UJ	29.	U	27.	U	29.	U
108-88-3	Toluene	7.	U	7.	UJ	6.	U	5.	U	6.	U
108-90-7	Chlorobenzene	7.	U	7.	UJ	6.	U	5.	U	6.	U
109-99-9	Tetrahydrofuran	34.	U	34.	U	29.	U	27.	U	29.	U
124-48-1	Dibromochloromethane	7.	U	7.	U	6.	U	5.	U	6.	U
127-18-4	Tetrachloroethene	7.	U	7.	UJ	6.	U	5.	U	6.	U
1330-20-7	Xylene (Total)	7.	U	7.	UJ	6.	U	5.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	7.	U	7.	U	6.	U	5.	U	6.	U
56-23-5	Carbon tetrachloride	7.	U	7.	U	6.	U	5.	U	6.	U
591-78-6	2-Hexanone	34.	U	34.	UJ	29.	U	27.	U	29.	U
67-64-1	Acetone	34.	U	33.	U	29.	U	27.	U	30.	U
67-66-3	Chloroform	7.	U	7.	U	6.	U	5.	U	6.	U
71-43-2	Benzene	7.	U	7.	U	6.	U	5.	U	6.	U
71-55-6	1,1,1-Trichloroethane	7.	U	7.	U	6.	U	5.	U	6.	U
74-83-9	Bromomethane	14.	U	13.	U	12.	U	11.	U	12.	U
74-87-3	Chloromethane	14.	UJ	13.	UJ	12.	UJ	11.	UJ	12.	UJ
75-00-3	Chloroethane	7.	U	7.	U	6.	U	5.	U	6.	U
75-01-4	Vinyl chloride	14.	U	13.	U	12.	U	11.	U	12.	U
75-09-2	Methylene chloride	14.	UJ	9.	J	3.8	J	11.	UJ	3.7	J
75-15-0	Carbon disulfide	7.	U	7.	U	6.	U	5.	U	6.	U
75-25-2	Bromoform	7.	U	7.	U	6.	U	5.	U	6.	U
75-27-4	Bromodichloromethane	7.	U	7.	U	6.	U	5.	U	6.	U
75-34-3	1,1-Dichloroethane	7.	U	7.	U	6.	U	5.	U	6.	U
75-35-4	1,1-Dichloroethylene	7.	U	7.	U	6.	U	5.	U	6.	U
75-69-4	Trichlorofluoromethane	7.	U	7.	U	6.	U	5.	U	6.	U
78-87-5	1,2-Dichloropropene	7.	U	7.	U	6.	U	5.	U	6.	U
78-93-3	2-Butanone (MEK)	34.	U	34.	U	29.	U	27.	U	29.	U
79-00-5	1,1,2-Trichloroethane	7.	U	7.	U	6.	U	5.	U	6.	U
79-01-6	Trichloroethene	7.	U	7.	U	6.	U	5.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	7.	UJ	6.	U	5.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUBS46-V0A		SAMPLE ID ----->	GDH-S-B007-02	GDH-S-B008-01	GDH-S-B008-02	GDH-S-B009-01	GDH-S-B009-02	GDH-S-B010-01			
		ORIGINAL ID ----->	GDHSB00702	GDHSB00801	GDHSB00802	GDHSB00901	GDHSB00902	GDHSB01001			
		LAB SAMPLE ID ---->	41665-014	41665-015	41665-016	41665-017	41665-019	41666-001			
		ID FROM REPORT -->	092819	092820	092821	092822	092824	092805			
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94			
		DATE ANALYZED ---->	10/10/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS15	VAL	CHS16	VAL
100-41-4	Ethylbenzene	6.	U	6.	U	8.	U	6.	U	7.	UJ
100-42-5	Styrene	6.	U	6.	U	8.	U	6.	U	7.	UJ
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	8.	U	6.	U	7.	UJ
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	8.	U	6.	U	7.	UJ
107-06-2	1,2-Dichloroethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
108-05-4	Vinyl acetate	12.	U	12.	U	17.	U	12.	U	14.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	31.	U	30.	U	42.	U	30.	U	34.	UJ
108-88-3	Toluene	6.	U	6.	U	8.	U	6.	U	7.	UJ
108-90-7	Chlorobenzene	6.	U	6.	U	8.	U	6.	U	7.	UJ
109-99-9	Tetrahydrofuran	31.	U	30.	U	42.	U	30.	U	34.	UJ
124-48-1	Dibromochloromethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
127-18-4	Tetrachloroethene	6.	U	6.	U	8.	U	6.	U	7.	UJ
1330-20-7	Xylene (Total)	6.	U	6.	U	8.	U	6.	U	7.	UJ
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	8.	U	6.	U	7.	UJ
56-23-5	Carbon tetrachloride	6.	U	6.	U	8.	U	6.	U	7.	UJ
591-78-6	2-Hexanone	31.	U	30.	U	42.	U	30.	U	34.	UJ
67-64-1	Acetone	30.	U	30.	U	27.	J	30.	U	20.	J
67-66-3	Chloroform	6.	U	6.	U	8.	U	6.	U	7.	UJ
71-43-2	Benzene	6.	U	6.	U	8.	U	6.	U	7.	UJ
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
74-83-9	Bromomethane	12.	U	12.	U	17.	U	12.	U	14.	UJ
74-87-3	Chloromethane	12.	UJ	12.	UJ	17.	UJ	12.	UJ	14.	UJ
75-00-3	Chloroethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
75-01-4	Vinyl chloride	12.	U	12.	U	17.	U	12.	U	14.	UJ
75-09-2	Methylene chloride	5.	J	6.	J	17.	UJ	4.5	J	12.	UJ
75-15-0	Carbon disulfide	6.	U	6.	U	8.	U	6.	U	7.	UJ
75-25-2	Bromoform	6.	U	6.	U	8.	U	6.	U	7.	UJ
75-27-4	Bromodichloromethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
75-34-3	1,1-Dichloroethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	8.	U	6.	U	7.	UJ
75-69-4	Trichlorofluoromethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
78-87-5	1,2-Dichloropropane	6.	U	6.	U	8.	U	6.	U	7.	UJ
78-93-3	2-Butanone (MEK)	31.	U	30.	U	42.	U	30.	U	34.	UJ
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
79-01-6	Trichloroethene	6.	U	6.	U	8.	U	6.	U	7.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	8.	U	6.	U	7.	UJ
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-VDA		SAMPLE ID ----->	GDH-S-B010-02	GDH-S-B011-01	GDH-S-B011-02	GDH-S-B012-01	GDH-S-B012-02	GDH-S-B013-01					
		ORIGINAL ID ----->	GDHSB01002	GDHSB01101	GDHSB01102	GDHSB01201	GDHSB01202	GDHSB01301					
		LAB SAMPLE ID ---->	41665-018	41667-001	41667-002	41667-003	41667-004	41693-001					
		ID FROM REPORT -->	092823	092825	092826	092827	092828	093003					
		SAMPLE DATE ----->	09/27/94	09/27/94	09/27/94	09/27/94	09/27/94	09/29/94					
		DATE ANALYZED ---->	10/11/94	10/07/94	10/07/94	10/07/94	10/11/94	10/11/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS15	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS14	VAL	CHS16	VAL
100-41-4	Ethylbenzene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
100-42-5	Styrene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
107-06-2	1,2-Dichloroethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
108-05-4	Vinyl acetate	14.	U	12.	U	19.	U	11.	U	14.	UJ	11.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	35.	U	31.	U	48.	U	28.	U	35.	U	27.	U
108-88-3	Toluene	8.	U	6.	U	10.	U	6.	U	7.	U	6.	U
108-90-7	Chlorobenzene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
109-99-9	Tetrahydrofuran	35.	U	31.	U	48.	U	28.	U	35.	U	27.	U
124-48-1	Dibromochloromethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
127-18-4	Tetrachloroethene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
1330-20-7	Xylene (Total)	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
56-23-5	Carbon tetrachloride	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
591-78-6	2-Hexanone	35.	U	31.	U	48.	U	28.	U	35.	U	27.	U
67-64-1	Acetone	100.	U	20.	J	340.	U	22.	J	35.	U	27.	U
67-66-3	Chloroform	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
71-43-2	Benzene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
71-55-6	1,1,1-Trichloroethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
74-83-9	Bromomethane	14.	U	12.	U	19.	U	11.	U	14.	U	11.	U
74-87-3	Chloromethane	14.	UJ	12.	U	19.	U	11.	U	14.	UJ	11.	UJ
75-00-3	Chloroethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
75-01-4	Vinyl chloride	14.	U	12.	U	19.	U	11.	U	14.	U	11.	U
75-09-2	Methylene chloride	8.	J	8.	J	14.	J	8.	J	14.	U	11.	U
75-15-0	Carbon disulfide	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
75-25-2	Bromoform	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
75-27-4	Bromodichloromethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
75-34-3	1,1-Dichloroethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
75-35-4	1,1-Dichloroethylene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
75-69-4	Trichlorofluoromethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
78-87-5	1,2-Dichloropropane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
78-93-3	2-Butanone (MEK)	35.	U	31.	U	48.	U	28.	U	35.	U	27.	U
79-00-5	1,1,2-Trichloroethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
79-01-6	Trichloroethene	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	6.	U	10.	U	6.	U	7.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-VOA		SAMPLE ID ----->	GDH-S-B013-02	GDH-S-B014-01	GDH-S-B014-02	GDH-S-B015-01 RE	GDH-S-B015-02	GDH-S-B016-01					
		ORIGINAL ID ----->	GDHSB01302	GDHSB01401	GDHSB01402	GDHSB01501	GDHSB01502	GDHSB01601					
		LAB SAMPLE ID ---->	41693-002	41693-003	41693-004	41693-005RE	41693-006	41693-007					
		ID FROM REPORT -->	093004	093005	093006	093007	093008	093009					
		SAMPLE DATE ----->	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94	09/29/94					
		DATE ANALYZED ---->	10/12/94	10/11/94	10/12/94	10/12/94	10/12/94	10/12/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL				
100-41-4	Ethylbenzene	6.	U	6.	U	11.	U	6.	UJ	9.	U	5.	U
100-42-5	Styrene	6.	U	6.	U	11.	U	6.	UJ	9.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
107-06-2	1,2-Dichloroethane	6.	UJ	6.	U	11.	UJ	6.	UJ	9.	UJ	5.	UJ
108-05-4	Vinyl acetate	12.	UJ	11.	UJ	21.	UJ	11.	UJ	19.	UJ	10.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	31.	U	28.	U	54.	U	28.	UJ	47.	U	26.	U
108-88-3	Toluene	6.	U	6.	U	11.	U	6.	J	9.	U	5.	U
108-90-7	Chlorobenzene	6.	U	6.	U	11.	U	6.	UJ	9.	U	5.	U
109-99-9	Tetrahydrofuran	31.	U	28.	U	54.	U	28.	U	47.	U	26.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	11.	U	6.	UJ	9.	U	5.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	11.	U	6.	UJ	9.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
591-78-6	2-Hexanone	31.	U	28.	U	54.	U	28.	U	47.	U	26.	U
67-64-1	Acetone	31.	UJ	28.	U	31.	UJ	21.	UJ	65.	UJ	55.	UJ
67-66-3	Chloroform	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
71-43-2	Benzene	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
74-83-9	Bromomethane	12.	U	11.	U	21.	U	11.	U	19.	U	10.	U
74-87-3	Chloromethane	12.	UJ	11.	UJ	21.	UJ	11.	UJ	19.	UJ	10.	UJ
75-00-3	Chloroethane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
75-01-4	Vinyl chloride	12.	U	11.	U	21.	U	11.	U	19.	U	10.	U
75-09-2	Methylene chloride	12.	U	11.	J	21.	U	13.	U	19.	U	10.	U
75-15-0	Carbon disulfide	6.	UJ	6.	U	11.	UJ	6.	UJ	9.	UJ	5.	UJ
75-25-2	Bromoform	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
75-69-4	Trichlorofluoromethane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
78-87-5	1,2-Dichloropropane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
78-93-3	2-Butanone (MEK)	31.	UJ	28.	U	54.	UJ	28.	UJ	47.	UJ	26.	UJ
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
79-01-6	Trichloroethene	6.	U	6.	U	11.	U	6.	U	9.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	11.	U	6.	UJ	9.	U	5.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB/6-VDA		SAMPLE ID ----->	GDH-S-8016-02	GDH-S-8017-01 RE	GDH-S-8017-02	GDH-S-8018-01	GDH-S-8019-01	GDH-S-8019-02			
		ORIGINAL ID ----->	GDHS801602	GDHS801701	GDHS801702	GDHS801801	GDHS801901	GDHS801902			
		LAB SAMPLE ID --->	41693-008	41713-001RE	41713-002	41713-003	41713-004	41713-005			
		ID FROM REPORT -->	093010	100401	100402	100403	100404	100405			
		SAMPLE DATE ----->	09/29/94	10/03/94	10/03/94	10/03/94	10/03/94	10/03/94			
		DATE ANALYZED --->	10/12/94	10/12/94	10/13/94	10/13/94	10/17/94	10/12/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL
100-41-4	Ethylbenzene	7.	U	6.	UJ	10.	U	7.	U	5.	U
100-42-5	Styrene	7.	U	6.	UJ	10.	U	7.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	6.	U	10.	U	7.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	6.	U	10.	U	7.	U	5.	U
107-06-2	1,2-Dichloroethane	7.	UJ	6.	UJ	10.	U	7.	U	5.	U
108-05-4	Vinyl acetate	14.	UJ	12.	UJ	20.	UJ	13.	UJ	11.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	35.	U	31.	UJ	50.	U	32.	U	27.	U
108-88-3	Toluene	7.	U	6.	UJ	10.	U	7.	U	5.	U
108-90-7	Chlorobenzene	7.	U	6.	UJ	10.	U	7.	U	5.	U
109-99-9	Tetrahydrofuran	35.	U	31.	U	50.	U	32.	U	27.	U
124-48-1	Dibromochloromethane	7.	U	6.	U	10.	U	7.	U	5.	U
127-18-4	Tetrachloroethene	7.	U	6.	UJ	10.	U	7.	U	5.	U
1330-20-7	Xylene (Total)	7.	U	6.	UJ	10.	U	7.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	7.	U	6.	U	10.	U	7.	U	5.	U
56-23-5	Carbon tetrachloride	7.	U	6.	U	10.	U	7.	U	5.	U
591-78-6	2-Hexanone	35.	U	31.	U	50.	U	32.	U	27.	U
67-64-1	Acetone	31.	UJ	31.	UJ	70.	J	27.	J	32.	U
67-66-3	Chloroform	7.	U	6.	U	10.	U	7.	U	5.	U
71-43-2	Benzene	7.	U	6.	U	10.	U	7.	U	5.	U
71-55-6	1,1,1-Trichloroethane	7.	U	6.	U	10.	U	7.	U	5.	U
74-83-9	Bromomethane	14.	U	12.	U	20.	U	13.	U	11.	U
74-87-3	Chloromethane	14.	UJ	12.	UJ	20.	UJ	13.	UJ	11.	U
75-00-3	Chloroethane	7.	U	6.	U	10.	U	7.	U	5.	U
75-01-4	Vinyl chloride	14.	U	12.	U	20.	U	13.	U	11.	U
75-09-2	Methylene chloride	14.	U	12.	U	16.	J	10.	J	11.	U
75-15-0	Carbon disulfide	7.	UJ	6.	U	10.	UJ	7.	UJ	5.	U
75-25-2	Bromoform	7.	U	6.	U	10.	U	7.	U	5.	U
75-27-4	Bromodichloromethane	7.	U	6.	U	10.	U	7.	U	5.	U
75-34-3	1,1-Dichloroethane	7.	U	6.	U	10.	U	7.	U	5.	U
75-35-4	1,1-Dichloroethylene	7.	U	6.	U	10.	U	7.	U	5.	U
75-69-4	Trichlorofluoromethane	7.	U	6.	U	10.	U	7.	U	5.	U
78-87-5	1,2-Dichloropropane	7.	U	6.	U	10.	U	7.	U	5.	U
78-93-3	2-Butanone (MEK)	35.	UJ	31.	UJ	50.	UJ	32.	U	27.	U
79-00-5	1,1,2-Trichloroethane	7.	U	6.	U	10.	U	7.	U	5.	U
79-01-6	Trichloroethene	7.	U	6.	U	10.	U	7.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	6.	UJ	10.	U	7.	U	5.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLES. N - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SWB46-V0A		SAMPLE ID ----->	GDH-S-8020-01	GDH-S-8020-02	GDH-S-8021-01	GDH-S-8022-01	GDH-S-8023-01	GDH-S-8023-02					
		ORIGINAL ID ----->	GDHS802001	GDHS802002	GDHS802101	GDHS802201	GDHS802301	GDHS802302					
		LAB SAMPLE ID ---->	41713-006	41713-008	41713-007	41713-009	41734-010	41734-011					
		ID FROM REPORT -->	100406	100408	100407	100409	100510	100511					
		SAMPLE DATE ----->	10/03/94	10/03/94	10/03/94	10/03/94	10/04/94	10/04/94					
		DATE ANALYZED ---->	10/13/94	10/13/94	10/13/94	10/13/94	10/12/94	10/12/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS16	VAL	CHS17	VAL	CHS17	VAL
100-41-4	Ethylbenzene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
100-42-5	Styrene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
108-05-4	Vinyl acetate	11.	UJ	13.	UJ	12.	UJ	12.	UJ	12.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	27.	U	32.	U	31.	U	31.	U	30.	U	30.	U
108-88-3	Toluene	6.	U	6.	U	6.	U	6.	U	3.3	J	6.	U
108-90-7	Chlorobenzene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	27.	U	32.	U	31.	U	31.	U	30.	U	30.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
591-78-6	2-Hexanone	27.	U	32.	U	31.	U	31.	U	30.	U	30.	U
67-64-1	Acetone	27.	U	52.	U	31.	U	150.	U	9.	U	22.	U
67-66-3	Chloroform	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
71-43-2	Benzene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
74-83-9	Bromomethane	11.	U	13.	U	12.	U	12.	U	12.	U	12.	U
74-87-3	Chloromethane	11.	UJ	13.	UJ	12.	UJ	12.	UJ	12.	UJ	12.	UJ
75-00-3	Chloroethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
75-01-4	Vinyl chloride	11.	U	13.	U	12.	U	12.	U	12.	U	12.	U
75-09-2	Methylene chloride	10.	J	11.	J	10.	J	9.	J	4.7	J	6.	J
75-15-0	Carbon disulfide	6.	UJ	6.	UJ	6.	UJ	6.	UJ	6.	U	6.	U
75-25-2	Bromoform	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
78-87-5	1,2-Dichloropropane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	27.	U	32.	U	31.	U	31.	U	30.	U	30.	U
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
79-01-6	Trichloroethene	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	6.	U	6.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-VDA		SAMPLE ID ----->	GDH-S-8024-01	GDH-S-8025-01	GDH-S-8026-01	GDH-S-8026-02	GDH-S-8027-01	GDH-S-8027-02			
		ORIGINAL ID ----->	GDHS802401	GDHS802501	GDHS802601	GDHS802602	GDHS802701	GDHS802702			
		LAB SAMPLE ID ---->	41734-012	41734-013	41734-014	41734-015	41734-016	41734-017			
		ID FROM REPORT -->	100512	100513	100514	100515	100516	100517			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE ANALYZED ---->	10/17/94	10/12/94	10/12/94	10/17/94	10/17/94	10/17/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
100-41-4	Ethylbenzene	6.	U	6.	U	6.	U	6.	U	6.	U
100-42-5	Styrene	6.	U	6.	U	6.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
108-05-4	Vinyl acetate	12.	U	12.	U	12.	U	12.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	31.	U	29.	U	29.	U	30.	U	30.	U
108-88-3	Toluene	3.8	J	6.	U	6.	U	7.		14.	
108-90-7	Chlorobenzene	6.	U	6.	U	6.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	31.	U	29.	U	29.	U	30.	U	30.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	6.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	6.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	6.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	6.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	6.	U	6.	U	6.	U
591-78-6	2-Hexanone	31.	U	29.	U	29.	U	30.	U	30.	U
67-64-1	Acetone	16.	U	15.	U	17.	U	16.	J	30.	U
67-66-3	Chloroform	6.	U	6.	U	6.	U	6.	U	6.	U
71-43-2	Benzene	6.	U	6.	U	6.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
74-83-9	Bromomethane	12.	U	12.	U	12.	U	12.	U	12.	U
74-87-3	Chloromethane	12.	U	12.	UJ	12.	UJ	12.	UJ	12.	UJ
75-00-3	Chloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-01-4	Vinyl chloride	12.	U	12.	U	12.	U	12.	U	12.	U
75-09-2	Methylene chloride	9.	J	7.	J	12.	U	8.	U	10.	U
75-15-0	Carbon disulfide	6.	U	6.	U	6.	U	6.	UJ	6.	UJ
75-25-2	Bromoform	6.	U	6.	U	6.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	6.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	6.	U	6.	U	6.	U	6.	UJ	6.	UJ
78-87-5	1,2-Dichloropropane	6.	U	6.	U	6.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	31.	U	29.	U	29.	U	30.	U	30.	U
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
79-01-6	Trichloroethene	6.	U	6.	U	6.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLES J - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-V0A		SAMPLE ID ----->	GDH-S-8028-01	GDH-S-8029-01	GDH-S-8030-01	GDH-S-8031-01	GDH-S-8031-02	GDH-S-8032-01			
		ORIGINAL ID ----->	GDHS802801	GDHS802901	GDHS803001	GDHS803101	GDHS803102	GDHS803201			
		LAB SAMPLE ID ---->	41734-018	41734-019	41734-020	41734-001	41734-002	41734-003			
		ID FROM REPORT -->	100518	100519	100520	100501	100502	100503			
		SAMPLE DATE ----->	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94	10/04/94			
		DATE ANALYZED ---->	10/17/94	10/17/94	10/17/94	10/11/94	10/11/94	10/11/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
100-41-4	Ethylbenzene	6.	U	6.	U	6.	U	6.	U	6.	U
100-42-5	Styrene	6.	U	6.	U	6.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
108-05-4	Vinyl acetate	12.	U	13.	U	12.	U	13.	U	13.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	29.	U	32.	U	29.	U	31.	U	31.	U
108-88-3	Toluene	6.	U	6.	U	6.	U	6.	U	6.	U
108-90-7	Chlorobenzene	6.	U	6.	U	6.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	29.	U	32.	U	29.	U	31.	U	31.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	6.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	6.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	6.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	6.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	6.	U	6.	U	6.	U
591-78-6	2-Hexanone	29.	U	32.	U	29.	U	31.	U	31.	U
67-64-1	Acetone	17.	J	18.	J	29.	U	20.	J	22.	J
67-66-3	Chloroform	6.	U	6.	U	6.	U	6.	U	6.	U
71-43-2	Benzene	6.	U	6.	U	6.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
74-83-9	Bromomethane	12.	U	13.	U	12.	U	13.	U	13.	U
74-87-3	Chloromethane	12.	UJ	13.	UJ	12.	UJ	13.	UJ	13.	UJ
75-00-3	Chloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-01-4	Vinyl chloride	12.	U	13.	U	12.	U	13.	U	13.	U
75-09-2	Methylene chloride	9.	U	11.	U	11.	U	3.8	J	3.9	J
75-15-0	Carbon disulfide	6.	UJ	6.	UJ	6.	UJ	6.	U	6.	U
75-25-2	Bromoform	6.	U	6.	U	6.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	6.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	6.	UJ	6.	UJ	6.	UJ	6.	U	6.	U
78-87-5	1,2-Dichloropropane	6.	U	6.	U	6.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	29.	U	32.	U	29.	U	31.	U	31.	U
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
79-01-6	Trichloroethene	6.	U	6.	U	6.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-V0A		SAMPLE ID ----->		GDH-S-B032-02		GDH-S-B033-01		GDH-S-B033-02		GDH-S-B034-01		GDH-S-B034-02		GDH-S-B035-01	
		ORIGINAL ID ----->		GDHSB03202		GDHSB03301		GDHSB03302		GDHSB03401		GDHSB03402		GDHSB03501	
		LAB SAMPLE ID ---->		41734-004		41734-005		41734-006		41734-007		41734-008		41734-009	
		ID FROM REPORT -->		100504		100505		100506		100507		100508		100509	
		SAMPLE DATE ----->		10/04/94		10/04/94		10/04/94		10/04/94		10/04/94		10/04/94	
		DATE ANALYZED ---->		10/12/94		10/11/94		10/11/94		10/11/94		10/12/94		10/12/94	
		MATRIX ----->		Soil											
		UNITS ----->		UG/KG											
CAS #	Parameter	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL	CHS17	VAL
100-41-4	Ethylbenzene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
100-42-5	Styrene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
10061-01-5	cis-1,3-Dichloropropene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
10061-02-6	trans-1,3-Dichloropropene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
107-06-2	1,2-Dichloroethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
108-05-4	Vinyl acetate	37.	U	13.	U	13.	U	14.	U	20.	U	15.	U		
108-10-1	4-Methyl-2-Pentanone (MIBK)	93.	U	32.	U	33.	U	36.	U	51.	U	39.	U		
108-88-3	Toluene	19.	U	6.	J	7.	U	16.	U	10.	U	8.	U		
108-90-7	Chlorobenzene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
109-99-9	Tetrahydrofuran	93.	U	32.	U	33.	U	36.	U	51.	U	39.	U		
124-48-1	Dibromochloromethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
127-18-4	Tetrachloroethene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
1330-20-7	Xylene (Total)	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
540-59-0	1,2-Dichloroethene (total)	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
56-23-5	Carbon tetrachloride	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
591-78-6	2-Hexanone	93.	U	32.	U	33.	U	36.	U	51.	U	39.	U		
67-64-1	Acetone	530.	U	21.	J	30.	J	20.	J	1200.	U	60.	U		
67-66-3	Chloroform	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
71-43-2	Benzene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
71-55-6	1,1,1-Trichloroethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
74-83-9	Bromomethane	37.	U	13.	U	13.	U	14.	U	20.	U	15.	U		
74-87-3	Chloromethane	37.	UJ	13.	UJ	13.	UJ	14.	UJ	20.	UJ	15.	UJ		
75-00-3	Chloroethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
75-01-4	Vinyl chloride	37.	U	13.	U	13.	U	14.	U	20.	U	15.	U		
75-09-2	Methylene chloride	18.	J	13.	UJ	13.	UJ	9.	J	10.	J	6.	U		
75-15-0	Carbon disulfide	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
75-25-2	Bromoform	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
75-27-4	Bromodichloromethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
75-34-3	1,1-Dichloroethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
75-35-4	1,1-Dichloroethylene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
75-69-4	Trichlorofluoromethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
78-87-5	1,2-Dichloropropane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
78-93-3	2-Butanone (MEK)	100.	U	32.	U	33.	U	36.	U	51.	U	39.	U		
79-00-5	1,1,2-Trichloroethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
79-01-6	Trichloroethene	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
79-34-5	1,1,2,2-Tetrachloroethane	19.	U	7.	U	7.	U	7.	U	10.	U	8.	U		
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR			

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-VDM		SAMPLE ID ----->	GDH-S-8036-01	GDH-S-8037-01	GDH-S-8037-02	GDH-S-8038-01	GDH-S-8038-02	GDH-S-8039-01			
		ORIGINAL ID ----->	GDHSB03601	GDHSB03701	GDHSB03702	GDHSB03801	GDHSB03802	GDHSB03901			
		LAB SAMPLE ID ---->	41733-001	41742-001	41742-002	41742-003	41742-004	41742-005			
		ID FROM REPORT -->	GDHSB03601	GDHSB03701	GDHSB03702	GDHSB03801	GDHSB03802	GDHSB03901			
		SAMPLE DATE ----->	10/04/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/18/94	10/13/94	10/13/94	10/13/94	10/18/94	10/19/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS1B	VAL	CHS1B	VAL	CHS1B	VAL	CHS1B	VAL	CHS1B	VAL
100-41-4	Ethylbenzene	8.	U	6.	U	7.	U	6.	U	8.	U
100-42-5	Styrene	8.	U	6.	U	7.	U	6.	U	8.	U
10061-01-5	cis-1,3-Dichloropropene	8.	U	6.	U	7.	U	6.	U	8.	U
10061-02-6	trans-1,3-Dichloropropene	8.	U	6.	U	7.	U	6.	U	8.	U
107-06-2	1,2-Dichloroethane	8.	UJ	6.	U	7.	U	6.	U	8.	UJ
108-05-4	Vinyl acetate	15.	U	12.	UJ	14.	UJ	11.	UJ	15.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	38.	UJ	30.	U	35.	U	28.	U	38.	UJ
108-88-3	Toluene	7.	J	5.	J	7.	U	3.3	J	4.8	J
108-90-7	Chlorobenzene	8.	U	6.	U	7.	U	6.	U	8.	U
109-99-9	Tetrahydrofuran	38.	U	30.	U	35.	U	28.	U	38.	U
124-48-1	Dibromochloromethane	8.	U	6.	U	7.	U	6.	U	8.	U
127-18-4	Tetrachloroethene	8.	U	6.	U	7.	U	6.	U	8.	U
1330-20-7	Xylene (Total)	8.	U	6.	U	7.	U	6.	U	8.	U
540-59-0	1,2-Dichloroethene (total)	8.	U	6.	U	7.	U	6.	U	8.	U
56-23-5	Carbon tetrachloride	8.	UJ	6.	U	7.	U	6.	U	8.	UJ
591-78-6	2-Hexanone	38.	UJ	30.	U	35.	U	28.	U	38.	UJ
67-64-1	Acetone	210.	J	17.	J	46.	J	20.	J	110.	J
67-66-3	Chloroform	8.	U	6.	U	7.	U	6.	U	8.	U
71-43-2	Benzene	8.	U	6.	U	7.	U	6.	U	8.	U
71-55-6	1,1,1-Trichloroethane	8.	U	6.	U	7.	U	6.	U	8.	U
74-83-9	Bromomethane	15.	U	12.	U	14.	U	11.	U	15.	U
74-87-3	Chloromethane	15.	UJ	12.	UJ	14.	UJ	11.	UJ	15.	U
75-00-3	Chloroethane	8.	U	6.	U	7.	U	6.	U	8.	UJ
75-01-4	Vinyl chloride	15.	U	12.	U	14.	U	11.	U	15.	U
75-09-2	Methylene chloride	41.	U	18.	U	18.	U	16.	U	23.	U
75-15-0	Carbon disulfide	8.	UJ	6.	UJ	7.	UJ	6.	UJ	8.	UJ
75-25-2	Bromoform	8.	U	6.	U	7.	U	6.	U	8.	U
75-27-4	Bromodichloromethane	8.	U	6.	U	7.	U	6.	U	8.	U
75-34-3	1,1-Dichloroethane	8.	U	6.	U	7.	U	6.	U	8.	U
75-35-4	1,1-Dichloroethylene	8.	U	6.	U	7.	U	6.	U	8.	U
75-69-4	Trichlorofluoromethane	8.	U	6.	U	7.	U	6.	U	8.	U
78-87-5	1,2-Dichloropropane	8.	U	6.	U	7.	U	6.	U	8.	U
78-93-3	2-Butanone (MEK)	38.	U	30.	U	35.	U	28.	U	38.	U
79-00-5	1,1,2-Trichloroethane	8.	U	6.	U	7.	U	6.	U	8.	U
79-01-6	Trichloroethene	8.	U	6.	U	7.	U	6.	U	8.	U
79-34-5	1,1,2,2-Tetrachloroethane	8.	U	6.	U	7.	U	6.	U	8.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-V0A		SAMPLE ID ----->	GDH-S-B039-02	GDH-S-B040-01	GDH-S-B040-02	GDH-S-B041-01	GDH-S-B042-01	GDH-S-B042-02			
		ORIGINAL ID ----->	GDHSB03902	GDHSB04001	GDHSB04002	GDHSB04101	GDHSB04201	GDHSB04202			
		LAB SAMPLE ID ---->	41742-006	41742-007	41742-008	41742-009	41742-010	41742-011			
		ID FROM REPORT -->	GDHSB03902	GDHSB04001	GDHSB04002	GDHSB04101	GDHSB04201	GDHSB04202			
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/19/94	10/18/94	10/19/94	10/19/94	10/19/94	10/19/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
100-41-4	Ethylbenzene	11.	U	6.	U	7.	U	7.	U	6.	U
100-42-5	Styrene	11.	U	6.	U	7.	U	7.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U	6.	U	7.	U	7.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U	6.	U	7.	U	7.	U	6.	U
107-06-2	1,2-Dichloroethane	11.	UJ	6.	UJ	7.	UJ	7.	UJ	6.	UJ
108-05-4	Vinyl acetate	22.	U	11.	U	15.	U	14.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	56.	UJ	27.	UJ	36.	UJ	35.	U	31.	U
108-88-3	Toluene	8.	J	3.1	J	13.	J	3.8	J	3.7	J
108-90-7	Chlorobenzene	11.	U	6.	U	7.	U	7.	U	6.	U
109-99-9	Tetrahydrofuran	56.	U	27.	U	36.	U	35.	UJ	31.	UJ
124-48-1	Dibromochloromethane	11.	U	6.	U	7.	U	7.	U	6.	U
127-18-4	Tetrachloroethene	11.	U	6.	U	7.	U	7.	U	6.	U
1330-20-7	Xylene (Total)	11.	U	6.	U	7.	U	7.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	11.	U	6.	U	7.	U	7.	U	6.	U
56-23-5	Carbon tetrachloride	11.	UJ	6.	UJ	7.	UJ	7.	UJ	6.	UJ
591-78-6	2-Hexanone	56.	U	27.	UJ	36.	U	35.	U	31.	U
67-64-1	Acetone	130.	J	29.	UJ	51.	UJ	52.	J	20.	UJ
67-66-3	Chloroform	11.	U	6.	U	7.	U	7.	U	6.	U
71-43-2	Benzene	11.	U	6.	U	7.	U	7.	U	6.	U
71-55-6	1,1,1-Trichloroethane	11.	UJ	6.	U	7.	UJ	7.	UJ	6.	UJ
74-83-9	Bromomethane	22.	U	11.	U	15.	U	14.	U	12.	U
74-87-3	Chloromethane	22.	U	11.	U	15.	U	14.	U	12.	U
75-00-3	Chloroethane	11.	U	6.	UJ	7.	U	7.	U	6.	U
75-01-4	Vinyl chloride	22.	U	11.	U	15.	U	14.	U	12.	U
75-09-2	Methylene chloride	41.	U	16.	U	30.	U	22.	U	20.	U
75-15-0	Carbon disulfide	11.	U	6.	UJ	7.	U	7.	U	6.	U
75-25-2	Bromoform	11.	U	6.	U	7.	U	7.	U	6.	U
75-27-4	Bromodichloromethane	11.	U	6.	U	7.	U	7.	U	6.	U
75-34-3	1,1-Dichloroethane	11.	U	6.	U	7.	U	7.	U	6.	U
75-35-4	1,1-Dichloroethylene	11.	U	6.	U	7.	U	7.	U	6.	U
75-69-4	Trichlorofluoromethane	11.	U	6.	U	7.	U	7.	U	6.	U
78-87-5	1,2-Dichloropropane	11.	U	6.	U	7.	U	7.	U	6.	U
78-93-3	2-Butanone (MEK)	56.	U	27.	U	36.	U	35.	U	31.	U
79-00-5	1,1,2-Trichloroethane	11.	U	6.	U	7.	U	7.	U	6.	U
79-01-6	Trichloroethene	11.	U	6.	U	7.	U	7.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U	6.	U	7.	U	7.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-VDA		SAMPLE ID ----->	GDH-S-B043-01	GDH-S-B043-02	GDH-S-B044-01	GDH-S-B045-01	GDH-S-B045-02	GDH-S-B046-01			
		ORIGINAL ID ----->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601			
		LAB SAMPLE ID ---->	41742-012	41742-013	41742-014	41742-015	41742-016	41742-017			
		ID FROM REPORT -->	GDHSB04301	GDHSB04302	GDHSB04401	GDHSB04501	GDHSB04502	GDHSB04601			
		SAMPLE DATE ----->	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94	10/05/94			
		DATE ANALYZED ---->	10/19/94	10/19/94	10/18/94	10/19/94	10/19/94	10/19/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL	CHS18	VAL
100-41-4	Ethylbenzene	7.	U	17.	U	6.	U	6.	U	8.	U
100-42-5	Styrene	7.	U	17.	U	6.	U	6.	U	8.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	17.	U	6.	U	6.	U	8.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	17.	U	6.	U	6.	U	8.	U
107-06-2	1,2-Dichloroethane	7.	UJ	17.	UJ	6.	UJ	6.	UJ	8.	UJ
108-05-4	Vinyl acetate	14.	U	35.	U	11.	U	12.	U	17.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	34.	U	87.	U	29.	UJ	31.	U	42.	U
108-88-3	Toluene	3.5	J	9.	J	15.	U	6.	U	4.3	J
108-90-7	Chlorobenzene	7.	U	17.	U	6.	U	6.	U	8.	U
109-99-9	Tetrahydrofuran	34.	UJ	87.	J	29.	U	31.	J	42.	UJ
124-48-1	Dibromochloromethane	7.	U	17.	U	6.	U	6.	U	8.	U
127-18-4	Tetrachloroethene	7.	U	17.	U	6.	U	6.	U	8.	U
1330-20-7	Xylene (Total)	7.	U	17.	U	6.	U	6.	U	8.	U
540-59-0	1,2-Dichloroethene (total)	7.	U	17.	U	6.	U	6.	U	8.	U
56-23-5	Carbon tetrachloride	7.	UJ	17.	UJ	6.	UJ	6.	UJ	8.	UJ
591-78-6	2-Hexanone	34.	U	87.	U	29.	UJ	31.	U	42.	U
67-64-1	Acetone	73.	J	270.	J	100.	J	60.	J	73.	J
67-66-3	Chloroform	7.	U	17.	U	6.	U	6.	U	8.	U
71-43-2	Benzene	7.	U	17.	U	6.	U	6.	U	8.	U
71-55-6	1,1,1-Trichloroethane	7.	UJ	17.	UJ	6.	U	6.	UJ	8.	UJ
74-83-9	Bromomethane	14.	U	35.	U	11.	U	12.	U	17.	U
74-87-3	Chloromethane	14.	U	35.	U	11.	U	12.	U	17.	U
75-00-3	Chloroethane	7.	U	17.	U	6.	UJ	6.	U	8.	U
75-01-4	Vinyl chloride	14.	U	35.	U	11.	U	12.	U	17.	U
75-09-2	Methylene chloride	20.	U	64.	U	28.	U	19.	U	15.	U
75-15-0	Carbon disulfide	7.	U	17.	U	6.	UJ	6.	U	8.	U
75-25-2	Bromoform	7.	U	17.	U	6.	U	6.	U	8.	U
75-27-4	Bromodichloromethane	7.	U	17.	U	6.	U	6.	U	8.	U
75-34-3	1,1-Dichloroethane	7.	U	17.	U	6.	U	6.	U	8.	U
75-35-4	1,1-Dichloroethylene	7.	U	17.	U	6.	U	6.	U	8.	U
75-69-4	Trichlorofluoromethane	7.	U	17.	U	6.	U	6.	U	8.	U
78-87-5	1,2-Dichloropropane	7.	U	17.	U	6.	U	6.	U	8.	U
78-93-3	2-Butanone (MEK)	34.	U	87.	U	29.	U	31.	U	42.	U
79-00-5	1,1,2-Trichloroethane	7.	U	17.	U	6.	U	6.	U	8.	U
79-01-6	Trichloroethene	7.	U	17.	U	3.5	J	6.	U	8.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	17.	U	6.	U	6.	U	8.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-V0A		SAMPLE ID ----->	GDH-S-8046-02	GDH-S-8047-01	GDH-S-8047-02	GDH-S-8048-01	GDH-S-8049-01 RE	GDH-S-8050-01 RE					
		ORIGINAL ID ----->	GDHS804602	GDHS804701	GDHS804702	GDHS804801	GDHS804901	GDHS805001					
		LAB SAMPLE ID ---->	41742-018	41760-001	41760-002	41760-003	41760-004RE	41760-005RE					
		ID FROM REPORT -->	GDHS804602	100701	100702	100703	100704	100705					
		SAMPLE DATE ----->	10/05/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94					
		DATE ANALYZED ---->	10/19/94	10/18/94	10/18/94	10/18/94	10/19/94	10/19/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS18	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL		
100-41-4	Ethylbenzene	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
100-42-5	Styrene	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
10061-01-5	cis-1,3-Dichloropropene	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
10061-02-6	trans-1,3-Dichloropropene	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
107-06-2	1,2-Dichloroethane	8.	UJ	7.	UJ	6.	U	8.	U	9.	U	6.	U
108-05-4	Vinyl acetate	16.	U	13.	UJ	12.	U	15.	U	17.	U	13.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	39.	U	33.	UJ	29.	U	38.	U	43.	UJ	32.	U
108-88-3	Toluene	17.		8.	J	5.	J	8.	U	8.	J	6.	U
108-90-7	Chlorobenzene	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
109-99-9	Tetrahydrofuran	39.	UJ	33.	UJ	29.	U	38.	U	43.	U	32.	U
124-48-1	Dibromochloromethane	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
127-18-4	Tetrachloroethene	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
1330-20-7	Xylene (Total)	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
540-59-0	1,2-Dichloroethene (total)	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
56-23-5	Carbon tetrachloride	8.	UJ	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
591-78-6	2-Hexanone	39.	U	33.	UJ	29.	U	38.	U	43.	UJ	32.	U
67-64-1	Acetone	380.	J	27.	J	57.		17.	J	32.	J	20.	J
67-66-3	Chloroform	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
71-43-2	Benzene	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
71-55-6	1,1,1-Trichloroethane	8.	UJ	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
74-83-9	Bromomethane	16.	U	13.	UJ	12.	U	15.	U	17.	U	13.	U
74-87-3	Chloromethane	16.	U	13.	UJ	12.	U	15.	U	17.	U	13.	U
75-00-3	Chloroethane	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
75-01-4	Vinyl chloride	16.	U	13.	UJ	12.	U	15.	U	17.	U	13.	U
75-09-2	Methylene chloride	18.	U	16.	U	12.	U	17.	U	23.	U	14.	U
75-15-0	Carbon disulfide	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
75-25-2	Bromoform	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
75-27-4	Bromodichloromethane	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
75-34-3	1,1-Dichloroethane	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
75-35-4	1,1-Dichloroethylene	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
75-69-4	Trichlorofluoromethane	8.	U	7.	UJ	6.	U	8.	U	9.	U	6.	U
78-87-5	1,2-Dichloropropane	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
78-93-3	2-Butanone (MEK)	31.	J	33.	UJ	29.	U	38.	U	43.	U	32.	U
79-00-5	1,1,2-Trichloroethane	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
79-01-6	Trichloroethene	2.5	J	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	8.	U	7.	UJ	6.	U	8.	U	9.	UJ	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLES N - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB66-VDA		SAMPLE ID ----->	GDH-S-8051-01	GDH-S-8051-02	GDH-S-8052-01	GDH-S-8052-02	GDH-S-8053-01	GDH-S-8053-02			
		ORIGINAL ID ----->	GDHS805101	GDHS805102	GDHS805201	GDHS805202	GDHS805301	GDHS805302			
		LAB SAMPLE ID ---->	41760-006	41760-007	41760-008	41760-009	41760-010	41760-011			
		ID FROM REPORT ---->	100706	100707	100708	100709	100710	100711			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94	10/06/94			
		DATE ANALYZED ---->	10/18/94	10/19/94	10/18/94	10/18/94	10/18/94	10/19/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL
100-41-4	Ethylbenzene	6.	U	7.	U	6.	U	6.	U	6.	U
100-42-5	Styrene	6.	U	7.	U	6.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	7.	U	6.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	7.	U	6.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	6.	U	7.	U	6.	U	6.	U	6.	U
108-05-4	Vinyl acetate	12.	U	13.	U	12.	U	13.	U	11.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	29.	U	34.	U	31.	U	30.	U	28.	U
108-88-3	Toluene	3.3	J	4.3	J	6.	U	6.	U	4.4	J
108-90-7	Chlorobenzene	6.	U	7.	U	6.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	29.	U	34.	U	31.	U	30.	U	28.	U
124-48-1	Dibromochloromethane	6.	U	7.	U	6.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	6.	U	7.	U	6.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	6.	U	7.	U	6.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	7.	U	6.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	6.	U	7.	U	6.	U	6.	U	6.	U
591-78-6	2-Hexanone	29.	U	34.	U	31.	U	30.	U	28.	U
67-64-1	Acetone	29.	U	61.	J	17.	J	33.	J	23.	J
67-66-3	Chloroform	6.	U	7.	U	6.	U	6.	U	6.	U
71-43-2	Benzene	6.	U	7.	U	6.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	6.	U	7.	U	6.	U	6.	U	6.	U
74-83-9	Bromomethane	12.	U	13.	U	12.	U	12.	U	13.	U
74-87-3	Chloromethane	12.	U	13.	U	12.	U	12.	U	13.	U
75-00-3	Chloroethane	6.	U	7.	U	6.	U	6.	U	6.	U
75-01-4	Vinyl chloride	12.	U	13.	U	12.	U	12.	U	13.	U
75-09-2	Methylene chloride	13.	U	15.	U	15.	U	16.	U	18.	U
75-15-0	Carbon disulfide	6.	U	7.	U	6.	U	6.	U	6.	U
75-25-2	Bromoform	6.	U	7.	U	6.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	6.	U	7.	U	6.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	6.	U	7.	U	6.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	6.	U	7.	U	6.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	6.	U	7.	U	6.	U	6.	U	6.	U
78-87-5	1,2-Dichloropropane	6.	U	7.	U	6.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	29.	U	34.	U	31.	U	30.	U	32.	U
79-00-5	1,1,2-Trichloroethane	6.	U	7.	U	6.	U	6.	U	6.	U
79-01-6	Trichloroethene	6.	U	7.	U	6.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	7.	U	6.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-VOA		SAMPLE ID ----->	GDH-S-B054-01 RE	GDH-S-B054-02	GDH-S-B055-01	GDH-S-B056-01	GDH-S-B056-02	GDH-S-B057-01			
		ORIGINAL ID ----->	GDHSB05401	GDHSB05402	GDHSB05501	GDHSB05601	GDHSB05602	GDHSB05701			
		LAB SAMPLE ID ---->	41760-012RE	41760-013	41760-014	41779-001	41779-002	41780-007			
		ID FROM REPORT -->	100712	100713	100714	100807	100808	100814			
		SAMPLE DATE ----->	10/06/94	10/06/94	10/06/94	10/07/94	10/07/94	10/07/94			
		DATE ANALYZED ---->	10/19/94	10/19/94	10/19/94	10/17/94	10/17/94	10/20/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS19	VAL	CHS20	VAL
100-41-4	Ethylbenzene	6.	U	6.	U	6.	U	6.	U	6.	U
100-42-5	Styrene	6.	U	6.	U	6.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
108-05-4	Vinyl acetate	13.	U	11.	U	12.	U	13.	U	12.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	32.	U	28.	U	31.	U	32.	U	30.	U
108-88-3	Toluene	6.	U	7.	U	3.9	J	6.	U	6.	U
108-90-7	Chlorobenzene	6.	U	6.	U	6.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	32.	U	28.	U	31.	U	32.	U	30.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	6.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	6.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	6.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	6.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	6.	U	6.	U	6.	U
591-78-6	2-Hexanone	32.	U	28.	U	31.	U	32.	U	30.	U
67-64-1	Acetone	32.	U	67.	U	12.	J	32.	U	27.	J
67-66-3	Chloroform	6.	U	6.	U	6.	U	6.	U	6.	U
71-43-2	Benzene	6.	U	6.	U	6.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
74-83-9	Bromomethane	13.	U	11.	U	12.	U	13.	U	12.	UJ
74-87-3	Chloromethane	13.	U	11.	U	12.	U	13.	U	12.	U
75-00-3	Chloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-01-4	Vinyl chloride	13.	U	11.	U	12.	U	13.	U	12.	U
75-09-2	Methylene chloride	26.	U	14.	U	16.	U	14.	U	11.	U
75-15-0	Carbon disulfide	6.	U	6.	U	6.	U	6.	U	6.	U
75-25-2	Bromoform	6.	U	6.	U	6.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	6.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	6.	U	6.	U	6.	U	6.	U	6.	U
78-87-5	1,2-Dichloropropane	6.	U	6.	U	6.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	32.	U	28.	U	31.	U	32.	U	30.	U
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
79-01-6	Trichloroethene	6.	U	6.	U	6.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	6.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-YOM		SAMPLE ID ----->	GDH-S-B058-01 RE	GDH-S-B058-02	GDH-S-B059-01	GDH-S-B060-01	GDH-S-B061-01	GDH-S-B062-01					
		ORIGINAL ID ----->	GDHSB05801	GDHSB05802	GDHSB05901	GDHSB06001	GDHSB06101	GDHSB06201					
		LAB SAMPLE ID ---->	41779-003RE	41779-004	41780-001	41780-002	41779-005	41784-001					
		ID FROM REPORT -->	100809	100810	100812	100813	100811	101001					
		SAMPLE DATE ----->	10/07/94	10/07/94	10/07/94	10/07/94	10/07/94	10/08/94					
		DATE ANALYZED ---->	10/18/94	10/18/94	10/19/94	10/19/94	10/18/94	10/19/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS19	VAL	CHS19	VAL	CHS20	VAL	CHS20	VAL	CHS19	VAL	CHS20	VAL
100-41-4	Ethylbenzene	7.	UJ	7.	U	7.	U	8.	U	6.	U	7.	U
100-42-5	Styrene	7.	UJ	7.	U	7.	U	8.	U	6.	U	7.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
107-06-2	1,2-Dichloroethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
108-05-4	Vinyl acetate	14.	U	14.	U	13.	UJ	15.	UJ	12.	U	15.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	34.	UJ	36.	U	33.	U	38.	U	29.	U	37.	U
108-88-3	Toluene	11.	J	7.	U	4.4	U	8.	U	11.	J	7.	U
108-90-7	Chlorobenzene	7.	UJ	7.	U	7.	U	8.	U	6.	U	7.	U
109-99-9	Tetrahydrofuran	34.	U	36.	U	33.	U	38.	U	29.	U	37.	U
124-48-1	Dibromochloromethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
127-18-4	Tetrachloroethene	7.	UJ	7.	U	7.	U	8.	U	6.	U	7.	U
1330-20-7	Xylene (Total)	7.	UJ	7.	U	7.	U	8.	U	6.	U	7.	U
540-59-0	1,2-Dichloroethene (total)	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
56-23-5	Carbon tetrachloride	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
591-78-6	2-Hexanone	34.	UJ	36.	U	33.	U	38.	U	29.	U	37.	U
67-64-1	Acetone	24.	J	58.	J	14.	J	32.	J	15.	J	75.	J
67-66-3	Chloroform	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
71-43-2	Benzene	7.	U	7.	U	2.1	U	8.	U	6.	U	1.8	UJ
71-55-6	1,1,1-Trichloroethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
74-83-9	Bromomethane	14.	U	14.	U	13.	UJ	15.	UJ	12.	U	15.	UJ
74-87-3	Chloromethane	14.	U	14.	U	13.	U	15.	U	12.	U	15.	U
75-00-3	Chloroethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
75-01-4	Vinyl chloride	14.	U	14.	U	13.	U	15.	U	12.	U	15.	U
75-09-2	Methylene chloride	18.	U	13.	U	17.	U	25.	U	11.	U	23.	U
75-15-0	Carbon disulfide	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
75-25-2	Bromoform	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
75-27-4	Bromodichloromethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
75-34-3	1,1-Dichloroethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
75-35-4	1,1-Dichloroethylene	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
75-69-4	Trichlorofluoromethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
78-87-5	1,2-Dichloropropane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
78-93-3	2-Butanone (MEK)	34.	U	36.	U	33.	U	38.	U	29.	U	14.	J
79-00-5	1,1,2-Trichloroethane	7.	U	7.	U	7.	U	8.	U	6.	U	7.	U
79-01-6	Trichloroethene	7.	U	7.	U	7.	U	2.	J	6.	U	7.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	UJ	7.	U	7.	U	8.	U	6.	U	7.	U
110-75-8	2-Chloroethylvinyl ether		NR		NR		NR		NR		NR		NR

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-VQA		SAMPLE ID -----> GDH-S-8063-01		GDH-S-8063-02		GDH-S-8064-01		GDH-S-8064-02		GDH-S-8065-01		GDH-S-8066-01	
		ORIGINAL ID -----> GDHS806301		GDHS806302		GDHS806401		GDHS806402		GDHS806501		GDHS806601	
		LAB SAMPLE ID ---> 41784-002		41784-003		41784-004		41784-005		41784-006		41790-010	
		ID FROM REPORT --> 101002		101003		101004		101005		101006		101112	
		SAMPLE DATE -----> 10/08/94		10/08/94		10/08/94		10/08/94		10/08/94		10/10/94	
		DATE ANALYZED ---> 10/20/94		10/19/94		10/20/94		10/19/94		10/20/94		10/21/94	
		MATRIX -----> Soil		Soil		Soil		Soil		Soil		Soil	
		UNITS -----> UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL	CHS20	VAL
100-41-4	Ethylbenzene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
100-42-5	Styrene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
108-05-4	Vinyl acetate	12.	UJ	12.	UJ	11.	UJ	13.	UJ	11.	UJ	12.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	29.	U	31.	U	29.	U	32.	U	27.	U	29.	U
108-88-3	Toluene	16.	U	4.1	U	11.	U	6.	U	10.	U	4.7	U
108-90-7	Chlorobenzene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	29.	U	31.	U	29.	U	32.	U	27.	U	29.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
591-78-6	2-Hexanone	29.	U	31.	U	29.	U	32.	U	27.	U	29.	U
67-64-1	Acetone	64.	U	14.	J	29.	U	27.	J	26.	J	22.	U
67-66-3	Chloroform	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
71-43-2	Benzene	6.	U	6.	U	6.	U	2.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
74-83-9	Bromomethane	12.	UJ	12.	UJ	11.	UJ	13.	UJ	11.	UJ	12.	UJ
74-87-3	Chloromethane	12.	U	12.	U	11.	U	13.	U	11.	U	12.	U
75-00-3	Chloroethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
75-01-4	Vinyl chloride	12.	U	12.	U	11.	U	13.	U	11.	U	12.	U
75-09-2	Methylene chloride	15.	U	18.	U	15.	U	19.	U	15.	U	22.	U
75-15-0	Carbon disulfide	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
75-25-2	Bromoform	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
78-87-5	1,2-Dichloropropane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	29.	U	31.	U	29.	U	32.	U	27.	U	29.	U
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
79-01-6	Trichloroethene	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	6.	U	7.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLES ON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-VDA		SAMPLE ID ----->	GDH-S-B067-01	GDH-S-B067-02	GDH-S-B068-01	GDH-S-B069-01	GDH-S-B070-01	GDH-S-B071-01			
		ORIGINAL ID ----->	GDHSB06701	GDHSB06702	GDHSB06801	GDHSB06901	GDHSB07001	GDHSB07101			
		LAB SAMPLE ID ---->	41806-001	41806-002	41806-003	41806-004	41806-007	41806-008			
		ID FROM REPORT -->	101203	101204	101205	101206	101209	101210			
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94	10/11/94			
		DATE ANALYZED ---->	10/21/94	10/21/94	10/21/94	10/21/94	10/24/94	10/25/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL
100-41-4	Ethylbenzene	5.	U	6.	U	7.	U	6.	U	6.	U
100-42-5	Styrene	5.	U	6.	U	7.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	6.	U	7.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	6.	U	7.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	5.	U	6.	U	7.	U	6.	U	6.	U
108-05-4	Vinyl acetate	10.	UJ	11.	UJ	13.	UJ	11.	UJ	11.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	26.	U	28.	U	33.	U	28.	U	27.	U
108-88-3	Toluene	9.		3.5	J	5.	J	3.8	J	3.1	J
108-90-7	Chlorobenzene	5.	U	6.	U	7.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	26.	U	28.	U	33.	U	28.	U	27.	U
124-48-1	Dibromochloromethane	5.	U	6.	U	7.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	5.	U	6.	U	7.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	5.	U	6.	U	7.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	6.	U	7.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	5.	U	6.	U	7.	U	6.	U	6.	U
591-78-6	2-Hexanone	26.	U	28.	U	33.	U	28.	U	27.	U
67-64-1	Acetone	43.	U	35.	U	37.	U	26.	U	18.	U
67-66-3	Chloroform	5.	U	6.	U	7.	U	6.	U	6.	U
71-43-2	Benzene	5.	U	6.	U	7.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	5.	U	6.	U	7.	U	6.	U	6.	U
74-83-9	Bromomethane	10.	UJ	11.	UJ	13.	UJ	11.	UJ	11.	UJ
74-87-3	Chloromethane	10.	U	11.	U	13.	U	11.	U	11.	U
75-00-3	Chloroethane	5.	U	6.	U	7.	U	6.	U	6.	U
75-01-4	Vinyl chloride	10.	U	11.	U	13.	U	11.	U	11.	U
75-09-2	Methylene chloride	23.	U	19.	U	26.	U	21.	U	17.	U
75-15-0	Carbon disulfide	5.	U	6.	U	7.	U	6.	U	6.	U
75-25-2	Bromoform	5.	U	6.	U	7.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	5.	U	6.	U	7.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	5.	U	6.	U	7.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	5.	U	6.	U	7.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	5.	U	6.	U	7.	U	6.	U	6.	U
78-87-5	1,2-Dichloropropane	5.	U	6.	U	7.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	26.	U	28.	U	33.	U	28.	U	27.	U
79-00-5	1,1,2-Trichloroethane	5.	U	6.	U	7.	U	6.	U	6.	U
79-01-6	Trichloroethene	5.	U	6.	U	7.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	6.	U	7.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-VDA		SAMPLE ID ----->	GDH-S-B071-02	GDH-S-B072-01	GDH-S-B072-02	GDH-S-B073-01	GDH-S-B073-02	GDH-S-B074-01					
		ORIGINAL ID ----->	GDHSB07102	GDHSB07201	GDHSB07202	GDHSB07301	GDHSB07302	GDHSB07401					
		LAB SAMPLE ID ---->	41806-009	41806-010	41806-011	41821-003	41821-004	25246.8					
		ID FROM REPORT -->	101211	101212	101213	101303	101304	102204					
		SAMPLE DATE ----->	10/11/94	10/11/94	10/11/94	10/12/94	10/12/94	10/21/94					
		DATE ANALYZED ---->	10/24/94	10/24/94	10/25/94	10/24/94	10/25/94	10/30/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS21	VAL	CHS23	VAL
100-41-4	Ethylbenzene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
100-42-5	Styrene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
107-06-2	1,2-Dichloroethane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	UJ
108-05-4	Vinyl acetate	12.	UJ	14.	UJ	22.	UJ	11.	UJ	16.	UJ	13.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	29.	U	36.	U	55.	U	29.	U	40.	U	13.	U
108-88-3	Toluene	13.		8.		6.	J	3.3	J	5.	J	7.	U
108-90-7	Chlorobenzene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
109-99-9	Tetrahydrofuran	29.	U	36.	U	55.	U	29.	U	40.	U	NR	
124-48-1	Dibromochloromethane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
127-18-4	Tetrachloroethene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
1330-20-7	Xylene (Total)	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	7.	U	11.	U	6.	U	8.	U	6.7	U
56-23-5	Carbon tetrachloride	6.	U	7.	U	11.	U	6.	U	8.	U	7.	UJ
591-78-6	2-Hexanone	29.	U	36.	U	55.	U	29.	U	40.	U	13.	U
67-64-1	Acetone	1300.		520.		370.		170.		2300.		106.	J
67-66-3	Chloroform	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
71-43-2	Benzene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
71-55-6	1,1,1-Trichloroethane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	UJ
74-83-9	Bromomethane	12.	UJ	14.	UJ	22.	UJ	11.	UJ	16.	UJ	13.	U
74-87-3	Chloromethane	12.	U	14.	U	22.	UJ	11.	U	16.	UJ	13.	U
75-00-3	Chloroethane	6.	U	7.	U	11.	U	6.	U	8.	U	13.	U
75-01-4	Vinyl chloride	12.	U	14.	U	22.	U	11.	U	16.	U	13.	U
75-09-2	Methylene chloride	25.	U	25.	U	32.	U	19.	U	29.	U	7.	U
75-15-0	Carbon disulfide	6.	U	7.	U	11.	UJ	6.	U	8.	UJ	7.	U
75-25-2	Bromoform	6.	U	7.	U	11.	U	6.	U	8.	U	7.	UJ
75-27-4	Bromodichloromethane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
75-34-3	1,1-Dichloroethane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
75-35-4	1,1-Dichloroethylene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
75-69-4	Trichlorofluoromethane	6.	U	7.	U	11.	U	6.	U	8.	U	NR	
78-87-5	1,2-Dichloropropane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
78-93-3	2-Butanone (MEK)	29.	U	17.	J	55.	U	29.	U	23.	J	13.	U
79-00-5	1,1,2-Trichloroethane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
79-01-6	Trichloroethene	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	7.	U	11.	U	6.	U	8.	U	7.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-VOA		SAMPLE ID ----->	GDH-S-8075-01	GDH-S-8076-01	GDH-S-8077-01	GDH-S-8078-01	GDH-S-8078-02	GDH-S-8079-01			
		ORIGINAL ID ----->	GDHS807501	GDHS807601	GDHS807701	GDHS807801	GDHS807802	GDHS807901			
		LAB SAMPLE ID ---->	25247.6	25248.4	25249.2	25250.6	25251.4	25252.2			
		ID FROM REPORT -->	102205	102206	102207	102208	102209	102210			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94	10/21/94			
		DATE ANALYZED ---->	10/30/94	10/30/94	10/31/94	10/31/94	11/03/94	11/03/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL
100-41-4	Ethylbenzene	7.	U	6.	UJ	7.	UJ	6.	U	6.	U
100-42-5	Styrene	7.	U	6.	UJ	7.	UJ	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	6.	U	7.	U	6.	U	7.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	6.	U	7.	U	6.	U	7.	U
107-06-2	1,2-Dichloroethane	7.	UJ	6.	UJ	7.	U	6.	UJ	6.	U
108-05-4	Vinyl acetate	13.	UJ	12.	UJ	14.	UJ	11.	UJ	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	U	12.	UJ	14.	UJ	11.	U	12.	U
108-88-3	Toluene	7.	U	6.	UJ	10.	J	41.		6.	U
108-90-7	Chlorobenzene	7.	U	6.	UJ	7.	UJ	6.	U	6.	U
109-99-9	Tetrahydrofuran	NR		NR		NR		NR		NR	
124-48-1	Dibromochloromethane	7.	U	6.	U	7.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	7.	U	6.	UJ	7.	UJ	6.	U	6.	U
1330-20-7	Xylene (Total)	7.	U	6.	UJ	7.	UJ	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.7	U	6.2	U	6.8	U	5.7	U	6.	U
56-23-5	Carbon tetrachloride	7.	UJ	6.	UJ	7.	UJ	6.	UJ	6.	U
591-78-6	2-Hexanone	13.	U	12.	UJ	14.	UJ	11.	UJ	12.	U
67-64-1	Acetone	88.	J	49.	J	14.	UJ	12.	UJ	137.	
67-66-3	Chloroform	7.	U	6.	UJ	7.	U	6.	UJ	6.	U
71-43-2	Benzene	7.	U	6.	U	7.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	7.	UJ	6.	UJ	7.	UJ	6.	UJ	6.	U
74-83-9	Bromomethane	13.	U	12.	UJ	14.	U	11.	UJ	12.	U
74-87-3	Chloromethane	13.	U	12.	UJ	14.	UJ	11.	UJ	12.	UJ
75-00-3	Chloroethane	13.	U	12.	UJ	14.	UJ	11.	UJ	12.	U
75-01-4	Vinyl chloride	13.	U	12.	UJ	14.	U	11.	UJ	12.	U
75-09-2	Methylene chloride	7.	U	6.	UJ	7.	U	6.	UJ	6.	U
75-15-0	Carbon disulfide	7.	U	6.	UJ	7.	U	6.	UJ	6.	U
75-25-2	Bromoform	7.	UJ	6.	U	7.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	7.	U	6.	U	7.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	7.	U	6.	UJ	7.	U	6.	UJ	6.	U
75-35-4	1,1-Dichloroethylene	7.	U	6.	UJ	7.	U	6.	UJ	6.	U
75-69-4	Trichlorofluoromethane	NR		NR		NR		NR		NR	
78-87-5	1,2-Dichloropropane	7.	U	6.	U	7.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	7.	U	12.	UJ	14.	UJ	11.	UJ	4.	J
79-00-5	1,1,2-Trichloroethane	7.	U	6.	U	7.	U	6.	U	6.	U
79-01-6	Trichloroethene	7.	U	6.	U	7.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	6.	UJ	7.	UJ	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-V0A		SAMPLE ID ----->	GDH-S-8079-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-8081-01	GDH-S-8082-01	GDH-S-8082-02			
		ORIGINAL ID ----->	GDHS807902	GDHS808001	GDHS808002	GDHS808101	GDHS808201	GDHS808202			
		LAB SAMPLE ID ---->	25253.0	25254.9	25255.7	25256.5	25257.3	25258.1			
		ID FROM REPORT -->	102211	102212	102213	102214	102215	102216			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/21/94	10/21/94	10/22/94	10/22/94			
		DATE ANALYZED ---->	10/31/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL	CHS23	VAL
100-41-4	Ethylbenzene	7.	U	6.	U	7.	U	6.	U	6.	U
100-42-5	Styrene	7.	U	6.	U	7.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U	6.	U	7.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U	6.	U	7.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	7.	U	6.	U	7.	U	6.	U	6.	U
108-05-4	Vinyl acetate	13.	UJ	11.	U	14.	U	11.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	U	11.	U	14.	U	11.	U	12.	U
108-88-3	Toluene	7.	U	6.	U	8.	U	6.	U	6.	U
108-90-7	Chlorobenzene	7.	U	6.	U	7.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	NR		NR		NR		NR		NR	
124-48-1	Dibromochloromethane	7.	U	6.	U	7.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	7.	U	6.	U	7.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	7.	U	6.	U	7.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.6	U	5.7	U	7.1	U	5.7	U	6.1	U
56-23-5	Carbon tetrachloride	7.	UJ	6.	U	7.	U	6.	U	6.	U
591-78-6	2-Hexanone	13.	UJ	11.	U	14.	U	11.	U	12.	U
67-64-1	Acetone	399.	J	21.	J	11.	J	48.	J	37.	J
67-66-3	Chloroform	7.	U	6.	U	7.	U	6.	U	6.	U
71-43-2	Benzene	7.	U	6.	U	7.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	7.	UJ	6.	U	7.	U	6.	U	6.	U
74-83-9	Bromomethane	13.	U	11.	U	14.	U	11.	U	12.	U
74-87-3	Chloromethane	13.	UJ	11.	UJ	14.	U	11.	U	12.	U
75-00-3	Chloroethane	13.	UJ	11.	U	14.	U	11.	U	12.	U
75-01-4	Vinyl chloride	13.	U	11.	U	14.	U	11.	U	12.	U
75-09-2	Methylene chloride	7.	J	6.	U	7.	U	6.	U	6.	U
75-15-0	Carbon disulfide	7.	U	6.	U	7.	U	6.	U	6.	U
75-25-2	Bromoform	7.	U	6.	U	7.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	7.	U	6.	U	7.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	7.	U	6.	U	7.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	7.	U	6.	U	7.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	NR		NR		NR		NR		NR	
78-87-5	1,2-Dichloropropane	7.	U	6.	U	7.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	13.	UJ	11.	U	14.	U	11.	U	12.	U
79-00-5	1,1,2-Trichloroethane	7.	U	6.	U	7.	U	6.	U	6.	U
79-01-6	Trichloroethene	7.	U	6.	U	7.	U	6.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U	6.	U	7.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SUB46-V0A		SAMPLE ID ----->	GDH-S-8083-01	GDH-S-8084-01	GDH-S-8084-02	GDH-S-8085-01	GDH-S-8085-02	GDH-S-8086-01			
		ORIGINAL ID ----->	GDHS808301	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601			
		LAB SAMPLE ID ---->	25259.0	42136-010	42136-011	42136-012	42136-013	42347-001			
		ID FROM REPORT -->	102217	GDHS808401	GDHS808402	GDHS808501	GDHS808502	GDHS808601			
		SAMPLE DATE ----->	10/22/94	11/09/94	11/09/94	11/09/94	11/09/94	11/22/94			
		DATE ANALYZED ---->	11/03/94	11/23/94	11/23/94	11/17/94	11/24/94	12/06/94			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS25	VAL	CHS25	VAL	CHS25	VAL	CHS27	VAL
100-41-4	Ethylbenzene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
100-42-5	Styrene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
10061-01-5	cis-1,3-Dichloropropene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
10061-02-6	trans-1,3-Dichloropropene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
107-06-2	1,2-Dichloroethane	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
108-05-4	Vinyl acetate	11.	U	14.	UJ	14.	U	1600.	U	14.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	11.	U	34.	UJ	34.	U	4100.	UJ	34.	UJ
108-88-3	Toluene	6.	U	9.	J	4.4	J	810.	U	4.6	J
108-90-7	Chlorobenzene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
109-99-9	Tetrahydrofuran	NR		34.	UJ	34.	U	4100.	UJ	34.	UJ
124-48-1	Dibromochloromethane	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
127-18-4	Tetrachloroethene	6.	U	22.	J	25.	J	810.	U	20.	J
1330-20-7	Xylene (Total)	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
540-59-0	1,2-Dichloroethene (total)	5.7	U	7.	UJ	7.	U	810.	U	7.	UJ
56-23-5	Carbon tetrachloride	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
591-78-6	2-Hexanone	11.	U	34.	UJ	34.	U	4100.	UJ	34.	UJ
67-64-1	Acetone	34.	U	17.	J	18.	J	12000.	J	16.	J
67-66-3	Chloroform	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
71-43-2	Benzene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
71-55-6	1,1,1-Trichloroethane	6.	U	9.	J	7.	J	810.	U	10.	J
74-83-9	Bromomethane	11.	U	5.	J	3.	J	1600.	U	4.3	J
74-87-3	Chloromethane	11.	U	14.	UJ	14.	U	1600.	U	14.	UJ
75-00-3	Chloroethane	11.	U	7.	UJ	7.	U	810.	U	7.	UJ
75-01-4	Vinyl chloride	11.	U	14.	UJ	14.	U	1600.	U	14.	UJ
75-09-2	Methylene chloride	6.	U	19.	UJ	17.	U	1900.	U	22.	UJ
75-15-0	Carbon disulfide	6.	U	7.	UJ	7.	U	810.	UJ	7.	UJ
75-25-2	Bromoform	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
75-27-4	Bromodichloromethane	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
75-34-3	1,1-Dichloroethane	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
75-35-4	1,1-Dichloroethylene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
75-69-4	Trichlorofluoromethane	NR		7.	UJ	7.	U	810.	U	7.	UJ
78-87-5	1,2-Dichloropropane	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
78-93-3	2-Butanone (MEK)	11.	U	34.	UJ	34.	U	4100.	UJ	34.	UJ
79-00-5	1,1,2-Trichloroethane	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
79-01-6	Trichloroethene	6.	U	7.	UJ	7.	U	810.	U	7.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	7.	UJ	7.	U	810.	UJ	7.	UJ
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SMB46-VOM		SAMPLE ID ----->	GDH-S-B086-02	GDH-S-B087-01	GDH-S-B087-02	GDH-S-B088-01	GDH-S-B088-02 RE	GDH-S-B089-01	
		ORIGINAL ID ----->	GDHSB08602	GDHSB08701	GDHSB08702	GDHSB08801	GDHSB08802	GDHSB08901	
		LAB SAMPLE ID ---->	42347-002	42347-003	42347-004	42347-005	42347-006RE	42430-001	
		ID FROM REPORT -->	GDHSB08602	GDHSB08701	GDHSB08702	GDHSB08801	GDHSB08802	GDHSB08901	
		SAMPLE DATE ----->	11/22/94	11/22/94	11/22/94	11/22/94	11/22/94	11/30/94	
		DATE ANALYZED ---->	12/06/94	12/06/94	12/06/94	12/07/94	12/07/94	12/15/94	
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil	
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS27	VAL	CHS27	VAL
100-41-4	Ethylbenzene	6.	U	7.	U	8.	U	7.	UJ
100-42-5	Styrene	6.	U	7.	U	8.	U	7.	UJ
10061-01-5	cis-1,3-Dichloropropene	6.	U	7.	U	8.	U	7.	UJ
10061-02-6	trans-1,3-Dichloropropene	6.	U	7.	U	8.	U	7.	UJ
107-06-2	1,2-Dichloroethane	6.	U	7.	U	8.	U	7.	UJ
108-05-4	Vinyl acetate	13.	U	13.	U	15.	U	13.	UJ
108-10-1	4-Methyl-2-Pentanone (MIBK)	31.	U	34.	U	38.	U	33.	UJ
108-88-3	Toluene	3.3	J	3.7	J	8.	U	5.	J
108-90-7	Chlorobenzene	6.	U	7.	U	8.	U	7.	UJ
109-99-9	Tetrahydrofuran	31.	U	34.	U	38.	U	33.	UJ
124-48-1	Dibromochloromethane	6.	U	7.	U	8.	U	7.	UJ
127-18-4	Tetrachloroethene	7.	J	7.	J	8.	U	11.	J
1330-20-7	Xylene (Total)	6.	U	7.	U	8.	U	7.	UJ
540-59-0	1,2-Dichloroethene (total)	6.	U	7.	U	8.	U	7.	UJ
56-23-5	Carbon tetrachloride	6.	U	7.	U	8.	U	7.	UJ
591-78-6	2-Hexanone	31.	U	34.	U	38.	U	33.	UJ
67-64-1	Acetone	31.	U	42.	U	80.	U	42.	UJ
67-66-3	Chloroform	6.	U	7.	U	8.	U	7.	UJ
71-43-2	Benzene	6.	U	7.	U	8.	U	7.	UJ
71-55-6	1,1,1-Trichloroethane	6.	U	7.	U	8.	U	7.	UJ
74-83-9	Bromomethane	13.	U	13.	U	15.	U	13.	UJ
74-87-3	Chloromethane	13.	U	13.	U	15.	U	13.	UJ
75-00-3	Chloroethane	6.	U	7.	U	8.	U	7.	UJ
75-01-4	Vinyl chloride	13.	U	13.	U	15.	U	13.	UJ
75-09-2	Methylene chloride	19.	UJ	19.	UJ	23.	UJ	16.	UJ
75-15-0	Carbon disulfide	6.	UJ	7.	UJ	8.	UJ	7.	UJ
75-25-2	Bromoform	6.	U	7.	U	8.	U	7.	UJ
75-27-4	Bromodichloromethane	6.	U	7.	U	8.	U	7.	UJ
75-34-3	1,1-Dichloroethane	6.	U	7.	U	8.	U	7.	UJ
75-35-4	1,1-Dichloroethylene	6.	U	7.	U	8.	U	7.	UJ
75-69-4	Trichlorofluoromethane	6.	U	7.	U	8.	U	7.	UJ
78-87-5	1,2-Dichloropropane	6.	U	7.	U	8.	U	7.	UJ
78-93-3	2-Butanone (MEK)	31.	U	34.	U	38.	U	33.	UJ
79-00-5	1,1,2-Trichloroethane	6.	U	7.	U	8.	U	7.	UJ
79-01-6	Trichloroethene	6.	U	7.	U	8.	U	7.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	7.	U	8.	U	7.	UJ
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SU846-V0A		SAMPLE ID ----->	GDH-S-8090-01 RE	GDH-S-8091-01	GDH-S-8092-01	GDH-S-8092-02	GDH-S-8093-01	GDH-S-8104-01					
		ORIGINAL ID ----->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		LAB SAMPLE ID ---->	42430-002RE	42430-003	42574-001	42574-004	42613-001	42985-001					
		ID FROM REPORT -->	GDHSB09001	GDHSB09101	GDHSB09201	GDHSB09202	GDHSB09301	GDHSB10401					
		SAMPLE DATE ----->	11/30/94	11/30/94	12/14/94	12/14/94	12/19/94	02/06/95					
		DATE ANALYZED ---->	12/16/94	12/15/94	12/27/94	12/27/94	12/30/94	02/13/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS27	VAL	CHS27	VAL	CHS28	VAL	CHS28	VAL	CHS28	VAL	CHS34	VAL
100-41-4	Ethylbenzene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
100-42-5	Styrene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
107-06-2	1,2-Dichloroethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
108-05-4	Vinyl acetate	16.	UJ	12.	UJ	14.	U	13.	U	11.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	40.	UJ	31.	UJ	34.	U	31.	U	29.	U	30.	U
108-88-3	Toluene	3.5	J	6.	UJ	3.4	J	6.	J	5.	J	6.	U
108-90-7	Chlorobenzene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
109-99-9	Tetrahydrofuran	40.	UJ	31.	UJ	34.	U	31.	U	29.	U	30.	U
124-48-1	Dibromochloromethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
127-18-4	Tetrachloroethene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
1330-20-7	Xylene (Total)	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
56-23-5	Carbon tetrachloride	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
591-78-6	2-Hexanone	40.	U	31.	UJ	34.	U	31.	U	29.	U	30.	U
67-64-1	Acetone	74.	UJ	32.	UJ	30.	UJ	140.	J	250.	J	30.	U
67-66-3	Chloroform	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
71-43-2	Benzene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
71-55-6	1,1,1-Trichloroethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
74-83-9	Bromomethane	16.	UJ	12.	UJ	14.	U	13.	U	11.	U	12.	U
74-87-3	Chloromethane	16.	UJ	12.	UJ	14.	U	13.	U	11.	UJ	12.	U
75-00-3	Chloroethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
75-01-4	Vinyl chloride	16.	UJ	12.	UJ	14.	U	13.	U	11.	U	12.	U
75-09-2	Methylene chloride	16.	UJ	12.	UJ	17.	UJ	20.	UJ	11.	UJ	12.	U
75-15-0	Carbon disulfide	8.	UJ	6.	UJ	7.	UJ	6.	UJ	6.	U	6.	UJ
75-25-2	Bromoform	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
75-27-4	Bromodichloromethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
75-34-3	1,1-Dichloroethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
75-35-4	1,1-Dichloroethylene	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
75-69-4	Trichlorofluoromethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	UJ
78-87-5	1,2-Dichloropropane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
78-93-3	2-Butanone (MEK)	40.	UJ	31.	UJ	34.	U	31.	U	29.	U	30.	U
79-00-5	1,1,2-Trichloroethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
79-01-6	Trichloroethene	2.6	J	6.	UJ	3.1	J	6.	J	3.1	J	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	8.	UJ	6.	UJ	7.	U	6.	U	6.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Soil Analytical Data

SW846-VDA		SAMPLE ID ----->	GDH-S-8104-02	GDH-S-8105-01	GDH-S-8107-01	GDH-S-8107-02			
		ORIGINAL ID ----->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		LAB SAMPLE ID ---->	42985-002	42985-003	43002-001	43002-002			
		ID FROM REPORT -->	GDHSB10402	GDHSB10501	GDHSB10701	GDHSB10702			
		SAMPLE DATE ----->	02/06/95	02/06/95	02/07/95	02/07/95			
		DATE ANALYZED ---->	02/13/95	02/13/95	02/13/95	02/13/95			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL
100-41-4	Ethylbenzene	6.	U	5.	U	5.	U	6.	U
100-42-5	Styrene	6.	U	5.	U	5.	U	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	5.	U	5.	U	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	5.	U	5.	U	6.	U
107-06-2	1,2-Dichloroethane	6.	U	5.	U	5.	U	6.	U
108-05-4	Vinyl acetate	12.	U	11.	U	10.	U	12.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	30.	U	27.	U	26.	U	30.	U
108-88-3	Toluene	6.	U	5.	U	5.	U	6.	U
108-90-7	Chlorobenzene	6.	U	5.	U	5.	U	6.	U
109-99-9	Tetrahydrofuran	30.	U	27.	U	26.	U	30.	U
124-48-1	Dibromochloromethane	6.	U	5.	U	5.	U	6.	U
127-18-4	Tetrachloroethene	6.	U	5.	U	5.	U	6.	U
1330-20-7	Xylene (Total)	6.	U	5.	U	5.	U	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	5.	U	5.	U	6.	U
56-23-5	Carbon tetrachloride	6.	U	5.	U	5.	U	6.	U
591-78-6	2-Hexanone	30.	U	27.	U	26.	U	30.	U
67-64-1	Acetone	30.	U	27.	U	10.	U	12.	U
67-66-3	Chloroform	6.	U	5.	U	5.	U	6.	U
71-43-2	Benzene	6.	U	5.	U	5.	U	6.	U
71-55-6	1,1,1-Trichloroethane	6.	U	5.	U	5.	U	6.	U
74-83-9	Bromomethane	12.	U	11.	U	10.	U	12.	U
74-87-3	Chloromethane	12.	U	11.	U	10.	U	12.	U
75-00-3	Chloroethane	6.	U	5.	U	5.	U	6.	U
75-01-4	Vinyl chloride	12.	U	11.	U	10.	U	12.	U
75-09-2	Methylene chloride	12.	U	11.	U	10.	U	12.	U
75-15-0	Carbon disulfide	6.	UJ	5.	UJ	5.	UJ	6.	UJ
75-25-2	Bromoform	6.	U	5.	U	5.	U	6.	U
75-27-4	Bromodichloromethane	6.	U	5.	U	5.	U	6.	U
75-34-3	1,1-Dichloroethane	6.	U	5.	U	5.	U	6.	U
75-35-4	1,1-Dichloroethylene	6.	U	5.	U	5.	U	6.	U
75-69-4	Trichlorofluoromethane	6.	UJ	5.	UJ	5.	UJ	6.	UJ
78-87-5	1,2-Dichloropropane	6.	U	5.	U	5.	U	6.	U
78-93-3	2-Butanone (MEK)	30.	U	27.	U	26.	U	30.	U
79-00-5	1,1,2-Trichloroethane	6.	U	5.	U	5.	U	6.	U
79-01-6	Trichloroethene	6.	U	5.	U	5.	U	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	5.	U	5.	U	6.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR	

Section 1B

Grid-Based Analytical Data for Groundwater



CHARLES N - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-CN		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	42289-004	42289-002	42392-001	42605-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/18/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	01/05/95	01/05/95	01/05/95	01/05/95			
		DATE ANALYZED ---->	01/09/95	01/09/95	01/09/95	01/09/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
CN	Cyanide	0.01	U	0.01		0.01	U	0.05	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-DIOXI		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	1K1677-3	1K1677-1	1K1711-1	1K1800-1			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	12/30/94	12/30/94	12/30/94	12/30/94			
		DATE ANALYZED -->	01/09/95	01/09/95	01/09/95	01/09/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	PG/L	PG/L	PG/L	PG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
1746-01-6	2378-TCDD	3.	U	3.95	U	2.46	U	2.06	U
19408-74-3	123789-HxCDD	9.67	U	7.07	U	13.35	U	10.38	U
3268-87-9	OCDD	33.61	U	27.55	U	18.39	U	41.69	U
35822-46-9	1234678-HpCDD	18.92	U	16.05	U	17.04	U	14.56	U
39001-02-0	OCDF	48.88	U	20.93	U	24.92	U	19.32	U
39227-28-6	123478-HxCDD	10.37	U	7.59	U	14.32	U	11.13	U
40321-76-4	12378-PeCDD	6.55	U	8.21	U	7.28	U	3.13	U
51207-31-9	2378-TCDF	4.48	U	8.07	U	4.	U	3.48	U
55673-89-7	1234789-HpCDF	5.73	U	6.96	U	14.59	U	4.94	U
57117-31-4	23478-PeCDF	10.34	U	7.11	U	6.34	U	3.93	U
57117-41-6	12378-PeCDF	9.66	U	6.65	U	5.93	U	3.68	U
57117-44-9	123678-HxCDF	2.68	U	4.13	U	2.03	U	2.79	U
57653-85-7	123678-HxCDD	9.67	U	7.07	U	13.35	U	10.38	U
60851-34-5	234678-HxCDF	3.08	U	4.74	U	2.33	U	3.19	U
67562-39-4	1234678-HpCDF	4.09	U	4.97	U	10.42	U	3.53	U
70648-26-9	123478-HxCDF	2.76	U	4.25	U	2.09	U	2.86	U
72918-21-9	123789-HxCDF	3.74	U	5.76	U	2.83	U	3.88	U
9999900-00-6	Total TCDD	0.	U	0.	U	0.	U	0.	U
9999900-00-7	Total PeCDD	0.	U	0.	U	0.	U	0.	U
9999900-00-8	Total HxCDD	0.	U	0.	U	0.	U	0.	U
9999900-00-9	Total HpCDD	0.	U	0.	U	0.	U	0.	U
9999900-01-0	Total TCDF	0.	U	0.	U	0.	U	0.	U
9999900-01-1	Total PeCDF	0.	U	0.	U	0.	U	0.	U
9999900-01-2	Total HxCDF	0.	U	0.	U	0.	U	0.	U
9999900-01-3	Total HpCDF	0.	U	0.	U	0.	U	0.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-HERB		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	UJL-003	UJL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/30/94	11/30/94	12/15/94	12/23/94			
		DATE ANALYZED ---->	11/30/94	11/30/94	12/15/94	01/10/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
93-72-1	2,4,5-TP (Silvex)	0.5	U	0.62	U	0.5	U	0.5	U
93-76-5	2,4,5-T	0.5	U	0.62	U	0.5	U	0.5	U
94-75-7	2,4-D	2.5	U	3.1	U	2.5	U	2.5	U
94-82-6	2,4-DB	NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-HEXAC		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	42289-004	42289-002	42392-001	42605-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/18/94	11/18/94	11/29/94	12/16/94			
		DATE ANALYZED ---->	11/21/94	11/21/94	11/30/94	12/19/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	MG/L	MG/L	MG/L	MG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
9999900-00-5	Hexavalent Chromium	0.01	U	0.01	U	0.01	U	0.08	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-METAL		SAMPLE ID -----> ORIGINAL ID -----> LAB SAMPLE ID ----> ID FROM REPORT --> SAMPLE DATE -----> DATE EXTRACTED --> DATE ANALYZED ----> MATRIX -----> UNITS ----->	GDH-H-W004-01 GDHHW00401 42289-004 GDHHW00401 11/18/94 11/22/94 11/22/94 Water MG/L	GDH-H-W006-01 GDHHW00601 42289-002 GDHHW00601 11/18/94 11/22/94 11/22/94 Water MG/L	GDH-H-W007-01 GDHHW00701 42392-001 GDHHW00701 11/29/94 12/02/94 12/05/94 Water MG/L	GDH-H-W100-01 GDHHW10001 42605-001 GDHHW10001 12/16/94 12/20/94 12/22/94 Water MG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
7439-92-1	Lead	1.1	U	1.1	U	1.1	U	4.4	U
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel	10.3	U	10.3	U	10.3	U	10.3	U
7440-22-4	Silver	3.4	U	3.4	U	3.4	U	3.4	U
7440-31-5	Tin	17.8	U	17.8	U	17.8	U	17.8	U
7440-36-0	Antimony	16.	U	16.	U	16.	U	16.	U
7440-38-2	Arsenic	0.85	J	7.	J	0.8	U	0.8	U
7440-39-3	Barium	10.6	U	1.7	U	3.4	U	39.1	U
7440-41-7	Beryllium	0.3	U	0.3	U	0.3	U	0.3	U
7440-43-9	Cadmium	2.1	U	2.1	U	2.1	U	2.1	U
7440-47-3	Chromium	4.3	U	4.3	U	4.3	U	4.3	U
7440-48-4	Cobalt	2.4	U	2.4	U	2.4	U	2.4	U
7440-50-8	Copper	3.3	U	3.3	U	3.3	U	17.4	U
7440-62-2	Vanadium	3.1	U	3.1	U	3.1	U	3.1	U
7440-66-6	Zinc	20.4	U	16.1	U	18.4	U	44.	U
7782-49-2	Selenium	0.9	U	1.4	U	0.9	U	4.6	U
7440-28-0	Thallium	1.	U	1.	U	1.	U	1.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-OP PE		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID --->	UUL-003	UUL-006	UWT-001	VHS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/30/94	11/30/94	12/15/94	12/23/94			
		DATE ANALYZED --->	11/30/94	11/30/94	12/15/94	01/10/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
126-68-1	O,O,O-Triethylphosphorothioate	1.	U	1.	U	1.	U	1.	U
297-97-2	Thionazin	1.	U	1.	U	1.	U	1.	U
298-00-0	Methyl parathion	1.	U	1.	U	1.	U	1.	U
298-02-2	Phorate	1.	U	1.	U	1.	U	1.	U
298-04-4	Disulfoton	1.	U	1.	U	1.	U	1.	U
3689-24-5	Sulfotep	1.	U	1.	U	1.	U	1.	U
52-85-7	Famphur	1.	U	1.	U	1.	U	1.	U
56-38-2	Parathion	1.	U	1.	U	1.	U	1.	U
60-51-5	Dimethoate	1.	U	1.	U	1.	U	1.	U

CHARLES CAN - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-PEST		SAMPLE ID ----->	GDH-H-W004-01 DL	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	UJL-003	UJL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/24/94	11/24/94	12/07/94	12/23/94			
		DATE ANALYZED ---->	12/02/94	12/02/94	12/13/94	01/06/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
309-00-2	Aldrin	0.05	U	0.05	U	0.06	U	0.05	U
319-84-6	alpha-BHC	0.05	U	0.05	U	0.06	U	0.05	U
319-85-7	beta-BHC	0.05	U	0.05	U	0.06	U	0.05	U
319-86-8	delta-BHC	0.05	U	0.05	U	0.06	U	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U	0.05	U	0.06	U	0.05	U
5103-71-9	alpha-Chlordane	0.05	U	0.05	U	0.06	U	0.05	U
5103-74-2	gamma-Chlordane	0.05	U	0.05	U	0.06	U	0.05	U
510-15-6	Chlorobenzilate	1.	U	1.	U	1.1	U	1.	U
72-54-8	4,4'-DDD	0.1	U	0.1	U	0.11	U	0.1	U
72-55-9	4,4'-DDE	0.1	U	0.1	U	0.11	U	0.1	U
50-29-3	4,4'-DDT	0.1	U	0.1	U	0.11	U	0.1	U
2303-16-4	Diallate	1.	U	1.	U	1.1	U	1.	U
60-57-1	Dieldrin	0.1	U	0.1	U	0.11	U	0.1	U
959-98-8	Endosulfan I	0.05	U	0.05	U	0.06	U	0.05	U
33213-65-9	Endosulfan II	0.1	U	0.1	U	0.11	U	0.1	U
1031-07-8	Endosulfan sulfate	0.1	U	0.1	U	0.11	U	0.1	U
72-20-8	Endrin	0.1	U	0.1	U	0.11	U	0.1	U
7421-93-4	Endrin aldehyde	0.1	U	0.1	U	0.11	U	0.1	U
76-44-8	Heptachlor	0.05	U	0.05	U	0.06	U	0.05	U
1024-57-3	Heptachlor epoxide	0.05	U	0.05	U	0.06	U	0.05	U
465-73-6	Isodrin	0.1	U	0.1	U	0.11	U	0.1	U
143-50-0	Kepone	1.	U	1.	U	1.1	UJ	1.	UJ
72-43-5	Methoxychlor	0.5	U	0.5	U	0.55	U	0.5	U
8001-35-2	Toxaphene	5.	U	5.	U	5.5	U	5.	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.1	U	1.	U
11104-28-2	Aroclor-1221	2.	U	2.	U	2.2	U	2.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.1	U	1.	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.1	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.1	U	1.	U
11097-69-1	Aroclor-1254	1.	U	1.	U	1.1	U	1.	U
11096-82-5	Aroclor-1260	1.	U	1.	U	1.1	U	1.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-SVDA		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	UUL-003	UUL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/24/94	11/24/94	12/05/94	12/22/94			
		DATE ANALYZED ---->	12/15/94	12/16/94	01/04/95	01/05/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
83-32-9	Acenaphthene	3.1	U	10.	U	11.4	U	10.	U
208-96-8	Acenaphthylene	10.	U	10.	U	11.4	U	10.	U
98-86-2	Acetophenone	10.	U	10.	U	11.4	U	10.	U
53-96-3	Acetamidofluorene	10.	U	10.	U	11.4	U	10.	U
92-67-1	4-Aminobiphenyl	10.	U	10.	U	11.4	U	10.	U
62-53-3	Aniline	10.	U	10.	U	11.4	U	10.	U
120-12-7	Anthracene	10.	U	10.	U	11.4	U	10.	U
140-57-8	Aramite	10.	U	10.	U	11.4	U	10.	U
56-55-3	Benzo(a)anthracene	10.	U	10.	U	11.4	U	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U	10.	U	11.4	U	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U	10.	U	11.4	U	10.	U
191-24-2	Benzo(g,h,i)perylene	10.	U	10.	U	11.4	U	10.	U
50-32-8	Benzo(a)pyrene	10.	U	10.	U	11.4	U	10.	U
100-51-6	Benzyl alcohol	10.	U	10.	U	11.4	U	10.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U	10.	U	11.4	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U	10.	U	11.4	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	UJ	10.	UJ	11.4	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U	10.	U	11.4	U	10.	U
101-55-3	4-Bromophenylphenylether	10.	U	10.	U	11.4	U	10.	U
85-68-7	Butylbenzylphthalate	10.	U	10.	U	11.4	U	10.	U
106-47-8	4-Chloroaniline	10.	U	10.	U	11.4	U	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U	10.	U	11.4	U	10.	U
91-58-7	2-Chloronaphthalene	10.	U	10.	U	11.4	U	10.	U
95-57-8	2-Chlorophenol	10.	U	10.	U	11.4	U	10.	U
7005-72-3	4-Chlorophenylphenylether	10.	U	10.	U	11.4	U	10.	U
218-01-9	Chrysene	10.	U	10.	U	11.4	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	10.	U	10.	U	11.4	U	10.	U
108-39-4	3-Methylphenol (m-Cresol)	10.	U	10.	U	11.4	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	10.	U	10.	U	11.4	U	10.	U
53-70-3	Dibenzo(a,h)anthracene	10.	U	10.	U	11.4	U	10.	U
132-64-9	Dibenzofuran	10.	U	10.	U	11.4	U	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U	10.	U	11.4	U	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U	10.	U	11.4	U	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U	10.	U	11.4	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U	20.	U	22.8	U	20.	U
120-83-2	2,4-Dichlorophenol	10.	U	10.	U	11.4	U	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-SV0A		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	UUL-003	UUL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/24/94	11/24/94	12/05/94	12/22/94			
		DATE ANALYZED ---->	12/15/94	12/16/94	01/04/95	01/05/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
87-65-0	2,6-Dichlorophenol	10.	U	10.	U	11.4	U	10.	U
84-66-2	Diethylphthalate	10.	U	10.	U	11.4	U	10.	U
60-11-7	p-(Dimethylamino)azobenzene	10.	U	10.	U	11.4	U	10.	U
57-97-6	7,12-Dimethylbenz(a)anthracene	10.	U	10.	U	11.4	U	10.	U
119-93-7	3,3-Dimethylbenzidine	10.	U	10.	U	11.4	U	10.	U
122-09-8	alpha, alpha-Dimethylphenethylamine	10.	U	10.	U	11.4	U	10.	U
131-11-3	Dimethylphthalate	10.	U	10.	U	11.4	U	10.	U
105-67-9	2,4-Dimethylphenol	10.	U	10.	U	11.4	U	10.	U
84-74-2	Di-n-butylphthalate	10.	U	10.	U	11.4	U	10.	U
99-65-0	1,3-Dinitrobenzene	10.	UJ	10.	UJ	11.4	U	10.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	50.	UJ	50.	UJ	57.	U	50.	U
51-28-5	2,4-Dinitrophenol	50.	UJ	50.	UJ	57.	UJ	50.	U
88-85-7	Dinoseb	10.	U	10.	U	11.4	U	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U	10.	U	11.4	U	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U	10.	U	11.4	U	10.	U
117-84-0	Di-n-octylphthalate	10.	U	10.	U	11.4	U	10.	U
122-39-4	Diphenylamine	10.	U	10.	U	11.4	U	10.	U
97-63-2	Ethyl methacrylate	10.	U	10.	U	11.4	U	10.	U
62-50-0	Ethyl methanesulfonate	10.	U	10.	U	11.4	U	10.	U
206-44-0	Fluoranthene	10.	U	10.	U	11.4	U	10.	U
86-73-7	Fluorene	10.	U	10.	U	11.4	U	10.	U
118-74-1	Hexachlorobenzene	10.	U	10.	U	11.4	U	10.	U
87-68-3	Hexachlorobutadiene	10.	U	10.	U	11.4	U	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U	10.	U	11.4	UJ	10.	U
67-72-1	Hexachloroethane	10.	U	10.	U	11.4	U	10.	U
70-30-4	Hexachlorophene	10.	U	10.	U	11.4	U	10.	U
1888-71-7	Hexachloropropene	10.	U	10.	U	11.4	UJ	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U	10.	U	11.4	U	10.	U
78-59-1	Isophorone	10.	U	10.	U	11.4	U	10.	U
120-58-1	Isosafrole	10.	U	10.	U	11.4	U	10.	U
91-80-5	Methapyrilene	10.	U	10.	U	11.4	UJ	10.	UJ
56-49-5	3-Methylcholanthrene	10.	U	10.	U	11.4	U	10.	U
80-62-6	Methyl methacrylate	10.	UJ	10.	UJ	11.4	U	10.	U
66-27-3	Methyl methanesulfonate	10.	U	10.	U	11.4	U	10.	U
91-57-6	2-Methylnaphthalene	10.	U	10.	U	11.4	U	10.	U
91-20-3	Naphthalene	2.6	J	10.	U	11.4	U	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-SVDA		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	UUL-003	UUL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/24/94	11/24/94	12/05/94	12/22/94			
		DATE ANALYZED ---->	12/15/94	12/16/94	01/04/95	01/05/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
130-15-4	1,4-Naphthoquinone	50.	U	50.	U	57.	U	50.	U
134-32-7	1-Naphthylamine	10.	U	10.	U	11.4	U	10.	U
91-59-8	2-Naphthylamine	10.	U	10.	U	11.4	U	10.	U
88-74-4	2-Nitroaniline	50.	U	50.	U	57.	U	50.	U
99-09-2	3-Nitroaniline	50.	U	50.	U	57.	U	50.	U
100-01-6	4-Nitroaniline	50.	U	50.	U	57.	U	50.	U
98-95-3	Nitrobenzene	10.	U	10.	U	11.4	U	10.	U
88-75-5	2-Nitrophenol	10.	U	10.	U	11.4	U	10.	U
100-02-7	4-Nitrophenol	50.	U	50.	U	57.	U	50.	U
56-57-5	4-Nitroquinoline 1-oxide	10.	UJ	10.	UJ	11.4	UR	10.	UR
924-16-3	N-Nitroso-di-n-butylamine	10.	U	10.	U	11.4	U	10.	U
55-18-5	N-Nitrosodiethylamine	10.	U	10.	U	11.4	U	10.	U
62-75-9	N-Nitrosodimethylamine	10.	U	10.	U	11.4	U	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U	10.	U	11.4	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U	10.	U	11.4	U	10.	U
10595-95-6	N-Nitrosomethylethylamine	10.	U	10.	U	11.4	U	10.	U
59-89-2	N-Nitrosomorpholine	10.	U	10.	U	11.4	U	10.	U
100-75-4	N-Nitrosopiperidine	10.	UJ	10.	UJ	11.4	U	10.	U
930-55-2	N-Nitrosopyrrolidine	10.	U	10.	U	11.4	U	10.	U
99-55-8	5-Nitro-o-toluidine	10.	U	10.	U	11.4	U	10.	U
608-93-5	Pentachlorobenzene	10.	U	10.	U	11.4	U	10.	U
76-01-7	Pentachloroethane	10.	U	10.	U	11.4	U	10.	U
82-68-8	Pentachloronitrobenzene	10.	U	10.	U	11.4	U	10.	U
87-86-5	Pentachlorophenol	50.	U	50.	U	57.	U	50.	U
62-44-2	Phenacetin	10.	U	10.	U	11.4	U	10.	U
85-01-8	Phenanthrene	10.	U	10.	U	11.4	U	10.	U
108-95-2	Phenol	10.	U	10.	U	11.4	U	10.	U
106-50-3	p-Phenylenediamine	20.	U	20.	U	22.8	U	20.	U
109-06-8	2-Picoline	10.	U	10.	U	11.4	U	10.	U
23950-58-5	Pronamide	10.	U	10.	U	11.4	U	10.	U
129-00-0	Pyrene	10.	U	10.	U	11.4	U	10.	U
110-86-1	Pyridine	10.	U	10.	U	11.4	U	10.	U
94-59-7	Safrole	10.	U	10.	U	11.4	U	10.	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10.	U	10.	U	11.4	U	10.	U
58-90-2	2,3,4,6-Tetrachlorophenol	10.	U	10.	U	11.4	U	10.	U
95-53-4	o-Toluidine	10.	U	10.	U	11.4	U	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-SV0A		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	UUL-003	UUL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/24/94	11/24/94	12/05/94	12/22/94			
		DATE ANALYZED ---->	12/15/94	12/16/94	01/04/95	01/05/95			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
120-82-1	1,2,4-Trichlorobenzene	10.	U	10.	U	11.4	U	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U	50.	U	57.	U	50.	U
88-06-2	2,4,6-Trichlorophenol	10.	U	10.	U	11.4	U	10.	U
99-35-4	1,3,5-Trinitrobenzene	10.	U	10.	U	11.4	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-V0A		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		LAB SAMPLE ID ---->	UUL-003	UUL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/29/94	11/29/94	12/02/94	12/21/94			
		DATE ANALYZED --->	11/29/94	11/29/94	12/02/94	12/21/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
67-64-1	Acetone	15.4	U	10.	U	10.	U	12.7	UJ
75-05-8	Acetonitrile	50.	U	50.	U	50.	U	50.	UJ
107-02-8	Acrolein	10.	UR	10.	UR	10.	UR	10.	UR
107-13-1	Acrylonitrile	10.	U	10.	U	10.	U	10.	UJ
107-05-1	3-Chloropropene	5.	U	5.	U	5.	U	5.	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
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	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
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U
126-99-8	Chloroprene	50.	U	50.	U	50.	U	50.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.	U	5.	U	5.	U	5.	UJ
106-93-4	1, 2-Dibromoethane	5.	U	5.	U	5.	U	5.	U
110-57-6	trans-1,4-Dichloro-2-butene	5.	U	5.	U	5.	U	5.	U
75-71-8	Dichlorodifluoromethane	50.	UR	50.	UR	50.	UR	50.	UR
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	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
123-91-1	1,4-Dioxane	500.	UR	500.	UR	500.	UR	500.	UR
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U
78-83-1	Isobutyl alcohol	500.	UR	500.	UR	500.	UR	500.	UR
126-98-7	Methacrylonitrile	5.	U	5.	U	5.	U	5.	UJ
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	UJ	10.	UJ	10.	UJ	10.	UJ
74-95-3	Methylene bromide	5.	U	5.	U	5.	U	5.	U
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

APX9-V0A		SAMPLE ID ----->	GDH-H-W004-01	GDH-H-W006-01	GDH-H-W007-01	GDH-H-W100-01			
		ORIGINAL ID ----->	GDHHW00401	GDHHW00601	GDHHW00701	GDRHW10001			
		LAB SAMPLE ID ---->	UUL-003	UUL-006	UWT-001	VFS-001			
		ID FROM REPORT -->	GDHHW00401	GDHHW00601	GDHHW00701	GDHHW10001			
		SAMPLE DATE ----->	11/17/94	11/18/94	11/29/94	12/16/94			
		DATE EXTRACTED -->	11/29/94	11/29/94	12/02/94	12/21/94			
		DATE ANALYZED -->	11/29/94	11/29/94	12/02/94	12/21/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	APX14	VAL	APX14	VAL	APX14	VAL	APX14	VAL
74-88-4	Methyl iodide	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U
107-12-0	Propionitrile	10.	UR	10.	UR	10.	UR	10.	UR
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U
630-20-6	1,1,1,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	UJ
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	1.3	J	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.	UJ	5.	UJ
96-18-4	1,2,3-Trichloropropane	5.	U	5.	U	5.	U	5.	UJ
108-05-4	Vinyl acetate	5.	U	5.	U	5.	U	5.	UJ
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

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-G-W001-01	GDH-G-W002-01	GDH-G-W003-01	GDH-G-W004-01	GDH-G-W005-01	GDH-G-W006-01					
		ORIGINAL ID ----->	GDHGW00101	GDHGW00201	GDHGW00301	GDHGW00401	GDHGW00501	GDHGW00601					
		LAB SAMPLE ID --->	42057-008	42084-007	42029-029	42288-008	42096-007	42278-011					
		ID FROM REPORT -->	GDHGW00101	GDHGW00201	110207	GDHGW00401	GDHGW00501	GDHGW00601					
		SAMPLE DATE ----->	11/03/94	11/04/94	11/01/94	11/17/94	11/07/94	11/18/94					
		DATE EXTRACTED -->	11/07/94	11/09/94	11/07/94	11/22/94	11/09/94	11/22/94					
		DATE ANALYZED --->	11/08/94	11/10/94	11/08/94	11/22/94	11/10/94	11/22/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L					
CAS #	Parameter	CHS25	VAL	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL
CN	Cyanide	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-CN		SAMPLE ID ----->	GDH-G-W007-01	GDH-G-W008-01	GDH-G-W009-01	GDH-G-W010-01	GDH-G-W011-01	GDH-G-W01D-01					
		ORIGINAL ID ----->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW01D01					
		LAB SAMPLE ID ---->	42393-003	42140-007	42316-024	42316-026	42316-023	42057-009					
		ID FROM REPORT -->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW01D01					
		SAMPLE DATE ----->	11/29/94	11/08/94	11/21/94	11/21/94	11/21/94	11/03/94					
		DATE EXTRACTED -->	12/02/94	11/11/94	11/29/94	11/29/94	11/29/94	11/07/94					
		DATE ANALYZED ---->	12/05/94	11/11/94	11/30/94	11/30/94	11/30/94	11/08/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L					
CAS #	Parameter	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS26	VAL	CHS26	VAL	CHS25	VAL
CN	Cyanide		0.01 U		0.01 U		0.01 U		0.01 U		0.02 U		0.02 U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-G-W020-01	GDH-G-W030-01	GDH-G-W040-02	GDH-G-W050-01	GDH-G-W060-01	GDH-G-W070-A1					
		ORIGINAL ID ----->	GDHGW02D01	GDHGW03D01	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		LAB SAMPLE ID --->	42086-007	42029-028	42288-009	42096-008	42278-012	42614-004					
		ID FROM REPORT -->	GDHGW02D01	110206	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		SAMPLE DATE ----->	11/05/94	11/01/94	11/17/94	11/07/94	11/18/94	12/19/94					
		DATE EXTRACTED -->	11/09/94	11/07/94	11/22/94	11/09/94	11/22/94	12/21/94					
		DATE ANALYZED --->	11/10/94	11/08/94	11/22/94	11/10/94	11/22/94	12/22/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L					
CAS #	Parameter	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS27	VAL
CN	Cyanide	0.01	U	0.01	U	0.02	U	0.02	U	0.02	U	0.01	U

*** Validati Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SUB66-CN		SAMPLE ID ----->	GDH-G-W080-01	GDH-G-W090-01	GDH-G-W100-A1	GDH-G-W110-A1			
		ORIGINAL ID ----->	GDHW08001	GDHW09001	GDHW10001	GDHW11001			
		LAB SAMPLE ID ---->	42136-009	42316-025	42607-004	42593-005			
		ID FROM REPORT -->	GDHW08001	GDHW09001	GDHW10001	GDHW11001			
		SAMPLE DATE ----->	11/09/94	11/21/94	12/16/94	12/15/94			
		DATE EXTRACTED -->	11/11/94	11/29/94	12/20/94	12/19/94			
		DATE ANALYZED ---->	11/11/94	11/30/94	12/22/94	12/19/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	MG/L	MG/L	MG/L	MG/L			
CAS #	Parameter	CHS25	VAL	CHS26	VAL	CHS27	VAL	CHS27	VAL
CN	Cyanide	0.05	U	0.02	U	0.05	U	0.02	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SUB46-META		SAMPLE ID ----->	GDH-G-W001-01	GDH-G-W002-01	GDH-G-W003-01	GDH-G-W004-01	GDH-G-W005-01	GDH-G-W006-01					
		ORIGINAL ID ----->	GDHGW00101	GDHGW00201	GDHGW00301	GDHGW00401	GDHGW00501	GDHGW00601					
		LAB SAMPLE ID --->	42057-006	42084-010	42029-022	42288-006	42096-004	42278-009					
		ID FROM REPORT -->	GDHGW00101	GDHGW00201	110207	GDHGW00401	GDHGW00501	GDHGW00601					
		SAMPLE DATE ----->	11/03/94	11/04/94	11/01/94	11/17/94	11/07/94	11/18/94					
		DATE EXTRACTED -->	11/14/94	11/14/94	11/04/94	11/28/94	11/14/94	11/28/94					
		DATE ANALYZED -->	11/16/94	11/21/94	11/14/94	12/01/94	11/16/94	12/01/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL
7429-90-5	Aluminum	14.	U	1560.	U	125.		14.	U	14.	U	14.	U
7439-89-6	Iron	10600.		791.	U	10700.		490.	J	5730.		1420.	
7439-92-1	Lead	2.3	U	2.3	U	1.	UJ	1.6	J	2.3	U	2.8	J
7440-02-0	Nickel	10.3	U	72.1	U	10.3	UJ	10.3	U	10.3	U	10.3	U
7440-09-7	Potassium	12400.		297000.		23000.		26200.		46200.		22100.	
7440-22-4	Silver	3.4	U	23.8	U	3.4	U	3.4	U	3.4	U	3.4	U
7440-23-5	Sodium	41700.		8590000.		430000.		86700.		616000.		61500.	
7440-28-0	Thallium	1.	U	10.	U	4.	UJ	1.9	J	10.	U	2.2	J
7440-36-0	Antimony	16.	U	112.	U	16.	U	16.	U	16.	U	16.	U
7440-38-2	Arsenic	8.	J	4.5	U	26.6	U	0.8	U	7.6	U	7.2	J
7440-39-3	Barium	0.8	U	26.2	U	3.6	U	13.1	J	11.1	U	3.2	J
7440-41-7	Beryllium	0.3	U	2.1	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-43-9	Cadmium	2.1	U	14.7	U	2.1	U	2.1	U	2.1	U	2.1	U
7440-48-4	Cobalt	2.4	U	16.8	U	2.4	U	2.4	J	2.4	U	2.4	U
7440-50-8	Copper	3.3	U	23.1	U	3.3	U	3.3	U	3.3	U	3.3	U
7440-62-2	Vanadium	3.1	U	21.7	U	3.2	U	3.1	U	3.1	U	3.1	U
7440-66-6	Zinc	3.5	U	24.5	U	5.2	U	13.6	U	7.8	U	19.1	U
7782-49-2	Selenium	0.9	U	0.9	U	3.3	UJ	0.9	UJ	1.2	J	1.1	J
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7439-95-4	Magnesium	28100.		1090000.		47500.		48500.		133000.		44500.	
7439-96-5	Manganese	514.		3.5	U	1090.		82.7		1310.		958.	
7440-70-2	Calcium	152000.		286000.		153000.		102000.		235000.		243000.	
7440-47-3	Chromium	4.3	U	30.1	U	4.3	U	4.3	U	4.3	U	4.3	U

*** Validati Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SUB46-META		SAMPLE ID ----->	GDH-G-W007-01	GDH-G-W008-01	GDH-G-W009-01	GDH-G-W010-01	GDH-G-W011-01	GDH-G-W01D-01					
		ORIGINAL ID ----->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW1001	GDHGW1101	GDHGW1001					
		LAB SAMPLE ID ---->	42393-002	42140-005	42316-018	42316-020	42316-017	42057-007					
		ID FROM REPORT -->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW1001	GDHGW1101	GDHGW1001					
		SAMPLE DATE ----->	11/29/94	11/08/94	11/21/94		11/21/94	11/03/94					
		DATE EXTRACTED -->	12/02/94	11/14/94	11/28/94		11/28/94	11/14/94					
		DATE ANALYZED ---->	12/12/94	11/17/94	12/09/94		12/02/94	11/16/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS26	VAL	CHS26	VAL	CHS25	VAL
7429-90-5	Aluminum	35.6	U	14.	U	280.	U	14.	U	201.	U	14.	U
7439-89-6	Iron	278.	U	15500.		28000.	J	2850.	J	9200.	J	5010.	
7439-92-1	Lead	2.3	J	2.3	U	1.1	J	2.2	J	3.2	J	3.	J
7440-02-0	Nickel	10.3	U	10.3	U	10.3	U	20.7	J	10.3	U	10.3	U
7440-09-7	Potassium	5010.		35800.		69500.		21200.		135000.		224000.	
7440-22-4	Silver	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U
7440-23-5	Sodium	18700.		77200.		1240000.		206000.		3910000.		6810000.	
7440-28-0	Thallium	1.	U	1.	U	105.	J	4.	U	10.	U	4.	U
7440-36-0	Antimony	16.	U	16.	U	16.	U	16.	U	16.	U	16.	U
7440-38-2	Arsenic	0.8	J	1.6	U	10.9		13.9		4.7	J	0.8	U
7440-39-3	Barium	2.9	J	14.8	U	54.5	J	6.8	J	40.3	J	25.	U
7440-41-7	Beryllium	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-43-9	Cadmium	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
7440-48-4	Cobalt	2.4	U	2.4	U	2.4	U	2.4	U	2.4	U	2.4	U
7440-50-8	Copper	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U
7440-62-2	Vanadium	3.1	U	3.1	U	3.1	U	3.1	U	7.6	J	3.1	U
7440-66-6	Zinc	17.7	U	4.9	U	13.6	U	6.	U	21.7	U	3.5	U
7782-49-2	Selenium	1.4	J	0.9	U	1.8	J	1.6	J	0.9	UJ	1.4	J
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7439-95-4	Magnesium	10000.	J	69500.		235000.		65600.		532000.		914000.	
7439-96-5	Manganese	19.2		1320.		4570.		428.		507.		555.	
7440-70-2	Calcium	55500.		233000.		720000.		204000.		201000.		120000.	
7440-47-3	Chromium	4.3	U	4.3	U	4.3	U	4.3	U	4.3	U	4.3	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SUB46-META		SAMPLE ID ----->	GDH-G-W02D-01	GDH-G-W03D-01	GDH-G-W04D-01	GDH-G-W05D-01	GDH-G-W06D-01	GDH-G-W07D-01					
		ORIGINAL ID ----->	GDHGW02D01	GDHGW03D01	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		LAB SAMPLE ID ---->	42086-009	42029-021	42288-007	42096-005	42278-010	42614-003					
		ID FROM REPORT -->	GDHGW02D01	110206	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		SAMPLE DATE ----->	11/05/94	11/01/94	11/17/94	11/07/94	11/18/94	12/19/94					
		DATE EXTRACTED -->	11/14/94	11/04/94	11/28/94	11/14/94	11/28/94	12/20/94					
		DATE ANALYZED -->	11/21/94	11/14/94	12/01/94	11/16/94	12/01/94	12/21/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS27	VAL
7429-90-5	Aluminum	105.	U	14.	U	14.	U	30.	U	292.	U	16.1	J
7439-89-6	Iron	4270.		139.	U	1540.	J	4430.		528.	J	923.	
7439-92-1	Lead	2.3	U	1.	UJ	2.6	J	2.3	U	2.4	J	1.	UJ
7440-02-0	Nickel	12.8	J	10.3	UJ	10.3	U	10.3	U	10.3	U	10.3	U
7440-09-7	Potassium	180000.		217000.		143000.		236000.		199000.		190000.	
7440-22-4	Silver	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U
7440-23-5	Sodium	5100000.		6230000.		6630000.		6720000.		5040000.		6520000.	
7440-28-0	Thallium	1.	U	5.	UJ	10.	U	10.	U	10.	U	5.8	UJ
7440-36-0	Antimony	16.	U	16.	U	16.	U	16.	U	16.	U	16.	U
7440-38-2	Arsenic	0.8	U	3.8	U	2.6	J	0.87	U	8.2	J	3.8	U
7440-39-3	Barium	24.4	U	59.8	J	48.3	J	60.7	U	95.7	J	84.7	J
7440-41-7	Beryllium	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-43-9	Cadmium	2.1	U	2.6	J	2.1	U	2.1	U	2.1	U	2.1	U
7440-48-4	Cobalt	2.4	U	2.4	UJ	2.6	J	2.4	U	3.	J	2.4	U
7440-50-8	Copper	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U
7440-62-2	Vanadium	3.7	J	5.3	U	6.8	J	3.1	U	10.3	U	4.4	UJ
7440-66-6	Zinc	3.5	U	3.5	U	3.5	U	3.5	U	61.9		35.	U
7782-49-2	Selenium	0.9	J	3.3	UJ	0.9	UJ	0.9	J	0.9	UJ	3.3	UJ
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	UJ
7439-95-4	Magnesium	629000.		751000.		874000.		943000.		672000.		852000.	
7439-96-5	Manganese	109.		0.65	U	132.		462.		12.2		126.	
7440-70-2	Calcium	95800.		162000.		213000.		145000.		150000.		203000.	
7440-47-3	Chromium	4.3	U	4.3	U	4.3	U	4.3	U	7.4	J	4.3	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SV846-META		SAMPLE ID ----->	GDH-G-W08D-01	GDH-G-W09D-01	GDH-G-W10D-01	GDH-G-W11D-01			
		ORIGINAL ID ----->	GDHGW08D01	GDHGW09D01	GDHGW10D01	GDHGW11D01			
		LAB SAMPLE ID ---->	42136-007	42316-019	42607-003	42593-004			
		ID FROM REPORT -->	GDHGW08D01	GDHGW09D01	GDHGW10D01	GDHGW11D01			
		SAMPLE DATE ----->	11/09/94	11/21/94	12/16/94	12/15/94			
		DATE EXTRACTED -->	11/14/94	12/02/94	12/20/94	12/20/94			
		DATE ANALYZED -->	11/17/94	12/07/94	12/21/94	12/21/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	CHS25	VAL	CHS26	VAL	CHS27	VAL	CHS27	VAL
7429-90-5	Aluminum	14.	U	151.	U	105.		207.	
7439-89-6	Iron	271.	U	2640.	J	2980.		6470.	
7439-92-1	Lead	2.3	U	2.9	J	1.	UJ	1.	UJ
7440-02-0	Nickel	10.3	U	10.3	U	10.3	U	10.3	U
7440-09-7	Potassium	205000.		211000.		192000.		193000.	
7440-22-4	Silver	3.4	U	3.4	U	3.4	U	3.4	U
7440-23-5	Sodium	6230000.		6350000.		5570000.		5980000.	
7440-28-0	Thallium	5.6	J	2.	U	5.8	UJ	5.8	UJ
7440-36-0	Antimony	16.	U	16.	U	16.	U	16.	U
7440-38-2	Arsenic	0.8	U	2.2	J	3.8	U	3.8	U
7440-39-3	Barium	66.5	U	30.1	J	39.4	U	40.6	U
7440-41-7	Beryllium	0.3	U	0.3	U	0.3	U	0.3	U
7440-43-9	Cadmium	2.1	U	2.1	U	2.1	U	2.1	U
7440-48-4	Cobalt	2.4	U	2.4	U	2.4	U	2.4	U
7440-50-8	Copper	3.3	U	3.3	U	13.8	U	17.	U
7440-62-2	Vanadium	4.1	J	4.	U	3.1	U	3.1	U
7440-66-6	Zinc	3.5	U	3.5	U	40.7	U	50.7	U
7782-49-2	Selenium	0.9	U	0.9	J	3.3	UJ	3.3	UJ
7439-97-6	Mercury	0.1	U	0.1	U	0.1	J	0.1	U
7439-95-4	Magnesium	789000.		927000.		692000.		688000.	
7439-96-5	Manganese	355.		185.		446.		281.	
7440-70-2	Calcium	171000.		112000.		92900.		103000.	
7440-47-3	Chromium	4.3	U	4.3	U	4.3	U	4.3	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-G-W001-01	GDH-G-W002-01	GDH-G-W003-01	GDH-G-W004-01	GDH-G-W005-01	GDH-G-W006-01					
		ORIGINAL ID ----->	GDHGW00101	GDHGW00201	GDHGW00301	GDHGW00401	GDHGW00501	GDHGW00601					
		LAB SAMPLE ID ---->	42057-004	42084-004	42029-015	42288-004	42096-001	42278-007					
		ID FROM REPORT -->	GDHGW00101	GDHGW00201	110207	GDHGW00401	GDHGW00501	GDHGW00601					
		SAMPLE DATE ----->	11/03/94	11/04/94	11/01/94	11/17/94	11/07/94	11/18/94					
		DATE EXTRACTED -->	11/07/94	11/11/94	11/07/94	11/22/94	11/14/94	11/22/94					
		DATE ANALYZED ---->	11/29/94	12/01/94	11/24/94	12/02/94	11/29/94	12/02/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL
11097-69-1	Aroclor-1254	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
11104-28-2	Aroclor-1221	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
11141-16-5	Aroclor-1232	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
12672-29-6	Aroclor-1248	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
11096-82-5	Aroclor-1260	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
12674-11-2	Aroclor-1016	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
53469-21-9	Aroclor-1242	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
1024-57-3	Heptachlor epoxide	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
1031-07-8	Endosulfan sulfate	0.1	U	1.	UJ	0.1	U	0.1	U	0.1	U	0.1	U
309-00-2	Aldrin	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
319-84-6	alpha-BHC	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
319-85-7	beta-BHC	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
319-86-8	delta-BHC	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
33213-65-9	Endosulfan 11	0.1	U	1.	UJ	0.1	U	0.1	U	0.1	U	0.1	U
50-29-3	4,4'-DDT	0.1	U	1.	UJ	0.1	U	0.1	U	0.1	U	0.1	U
5103-71-9	alpha-Chlordane	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
5103-74-2	gamma-Chlordane	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
53494-70-5	Endrin ketone	0.1	U	1.	UJ	0.1	U	0.1	U	0.1	U	0.1	U
58-89-9	gamma-BHC (Lindane)	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
60-57-1	Dieldrin	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
72-20-8	Endrin	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
72-43-5	Methoxychlor	0.6	U	5.	UJ	0.5	U	0.5	U	0.5	U	0.5	U
72-54-8	4,4'-DDD	0.1	U	1.	UJ	0.1	U	0.1	U	0.1	U	0.1	U
72-55-9	4,4'-DDE	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
7421-93-4	Endrin aldehyde	0.1	U	1.	UJ	0.1	U	0.1	U	0.1	U	0.1	U
76-44-8	Heptachlor	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
8001-35-2	Toxaphene	2.	U	20.	UJ	2.	U	2.	U	2.	U	2.	U
959-98-8	Endosulfan 1	0.06	U	0.5	UJ	0.05	U	0.05	U	0.05	U	0.05	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-G-W007-01	GDH-G-W008-01	GDH-G-W009-01	GDH-G-W010-01	GDH-G-W011-01 RE	GDH-G-W010-01					
		ORIGINAL ID ----->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW01001					
		LAB SAMPLE ID ---->	42393-001	42140-002	42316-012	42316-014	42316-011RE	42057-005					
		ID FROM REPORT -->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW01001					
		SAMPLE DATE ----->	11/29/94	11/08/94	11/21/94	11/21/94	11/21/94	11/03/94					
		DATE EXTRACTED -->	12/01/94	11/14/94	11/28/94	11/30/94	12/09/94	11/07/94					
		DATE ANALYZED ---->	12/12/94	11/29/94	12/07/94	12/12/94	12/13/94	11/29/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS26	VAL	CHS26	VAL	CHS25	VAL
11097-69-1	Aroclor-1254	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
11104-28-2	Aroclor-1221	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
11141-16-5	Aroclor-1232	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
12672-29-6	Aroclor-1248	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
11096-82-5	Aroclor-1260	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
12674-11-2	Aroclor-1016	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
53469-21-9	Aroclor-1242	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
1024-57-3	Heptachlor epoxide	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
1031-07-8	Endosulfan sulfate	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
309-00-2	Aldrin	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
319-84-6	alpha-BHC	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
319-85-7	beta-BHC	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
319-86-8	delta-BHC	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
33213-65-9	Endosulfan II	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
50-29-3	4,4'-DDT	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
5103-71-9	alpha-Chlordane	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
5103-74-2	gamma-Chlordane	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
53494-70-5	Endrin ketone	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
58-89-9	gamma-BHC (Lindane)	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
60-57-1	Dieldrin	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
72-20-8	Endrin	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
72-43-5	Methoxychlor	0.5	U	0.6	U	0.6	U	0.5	U	0.6	U	0.5	U
72-54-8	4,4'-DDD	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
72-55-9	4,4'-DDE	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
7421-93-4	Endrin aldehyde	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
76-44-8	Heptachlor	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
8001-35-2	Toxaphene	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
959-98-8	Endosulfan I	0.05	U	0.06	U	0.06	U	0.05	U	0.06	U	0.05	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-G-W02D-01	GDH-G-W03D-01	GDH-G-W04D-01	GDH-G-W05D-01	GDH-G-W06D-01	GDH-G-W07D-01					
		ORIGINAL ID ----->	GDHGW02D01	GDHGW03D01	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		LAB SAMPLE ID ---->	42086-005	42029-014	42288-005	42096-002	42278-008	42614-002					
		ID FROM REPORT -->	GDHGW02D01	110206	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		SAMPLE DATE ----->	11/05/94	11/01/94	11/17/94	11/07/94	11/18/94	12/19/94					
		DATE EXTRACTED -->	11/12/94	11/07/94	11/22/94	11/14/94	11/22/94	12/22/94					
		DATE ANALYZED -->	11/29/94	11/29/94	12/02/94	11/29/94	12/02/94	12/29/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS27	VAL
11097-69-1	Aroclor-1254	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
11104-28-2	Aroclor-1221	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
11141-16-5	Aroclor-1232	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
12672-29-6	Aroclor-1248	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
11096-82-5	Aroclor-1260	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
12674-11-2	Aroclor-1016	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
53469-21-9	Aroclor-1242	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
1024-57-3	Heptachlor epoxide	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
1031-07-8	Endosulfan sulfate	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
309-00-2	Aldrin	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
319-84-6	alpha-BHC	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
319-85-7	beta-BHC	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
319-86-8	delta-BHC	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
33213-65-9	Endosulfan II	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
50-29-3	4,4'-DDT	0.06	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
5103-71-9	alpha-Chlordane	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
5103-74-2	gamma-Chlordane	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
53494-70-5	Endrin ketone	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
58-89-9	gamma-BHC (Lindane)	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
60-57-1	Dieldrin	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
72-20-8	Endrin	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
72-43-5	Methoxychlor	0.5	U	0.5	U	0.6	U	0.5	U	0.6	U	0.6	U
72-54-8	4,4'-DDD	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
72-55-9	4,4'-DDE	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
7421-93-4	Endrin aldehyde	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
76-44-8	Heptachlor	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
8001-35-2	Toxaphene	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
959-98-8	Endosulfan I	0.05	U	0.05	U	0.06	U	0.05	U	0.06	U	0.06	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-G-W080-01	GDH-G-W090-01	GDH-G-W100-01	GDH-G-W110-01			
		ORIGINAL ID ----->	GDHGW08D01	GDHGW09D01	GDHGW10D01	GDHGW11D01			
		LAB SAMPLE ID ---->	42136-005	42316-013	42607-002	42593-003			
		ID FROM REPORT --->	GDHGW08D01	GDHGW09D01	GDHGW10D01	GDHGW11D01			
		SAMPLE DATE ----->	11/09/94	11/21/94	12/16/94	12/15/94			
		DATE EXTRACTED --->	11/14/94	11/30/94	12/22/94	12/22/94			
		DATE ANALYZED ---->	11/30/94	12/12/94	12/29/94	12/29/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	CHS25	VAL	CHS26	VAL	CHS27	VAL	CHS27	VAL
11097-69-1	Aroclor-1254	0.6	U	0.6	U	0.5	U	0.5	U
11104-28-2	Aroclor-1221	0.6	U	0.6	U	0.5	U	0.5	U
11141-16-5	Aroclor-1232	0.6	U	0.6	U	0.5	U	0.5	U
12672-29-6	Aroclor-1248	0.6	U	0.6	U	0.5	U	0.5	U
11096-82-5	Aroclor-1260	0.6	U	0.6	U	0.5	U	0.5	U
12674-11-2	Aroclor-1016	0.6	U	0.6	U	0.5	U	0.5	U
53469-21-9	Aroclor-1242	0.6	U	0.6	U	0.5	U	0.5	U
1024-57-3	Heptachlor epoxide	0.06	U	0.06	U	0.05	U	0.05	U
1031-07-8	Endosulfan sulfate	0.1	U	0.1	U	0.1	U	0.1	U
309-00-2	Aldrin	0.06	U	0.06	U	0.05	U	0.05	U
319-84-6	alpha-BHC	0.06	U	0.06	U	0.05	U	0.05	U
319-85-7	beta-BHC	0.06	U	0.06	U	0.05	U	0.05	U
319-86-8	delta-BHC	0.06	U	0.06	U	0.05	U	0.05	U
33213-65-9	Endosulfan II	0.1	U	0.1	U	0.1	U	0.1	U
50-29-3	4,4'-DDT	0.1	U	0.1	U	0.1	U	0.1	U
5103-71-9	alpha-Chlordane	0.06	U	0.06	U	0.05	U	0.05	U
5103-74-2	gamma-Chlordane	0.06	U	0.06	U	0.05	U	0.05	U
53494-70-5	Endrin ketone	0.1	U	0.1	U	0.1	U	0.1	U
58-89-9	gamma-BHC (Lindane)	0.06	U	0.06	U	0.05	U	0.05	U
60-57-1	Dieldrin	0.06	U	0.06	U	0.05	U	0.05	U
72-20-8	Endrin	0.06	U	0.06	U	0.05	U	0.05	U
72-43-5	Methoxychlor	0.6	U	0.6	U	0.5	U	0.5	U
72-54-8	4,4'-DDD	0.1	U	0.1	U	0.1	U	0.1	U
72-55-9	4,4'-DDE	0.06	U	0.06	U	0.05	U	0.05	U
7421-93-4	Endrin aldehyde	0.1	U	0.1	U	0.1	U	0.1	U
76-44-8	Heptachlor	0.06	U	0.06	U	0.05	U	0.05	U
8001-35-2	Toxaphene	2.	U	2.	U	2.	U	2.	U
959-98-8	Endosulfan I	0.06	U	0.06	U	0.05	U	0.05	U
57-74-9	Chlordane	NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-G-W001-01 RE	GDH-G-W002-01	GDH-G-W003-01	GDH-G-W004-01	GDH-G-W005-01	GDH-G-W006-01					
		ORIGINAL ID ----->	GDHGW00101RE	GDHGW00201	GDHGW00301	GDHGW00401	GDHGW00501	GDHGW00601					
		LAB SAMPLE ID ---->	42057-004	42084-004	42029-015	42288-004	42096-001	42278-007					
		ID FROM REPORT -->	GDHGW00101RE	GDHGW00201	110207	GDHGW00401	GDHGW00501	GDHGW00601					
		SAMPLE DATE ----->	11/03/94	11/04/94	11/01/94	11/17/94	11/07/94	11/18/94					
		DATE EXTRACTED -->	11/10/94	11/10/94	11/08/94	11/23/94	11/14/94	11/23/94					
		DATE ANALYZED ---->	11/15/94	11/15/94	11/10/94	11/30/94	11/22/94	11/30/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL
62-75-9	N-Nitrosodimethylamine	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
606-20-2	2,6-Dinitrotoluene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
108-95-2	Phenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
99-09-2	3-Nitroaniline	58.	U	54.	U	52.	U	53.	U	54.	U	56.	U
62-53-3	Aniline	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
83-32-9	Acenaphthene	12.	U	11.	U	10.	U	3.8	J	11.	U	11.	U
111-44-4	bis(2-Chloroethyl)ether	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
51-28-5	2,4-Dinitrophenol	58.	U	54.	U	52.	U	53.	U	54.	U	56.	U
95-57-8	2-Chlorophenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
100-02-7	4-Nitrophenol	58.	UJ	54.	UJ	52.	U	53.	U	54.	U	56.	U
541-73-1	1,3-Dichlorobenzene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
132-64-9	Dibenzofuran	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
106-46-7	1,4-Dichlorobenzene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
121-14-2	2,4-Dinitrotoluene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
100-51-6	Benzyl alcohol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
84-66-2	Diethylphthalate	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
95-50-1	1,2-Dichlorobenzene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
7005-72-3	4-Chlorophenylphenylether	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
95-48-7	2-Methylphenol (o-Cresol)	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
86-73-7	Fluorene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
100-01-6	4-Nitroaniline	58.	U	54.	U	52.	U	53.	U	54.	U	56.	U
106-44-5	4-Methylphenol (p-Cresol)	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	58.	U	54.	U	52.	U	53.	U	54.	U	56.	U
621-64-7	N-Nitroso-di-n-propylamine	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
86-30-6	N-Nitrosodiphenylamine	12.	UJ	11.	UJ	10.	U	11.	U	11.	U	11.	U
67-72-1	Hexachloroethane	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
101-55-3	4-Bromophenylphenylether	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
98-95-3	Nitrobenzene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
118-74-1	Hexachlorobenzene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
78-59-1	Isophorone	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
87-86-5	Pentachlorophenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
88-75-5	2-Nitrophenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
85-01-8	Phenanthrene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
105-67-9	2,4-Dimethylphenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
120-12-7	Anthracene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-G-W001-01 RE	GDH-G-W002-01	GDH-G-W003-01	GDH-G-W004-01	GDH-G-W005-01	GDH-G-W006-01					
		ORIGINAL ID ----->	GDHW00101RE	GDHW00201	GDHW00301	GDHW00401	GDHW00501	GDHW00601					
		LAB SAMPLE ID --->	42057-004	42084-004	42029-015	42288-004	42096-001	42278-007					
		ID FROM REPORT -->	GDHW00101RE	GDHW00201	110207	GDHW00401	GDHW00501	GDHW00601					
		SAMPLE DATE ----->	11/03/94	11/04/94	11/01/94	11/17/94	11/07/94	11/18/94					
		DATE EXTRACTED -->	11/10/94	11/10/94	11/08/94	11/23/94	11/14/94	11/23/94					
		DATE ANALYZED --->	11/15/94	11/15/94	11/10/94	11/30/94	11/22/94	11/30/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL
65-85-0	Benzoic acid	58.	UJ	54.	UJ	52.	UJ	53.	U	54.	U	56.	U
84-74-2	Di-n-butylphthalate	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
111-91-1	bis(2-Chloroethoxy)methane	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
206-44-0	Fluoranthene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
120-83-2	2,4-Dichlorophenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
92-87-5	Benzidine	58.	UJ	54.	UJ	52.	UJ	53.	U	54.	U	56.	U
120-82-1	1,2,4-Trichlorobenzene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
129-00-0	Pyrene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
91-20-3	Naphthalene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
85-68-7	Butylbenzylphthalate	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
106-47-8	4-Chloroaniline	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
91-94-1	3,3'-Dichlorobenzidine	23.	U	22.	U	21.	U	21.	U	22.	U	22.	U
87-68-3	Hexachlorobutadiene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
56-55-3	Benzo(a)anthracene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
59-50-7	4-Chloro-3-methylphenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
218-01-9	Chrysene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
91-57-6	2-Methylnaphthalene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
77-47-4	Hexachlorocyclopentadiene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
117-84-0	Di-n-octylphthalate	12.	U	11.	U	10.	UJ	11.	U	11.	U	11.	U
88-06-2	2,4,6-Trichlorophenol	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
205-99-2	Benzo(b)fluoranthene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
95-95-4	2,4,5-Trichlorophenol	58.	U	54.	U	52.	U	53.	U	54.	U	56.	U
207-08-9	Benzo(k)fluoranthene	12.	U	11.	U	10.	UJ	11.	U	11.	U	11.	U
91-58-7	2-Chloronaphthalene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
50-32-8	Benzo(a)pyrene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
88-74-4	2-Nitroaniline	58.	U	54.	U	52.	U	53.	U	54.	U	56.	U
193-39-5	Indeno(1,2,3-cd)pyrene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
131-11-3	Dimethylphthalate	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
53-70-3	Dibenzo(a,h)anthracene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
208-96-8	Acenaphthylene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
191-24-2	Benzo(g,h,i)perylene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U
103-33-3	Azobenzene	12.	U	11.	U	10.	U	11.	U	11.	U	11.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SUB46-SV0A		SAMPLE ID ----->	GDH-G-W007-01	GDH-G-W008-01	GDH-G-W009-01	GDH-G-W010-01	GDH-G-W011-01	GDH-G-W01D-01					
		ORIGINAL ID ----->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW01D01					
		LAB SAMPLE ID ---->	42393-001	42140-002	42316-012	42316-014	42316-011	42057-005					
		ID FROM REPORT -->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW01D01					
		SAMPLE DATE ----->	11/29/94	11/08/94	11/21/94	11/21/94	11/21/94	11/03/94					
		DATE EXTRACTED -->	12/02/94	11/12/94	11/28/94	11/30/94	11/28/94	11/09/94					
		DATE ANALYZED --->	12/09/94	11/15/94	12/07/94	12/07/94	12/07/94	11/14/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS26	VAL	CHS26	VAL	CHS25	VAL
62-75-9	N-Nitrosodimethylamine	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
606-20-2	2,6-Dinitrotoluene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
108-95-2	Phenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
99-09-2	3-Nitroaniline	62.	U	59.	U	60.	U	54.	UJ	57.	U	50.	U
62-53-3	Aniline	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
83-32-9	Acenaphthene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
51-28-5	2,4-Dinitrophenol	62.	U	59.	U	60.	U	54.	UJ	57.	U	50.	U
95-57-8	2-Chlorophenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
100-02-7	4-Nitrophenol	62.	U	59.	UJ	60.	U	54.	UJ	57.	U	50.	U
541-73-1	1,3-Dichlorobenzene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
132-64-9	Dibenzofuran	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
106-46-7	1,4-Dichlorobenzene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
121-14-2	2,4-Dinitrotoluene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
100-51-6	Benzyl alcohol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
84-66-2	Diethylphthalate	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
95-50-1	1,2-Dichlorobenzene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
7005-72-3	4-Chlorophenylphenylether	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
86-73-7	Fluorene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
100-01-6	4-Nitroaniline	62.	U	59.	U	60.	U	54.	UJ	57.	U	50.	U
106-44-5	4-Methylphenol (p-Cresol)	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	62.	U	59.	U	60.	U	54.	UJ	57.	U	50.	U
621-64-7	N-Nitroso-di-n-propylamine	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
86-30-6	N-Nitrosodiphenylamine	12.	U	12.	UJ	12.	U	11.	UJ	11.	U	10.	U
67-72-1	Hexachloroethane	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
101-55-3	4-Bromophenylphenylether	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
98-95-3	Nitrobenzene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
118-74-1	Hexachlorobenzene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
78-59-1	Isophorone	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
87-86-5	Pentachlorophenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
88-75-5	2-Nitrophenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
85-01-8	Phenanthrene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
105-67-9	2,4-Dimethylphenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
120-12-7	Anthracene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-G-W007-01	GDH-G-W008-01	GDH-G-W009-01	GDH-G-W010-01	GDH-G-W011-01	GDH-G-W01D-01					
		ORIGINAL ID ----->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW1001					
		LAB SAMPLE ID --->	42393-001	42140-002	42316-012	42316-014	42316-011	42057-005					
		ID FROM REPORT -->	GDHGW00701	GDHGW00801	GDHGW00901	GDHGW01001	GDHGW01101	GDHGW1001					
		SAMPLE DATE ----->	11/29/94	11/08/94	11/21/94	11/21/94	11/21/94	11/03/94					
		DATE EXTRACTED -->	12/02/94	11/12/94	11/28/94	11/30/94	11/28/94	11/09/94					
		DATE ANALYZED ---->	12/09/94	11/15/94	12/07/94	12/07/94	12/07/94	11/14/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS26	VAL	CHS26	VAL	CHS25	VAL
65-85-0	Benzoic acid	62.	U	59.	UJ	60.	U	54.	UJ	57.	U	50.	U
84-74-2	Di-n-butylphthalate	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
111-91-1	bis(2-Chloroethoxy)methane	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
206-44-0	Fluoranthene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
120-83-2	2,4-Dichlorophenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
92-87-5	Benzidine	62.	U	59.	UJ	60.	U	54.	UJ	57.	U	50.	U
120-82-1	1,2,4-Trichlorobenzene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
129-00-0	Pyrene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
91-20-3	Naphthalene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
85-68-7	Butylbenzylphthalate	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
106-47-8	4-Chloroaniline	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	25.	U	24.	U	24.	U	22.	UJ	23.	U	20.	U
87-68-3	Hexachlorobutadiene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
56-55-3	Benzo(a)anthracene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
218-01-9	Chrysene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
91-57-6	2-Methylnaphthalene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
117-84-0	Di-n-octylphthalate	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
88-06-2	2,4,6-Trichlorophenol	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
205-99-2	Benzo(b)fluoranthene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	62.	U	59.	U	60.	U	54.	UJ	57.	U	50.	U
207-08-9	Benzo(k)fluoranthene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
91-58-7	2-Chloronaphthalene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
50-32-8	Benzo(a)pyrene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
88-74-4	2-Nitroaniline	62.	U	59.	U	60.	U	54.	UJ	57.	U	50.	U
193-39-5	Indeno(1,2,3-cd)pyrene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
131-11-3	Dimethylphthalate	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
53-70-3	Dibenzo(a,h)anthracene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
208-96-8	Acenaphthylene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U
103-33-3	Azobenzene	12.	U	12.	U	12.	U	11.	UJ	11.	U	10.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-SV0A		SAMPLE ID ----->	GDH-G-W02D-01	GDH-G-W03D-01	GDH-G-W04D-01	GDH-G-W05D-01	GDH-G-W06D-01	GDH-G-W07D-01					
		ORIGINAL ID ----->	GDHG02D01	GDHG03D01	GDHG04D01	GDHG05D01	GDHG06D01	GDHG07D01					
		LAB SAMPLE ID ---->	42086-005	42029-014	42288-005	42096-002	42278-008	42614-002					
		ID FROM REPORT -->	GDHG02D01	110206	GDHG04D01	GDHG05D01	GDHG06D01	GDHG07D01					
		SAMPLE DATE ----->	11/05/94	11/01/94	11/17/94	11/07/94	11/18/94	12/19/94					
		DATE EXTRACTED -->	11/10/94	11/04/94	11/23/94	11/14/94	11/23/94	12/22/94					
		DATE ANALYZED ---->	11/22/94	11/10/94	11/30/94	11/22/94	11/30/94	12/30/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS27	VAL
62-75-9	N-Nitrosodimethylamine	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
606-20-2	2,6-Dinitrotoluene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
108-95-2	Phenol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
99-09-2	3-Nitroaniline	53.	U	52.	U	56.	U	53.	U	56.	U	54.	U
62-53-3	Aniline	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
83-32-9	Acenaphthene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
111-44-4	bis(2-Chloroethyl)ether	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
51-28-5	2,4-Dinitrophenol	53.	U	52.	U	56.	U	53.	U	56.	U	54.	U
95-57-8	2-Chlorophenol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
100-02-7	4-Nitrophenol	53.	U	52.	U	56.	U	53.	U	56.	U	54.	U
541-73-1	1,3-Dichlorobenzene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
132-64-9	Dibenzofuran	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
106-46-7	1,4-Dichlorobenzene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
121-14-2	2,4-Dinitrotoluene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
100-51-6	Benzyl alcohol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
84-66-2	Diethylphthalate	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
95-50-1	1,2-Dichlorobenzene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
7005-72-3	4-Chlorophenylphenylether	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
95-48-7	2-Methylphenol (o-Cresol)	11.	U	10.	U	20.	U	11.	U	11.	U	11.	U
86-73-7	Fluorene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
100-01-6	4-Nitroaniline	53.	U	52.	U	56.	U	53.	U	56.	U	54.	U
106-44-5	4-Methylphenol (p-Cresol)	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	53.	U	52.	U	56.	U	53.	U	56.	U	54.	U
621-64-7	N-Nitroso-di-n-propylamine	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
86-30-6	N-Nitrosodiphenylamine	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
67-72-1	Hexachloroethane	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
101-55-3	4-Bromophenylphenylether	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
98-95-3	Nitrobenzene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
118-74-1	Hexachlorobenzene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
78-59-1	Isophorone	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
87-86-5	Pentachlorophenol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
88-75-5	2-Nitrophenol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
85-01-8	Phenanthrene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
105-67-9	2,4-Dimethylphenol	11.	U	10.	U	15.	U	11.	U	11.	U	11.	U
120-12-7	Anthracene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-G-W02D-01	GDH-G-W03D-01	GDH-G-W04D-01	GDH-G-W05D-01	GDH-G-W06D-01	GDH-G-W07D-01					
		ORIGINAL ID ----->	GDHGW02D01	GDHGW03D01	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		LAB SAMPLE ID ---->	42086-005	42029-014	42288-005	42096-002	42278-008	42614-002					
		ID FROM REPORT -->	GDHGW02D01	110206	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		SAMPLE DATE ----->	11/05/94	11/01/94	11/17/94	11/07/94	11/18/94	12/19/94					
		DATE EXTRACTED -->	11/10/94	11/04/94	11/23/94	11/14/94	11/23/94	12/22/94					
		DATE ANALYZED ---->	11/22/94	11/10/94	11/30/94	11/22/94	11/30/94	12/30/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS27	VAL
65-85-0	Benzoic acid	53.	U	52.	UJ	56.	U	53.	U	56.	U	54.	UJ
84-74-2	Di-n-butylphthalate	11.	U	10.	U	2.6	J	11.	U	11.	U	11.	U
111-91-1	bis(2-Chloroethoxy)methane	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
206-44-0	Fluoranthene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
120-83-2	2,4-Dichlorophenol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
92-87-5	Benidine	53.	U	52.	UJ	56.	U	53.	U	56.	U	54.	UJ
120-82-1	1,2,4-Trichlorobenzene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
129-00-0	Pyrene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
91-20-3	Naphthalene	11.	U	10.	U	17.	U	11.	U	11.	U	11.	U
85-68-7	Butylbenzylphthalate	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
106-47-8	4-Chloroaniline	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
91-94-1	3,3'-Dichlorobenzidine	21.	U	21.	U	22.	U	21.	U	22.	U	22.	U
87-68-3	Hexachlorobutadiene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
56-55-3	Benzo(a)anthracene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
59-50-7	4-Chloro-3-methylphenol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
218-01-9	Chrysene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
91-57-6	2-Methylnaphthalene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	11.	U	10.	U	11.	U	11.	U	3.9	J	11.	U
77-47-4	Hexachlorocyclopentadiene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
117-84-0	Di-n-octylphthalate	11.	U	10.	UJ	11.	U	11.	U	11.	U	11.	U
88-06-2	2,4,6-Trichlorophenol	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
205-99-2	Benzo(b)fluoranthene	11.	U	10.	UJ	11.	U	11.	U	11.	U	11.	U
95-95-4	2,4,5-Trichlorophenol	53.	U	52.	U	56.	U	53.	U	56.	U	54.	U
207-08-9	Benzo(k)fluoranthene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	UJ
91-58-7	2-Chloronaphthalene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
50-32-8	Benzo(a)pyrene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
88-74-4	2-Nitroaniline	53.	U	52.	U	56.	U	53.	U	56.	U	54.	U
193-39-5	Indeno(1,2,3-cd)pyrene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
131-11-3	Dimethylphthalate	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
53-70-3	Dibenzo(a,h)anthracene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
208-96-8	Acenaphthylene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
191-24-2	Benzo(g,h,i)perylene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U
103-33-3	Azobenzene	11.	U	10.	U	11.	U	11.	U	11.	U	11.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SWS46-SVDA		SAMPLE ID ----->	GDH-G-W080-01	GDH-G-W100-01	GDH-G-W110-01			
		ORIGINAL ID ----->	GDHGW08001	GDHGW10001	GDHGW11001			
		LAB SAMPLE ID ---->	42136-005	42607-002	42593-003			
		ID FROM REPORT -->	GDHGW08001	GDHGW10001	GDHGW11001			
		SAMPLE DATE ----->	11/09/94	12/16/94	12/15/94			
		DATE EXTRACTED -->	11/14/94	12/22/94	12/19/94			
		DATE ANALYZED ---->	11/28/94	01/03/95	12/30/94			
		MATRIX ----->	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L			
CAS #	Parameter	CHS25	VAL	CHS27	VAL	CHS27	VAL	
62-75-9	N-Nitrosodimethylamine	11.	U	11.	U	11.	U	
606-20-2	2,6-Dinitrotoluene	11.	U	11.	U	11.	U	
108-95-2	Phenol	11.	U	11.	U	11.	U	
99-09-2	3-Nitroaniline	55.	U	54.	U	56.	U	
62-53-3	Aniline	11.	U	11.	U	11.	U	
83-32-9	Acenaphthene	11.	U	11.	U	11.	U	
111-44-4	bis(2-Chloroethyl)ether	11.	U	11.	U	11.	U	
51-28-5	2,4-Dinitrophenol	55.	U	54.	U	56.	U	
95-57-8	2-Chlorophenol	11.	U	11.	U	11.	U	
100-02-7	4-Nitrophenol	55.	U	54.	U	56.	U	
541-73-1	1,3-Dichlorobenzene	11.	U	11.	U	11.	U	
132-64-9	Dibenzofuran	11.	U	11.	U	11.	U	
106-46-7	1,4-Dichlorobenzene	11.	U	11.	U	11.	U	
121-14-2	2,4-Dinitrotoluene	11.	U	11.	U	11.	U	
100-51-6	Benzyl alcohol	11.	U	11.	U	11.	U	
84-66-2	Diethylphthalate	11.	U	11.	U	11.	U	
95-50-1	1,2-Dichlorobenzene	11.	U	11.	U	11.	U	
7005-72-3	4-Chlorophenylphenylether	11.	U	11.	UJ	11.	U	
95-48-7	2-Methylphenol (o-Cresol)	11.	U	11.	U	11.	U	
86-73-7	Fluorene	11.	U	11.	UJ	11.	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	11.	U	11.	U	11.	U	
100-01-6	4-Nitroaniline	55.	U	54.	U	56.	U	
106-44-5	4-Methylphenol (p-Cresol)	11.	U	11.	U	11.	U	
534-52-1	2-Methyl-4,6-Dinitrophenol	55.	U	54.	U	56.	U	
621-64-7	N-Nitroso-di-n-propylamine	11.	U	11.	U	11.	U	
86-30-6	N-Nitrosodiphenylamine	11.	U	11.	U	11.	U	
67-72-1	Hexachloroethane	11.	U	11.	U	11.	U	
101-55-3	4-Bromophenylphenylether	11.	U	11.	U	11.	U	
98-95-3	Nitrobenzene	11.	U	11.	U	11.	U	
118-74-1	Hexachlorobenzene	11.	U	11.	U	11.	U	
78-59-1	Isophorone	11.	U	11.	U	11.	U	
87-86-5	Pentachlorophenol	11.	U	11.	U	11.	U	
88-75-5	2-Nitrophenol	11.	U	11.	U	11.	U	
85-01-8	Phenanthrene	11.	U	11.	U	11.	U	
105-67-9	2,4-Dimethylphenol	11.	U	11.	U	11.	U	
120-12-7	Anthracene	11.	U	11.	U	11.	U	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-SVDA		SAMPLE ID ----->	GDH-G-W080-01	GDH-G-W100-01	GDH-G-W110-01			
		ORIGINAL ID ----->	GDHGW08D01	GDHGW10001	GDHGW110D1			
		LAB SAMPLE ID ---->	42136-005	42607-002	42593-003			
		ID FROM REPORT -->	GDHGW08D01	GDHGW10D01	GDHGW11D01			
		SAMPLE DATE ----->	11/09/94	12/16/94	12/15/94			
		DATE EXTRACTED -->	11/14/94	12/22/94	12/19/94			
		DATE ANALYZED ---->	11/28/94	01/03/95	12/30/94			
		MATRIX ----->	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L			
CAS #	Parameter	CHS25	VAL	CHS27	VAL	CHS27	VAL	
65-85-0	Benzoic acid	55.	UJ	54.	U	56.	UJ	
84-74-2	Di-n-butylphthalate	11.	U	11.	U	11.	U	
111-91-1	bis(2-Chloroethoxy)methane	11.	U	11.	U	11.	U	
206-44-0	Fluoranthene	11.	U	11.	U	11.	U	
120-83-2	2,4-Dichlorophenol	11.	U	11.	U	11.	U	
92-87-5	Benzidine	55.	U	54.	UJ	56.	UJ	
120-82-1	1,2,4-Trichlorobenzene	11.	U	11.	U	11.	U	
129-00-0	Pyrene	11.	U	11.	U	11.	U	
91-20-3	Naphthalene	11.	U	11.	U	11.	U	
85-68-7	Butylbenzylphthalate	11.	U	11.	U	11.	U	
106-47-8	4-Chloroaniline	11.	U	11.	U	11.	U	
91-94-1	3,3'-Dichlorobenzidine	22.	U	22.	U	22.	U	
87-68-3	Hexachlorobutadiene	11.	U	11.	U	11.	U	
56-55-3	Benzo(a)anthracene	11.	U	11.	U	11.	U	
59-50-7	4-Chloro-3-methylphenol	11.	U	11.	U	11.	U	
218-01-9	Chrysene	11.	U	11.	U	11.	U	
91-57-6	2-Methylnaphthalene	11.	U	11.	U	11.	U	
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	11.	U	11.	U	11.	U	
77-47-4	Hexachlorocyclopentadiene	11.	U	11.	U	11.	U	
117-84-0	Di-n-octylphthalate	11.	U	11.	U	11.	U	
88-06-2	2,4,6-Trichlorophenol	11.	U	11.	U	11.	U	
205-99-2	Benzo(b)fluoranthene	11.	U	11.	U	11.	U	
95-95-4	2,4,5-Trichlorophenol	55.	U	54.	U	56.	U	
207-08-9	Benzo(k)fluoranthene	11.	U	11.	UJ	11.	UJ	
91-58-7	2-Chloronaphthalene	11.	U	11.	U	11.	U	
50-32-8	Benzo(a)pyrene	11.	U	11.	U	11.	U	
88-74-4	2-Nitroaniline	55.	U	54.	U	56.	U	
193-39-5	Indeno(1,2,3-cd)pyrene	11.	U	11.	U	11.	U	
131-11-3	Dimethylphthalate	11.	U	11.	U	11.	U	
53-70-3	Dibenzo(a,h)anthracene	11.	U	11.	U	11.	U	
208-96-8	Acenaphthylene	11.	U	11.	U	11.	U	
191-24-2	Benzo(g,h,i)perylene	11.	U	11.	U	11.	U	
103-33-3	Azobenzene	11.	U	11.	U	11.	U	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SU846-VOA		SAMPLE ID ----->	GDH-G-W001-01	GDH-G-W002-01	GDH-G-W003-01	GDH-G-W004-01	GDH-G-W005-01	GDH-G-W006-01					
		ORIGINAL ID ----->	GDHG00101	GDHG00201	GDHG00301	GDHG00401	GDHG00501	GDHG00601					
		LAB SAMPLE ID ---->	42057-001	42084-001	42029-007	42288-001	42096-010	42278-001					
		ID FROM REPORT -->	GDHG00101	GDHG00201	110207	GDHG00401	GDHG00501	GDHG00601					
		SAMPLE DATE ----->	11/03/94	11/04/94	11/01/94	11/17/94	11/07/94	11/18/94					
		DATE ANALYZED ---->	11/15/94	11/15/94	11/09/94	12/02/94	11/15/94	12/01/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL
100-41-4	Ethylbenzene	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ
100-42-5	Styrene	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	UJ	10.	U	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U
108-88-3	Toluene	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ
108-90-7	Chlorobenzene	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ
109-99-9	Tetrahydrofuran	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
591-78-6	2-Hexanone	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U
67-64-1	Acetone	25.	U	25.	U	25.	U	23.	J	25.	U	25.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	UJ	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	UJ	10.	UJ	10.	U	10.	U
75-00-3	Chloroethane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	UJ	10.	U	10.	U
75-09-2	Methylene chloride	5.	U	10.	U	10.	U	4.	UJ	10.	U	3.7	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
75-69-4	Trichlorofluoromethane	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
78-93-3	2-Butanone (MEK)	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U	25.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	UJ	5.	UJ	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	UJ	5.	U	5.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SUB46-VOA		SAMPLE ID ----->	GDH-G-W007-01	GDH-G-W008-01	GDH-G-W009-01	GDH-G-W010-01	GDH-G-W011-01	GDH-G-W010-01					
		ORIGINAL ID ----->	GDHG00701	GDHG00801	GDHG00901	GDHG01001	GDHG01101	GDHG01001					
		LAB SAMPLE ID ---->	42393-004	42140-010	42316-005	42316-007	42316-004	42057-003					
		ID FROM REPORT -->	GDHG00701	GDHG00801	GDHG00901	GDHG01001	GDHG01101	GDHG01001					
		SAMPLE DATE ----->	11/29/94	11/08/94	11/21/94	11/21/94	11/21/94	11/03/94					
		DATE ANALYZED -->	12/05/94	11/17/94	12/05/94	12/05/94	12/03/94	11/15/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS26	VAL	CHS26	VAL	CHS25	VAL
100-41-4	Ethylbenzene	5.	U	5.	U	5.	UJ	5.	UJ	5.	UJ	5.	U
100-42-5	Styrene	5.	U	5.	U	5.	UJ	5.	UJ	5.	UJ	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	25.	U	25.	UJ	25.	U	25.	U	25.	U	25.	UJ
108-88-3	Toluene	5.	U	5.	U	5.	UJ	5.	UJ	5.	UJ	5.	U
108-90-7	Chlorobenzene	5.	U	5.	U	5.	UJ	5.	UJ	5.	UJ	5.	U
109-99-9	Tetrahydrofuran	25.	U	25.	UJ	25.	U	25.	U	25.	U	25.	UJ
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	UJ	5.	UJ	5.	UJ	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
591-78-6	2-Hexanone	25.	U	25.	UJ	25.	U	25.	U	25.	U	25.	UJ
67-64-1	Acetone	25.	U	25.	UJ	25.	U	25.	U	25.	U	25.	U
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	U	5.	UJ	5.	UJ	5.	UJ	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	8.	U	8.	U	7.	U	5.	U	5.	U	6.	J
75-15-0	Carbon disulfide	5.	U	5.	UJ	5.	U	5.	U	7.	U	5.	U
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-69-4	Trichlorofluoromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	25.	U	25.	UJ	25.	U	25.	U	25.	U	25.	UJ
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	UJ	5.	U	5.	U	5.	U	5.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-VOA		SAMPLE ID ----->	GDH-G-W02D-01	GDH-G-W03D-01	GDH-G-W040-01	GDH-G-W050-01	GDH-G-W06D-01	GDH-G-W07D-01					
		ORIGINAL ID ----->	GDHGW02D01	GDHGW03D01	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		LAB SAMPLE ID ---->	42D86-002	42029-006	42288-002	42096-011	42278-002	42614-001					
		ID FROM REPORT -->	GDHGW02D01	110206	GDHGW04D01	GDHGW05D01	GDHGW06D01	GDHGW07D01					
		SAMPLE DATE ----->	11/05/94	11/01/94	11/17/94	11/07/94	11/18/94	12/19/94					
		DATE ANALYZED ---->	11/15/94	11/09/94	12/02/94	11/17/94	12/01/94	12/22/94					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS25	VAL	CHS24	VAL	CHS26	VAL	CHS25	VAL	CHS26	VAL	CHS27	VAL
100-41-4	Ethylbenzene	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ	5.	U
100-42-5	Styrene	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	UJ	10.	U	10.	U	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U	25.	U
108-88-3	Toluene	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ	5.	U
108-90-7	Chlorobenzene	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ	5.	U
109-99-9	Tetrahydrofuran	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U	25.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
591-78-6	2-Hexanone	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U	25.	U
67-64-1	Acetone	25.	UJ	25.	U	25.	UJ	25.	UJ	25.	U	25.	UJ
67-66-3	Chloroform	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	UJ	2.8	J	5.	U	5.	UJ	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	UJ	10.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	UJ	10.	UJ	10.	U	10.	U	10.	U
75-00-3	Chloroethane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	UJ	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	10.	U	10.	U	4.1	UJ	5.	U	4.8	U	10.	U
75-15-0	Carbon disulfide	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	UJ
75-25-2	Bromoform	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
75-69-4	Trichlorofluoromethane	5.	U	5.	UJ	5.	UJ	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	25.	UJ	25.	UJ	25.	UJ	25.	UJ	25.	U	25.	U
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	5.	U	5.	U	5.	UJ	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	UJ	5.	UJ	5.	U	5.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

SW846-VDA		SAMPLE ID ----->	GDH-G-W080-01	GDH-G-W090-01	GDH-G-W100-01	GDH-G-W110-01			
		ORIGINAL ID ----->	GDHW08001	GDHW09001	GDHW10001	GDHW11001			
		LAB SAMPLE ID ----->	42136-002	42316-006	42607-001	42593-001			
		ID FROM REPORT -->	GDHW08001	GDHW09001	GDHW10001	GDHW11001			
		SAMPLE DATE ----->	11/09/94	11/21/94	12/16/94	12/15/94			
		DATE ANALYZED -->	11/17/94	12/03/94	12/22/94	12/22/94			
		MATRIX ----->	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	CHS25	VAL	CHS26	VAL	CHS27	VAL	CHS27	VAL
100-41-4	Ethylbenzene	5.	U	5.	UJ	5.	U	5.	U
100-42-5	Styrene	5.	U	5.	UJ	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
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	25.	UJ	25.	U	25.	U	25.	U
108-88-3	Toluene	5.	U	5.	UJ	5.	U	5.	U
108-90-7	Chlorobenzene	5.	U	5.	UJ	5.	U	5.	U
109-99-9	Tetrahydrofuran	25.	UJ	25.	U	25.	U	25.	U
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U
1330-20-7	Xylene (Total)	5.	U	5.	UJ	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U
591-78-6	2-Hexanone	25.	UJ	25.	U	25.	U	25.	U
67-64-1	Acetone	25.	UJ	25.	U	25.	UJ	25.	UJ
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U
71-43-2	Benzene	5.	U	5.	UJ	5.	U	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	5.	U	5.	U	5.	U	5.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	6.	U	10.	U	10.	U	5.	J
75-15-0	Carbon disulfide	5.	UJ	5.	U	5.	UJ	5.	UJ
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	5.	U	5.	U	5.	U	5.	U
75-69-4	Trichlorofluoromethane	5.	U	5.	U	5.	U	5.	U
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U
78-93-3	2-Butanone (MEK)	25.	UJ	25.	U	25.	U	25.	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
79-34-5	1,1,2,2-Tetrachloroethane	5.	UJ	5.	U	5.	U	5.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR	

DATALCP3
12/14/95

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
Grid Sample Groundwater Analytical Data

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Time: 15:54

TPH		SAMPLE ID ----->	GDH-G-W003-01	GDH-G-W030-01				
		ORIGINAL ID ----->	GDHGW00301	GDHGW03001				
		LAB SAMPLE ID --->	42029-036	42029-035				
		ID FROM REPORT -->	110207	110206				
		SAMPLE DATE ----->	11/01/94	11/01/94				
		DATE EXTRACTED -->	11/04/94	11/04/94				
		DATE ANALYZED --->	11/07/94	11/07/94				
		MATRIX ----->	Water	Water				
		UNITS ----->	MG/L	MG/L				
CAS #	Parameter	CHS24	VAL	CHS24	VAL			
9999900-02-4	Petroleum Hydrocarbons, TPH	1.1	U	1.	U			
9999900-04-9	Miscellaneous Light Products	NR		NR				
9999900-08-3	Indeterminate Lubricating Oil	NR		NR				
9999900-06-1	Total Gasoline	NR		NR				
9999900-10-7	Heavy Products	NR		NR				
9999900-11-8	Indeterminate Diesel Fuel	NR		NR				

*** Validation Complete ***

Grid Locations (GDH)

2nd Quarter Analytical Data for Groundwater

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SWS46-HERB		SAMPLE ID ----->	GDH-G-W009-02				
		ORIGINAL ID ----->	GDHGM00902				
		LAB SAMPLE ID ---->	43632-006				
		ID FROM REPORT -->	GDHGM00902				
		SAMPLE DATE ----->	04/12/95				
		DATE EXTRACTED -->	04/19/95				
		DATE ANALYZED ---->	04/21/95				
		MATRIX ----->	Water				
		UNITS ----->	UG/L				
CAS #	Parameter	CRS42	VAL				
94-75-7	2,4-D	2.	U				
93-72-1	2,4,5-TP (Silvex)	2.	U				
93-76-5	2,4,5-T	2.	U				
75-99-0	Daeton	2.	U				
1918-00-9	Dicamba	2.	U				
120-36-5	Dichlorprop	2.	U				
94-02-6	2,4-DB	2.	U				
94-74-6	MCPA	100.	U				
93-65-2	MCPP	100.	U				
88-85-7	Dincoseb	2.	U				
19719-28-9	DCAA	86.					

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUB46-META		SAMPLE ID ----->	GDH-G-W001-02	GDH-G-W002-02	GDH-G-W003-02	GDH-G-W004-02	GDH-G-W005-02	GDH-G-W006-02					
		ORIGINAL ID ----->	GDHGW00102	GDHGW00202	GDHGW00302	GDHGW00402	GDHGW00502	GDHGW00602					
		LAB SAMPLE ID ---->	43601-009	43606-007	43412-003	43472-012	43606-005	43412-002					
		ID FROM REPORT -->	GDHGW00102	GDHGW00202	GDHGW00302	GDHGW00402	GDHGW00502	GDHGW00602					
		SAMPLE DATE ----->	04/10/95	04/11/95	03/28/95	03/31/95	04/11/95	03/28/95					
		DATE EXTRACTED -->	04/17/95	04/17/95	04/04/95	04/06/95	04/17/95	04/04/95					
		DATE ANALYZED ---->	04/18/95	04/18/95	04/04/95	04/06/95	04/18/95	04/04/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS42	VAL	CHS42	VAL	CHS38	VAL	CHS41	VAL	CHS42	VAL	CHS38	VAL
7429-90-5	Aluminum	60.2	U	491.		15.4	U	15.4	U	14.3	U	15.4	U
7440-36-0	Antimony	11.5	U	11.5	U	11.9	U	11.9	U	11.5	U	11.9	U
7440-38-2	Arsenic	8.9	UJ	3.7	UJ	24.8		2.6	U	10.8	UJ	7.3	
7440-39-3	Barium	4.4	UJ	16.6	UJ	8.1	J	10.9	J	31.3	UJ	0.8	U
7440-41-7	Beryllium	0.3	U	0.3	U	0.2	U	0.2	U	0.3	U	0.2	U
7440-43-9	Cadmium	1.2	U	1.2	U	1.4	U	1.4	U	1.2	U	1.4	U
7440-70-2	Calcium	159000.		198000.		144000.		90500.		198000.		250000.	
7440-47-3	Chromium	3.1	U	4.4	U	2.	U	2.	U	3.1	U	2.	U
7440-48-4	Cobalt	2.1	U	2.1	U	2.4	U	2.4	U	2.7	U	2.4	U
7440-50-8	Copper	2.9	UJ	2.9	UJ	5.6	U	5.6	U	2.9	UJ	5.6	U
7439-89-6	Iron	12500.		501.		22700.		466.		16400.		2040.	
7439-92-1	Lead	1.9	U	1.9	U	1.	U	1.8	U	1.9	U	1.	U
7439-95-4	Magnesium	34500.		978000.		56500.		46800.		243000.		29500.	
7439-96-5	Manganese	584.		16.6	J	1690.		91.4	J	1680.		612.	
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel	7.2	UJ	7.2	UJ	5.5	U	5.5	U	8.8	UJ	5.5	U
7440-09-7	Potassium	14200.		239000.		27200.		20400.		77800.		11800.	
7782-49-2	Selenium	2.8	U	2.7	U	3.5	U	5.	U	2.7	U	5.	
7440-22-4	Silver	2.	UJ	2.	UJ	1.9	U	1.9	U	2.	UJ	1.9	U
7440-23-5	Sodium	34200.		7330000.	J	575000.		56600.		1480000.		26800.	
7440-28-0	Thallium	3.3	U	3.5	U	3.7	U	3.7	UJ	3.3	U	3.7	U
7440-62-2	Vanadium	4.6	U	10.7	U	2.5	U	2.5	U	7.1	U	2.5	U
7440-66-6	Zinc	11.5	U	2.6	U	6.5	U	5.8	U	2.8	U	7.5	

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUBS-META		SAMPLE ID ----->	GDH-G-W007-02	GDH-H-W007-02	GDH-G-W008-02	GDH-G-W009-02	GDH-G-W010-02	GDH-G-W011-02			
		ORIGINAL ID ----->	GDHG00702	GDHH00702	GDHG00802	GDHG00902	GDHG01002	GDHG01102			
		LAB SAMPLE ID ---->	43472-010	43473-006	43519-006	43632-012	43656-002	43632-016			
		ID FROM REPORT -->	GDHG00702	GDHH00702	GDHG00802	GDHG00902	GDHG01002	GDHG01102			
		SAMPLE DATE ----->	03/31/95	03/31/95	04/04/95	04/12/95	04/13/95	04/12/95			
		DATE EXTRACTED -->	04/06/95	04/07/95	04/07/95	04/17/95	04/18/95	04/18/95			
		DATE ANALYZED -->	04/06/95	04/10/95	04/10/95	04/24/95	04/20/95	04/20/95			
		MATRIX ----->	Water	Water	Water	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L			
CAS #	Parameter	CHS41	VAL	CHS39	VAL	CHS39	VAL	CHS42	VAL	CHS42	VAL
7429-90-5	Aluminum	57.3	J	267.		15.4	U	143.	U	14.3	U
7440-36-0	Antimony	11.9	U	11.9	U	11.9	U	11.5	UJ	11.5	U
7440-38-2	Arsenic	2.6	U	2.7	U	2.7	U	8.3	UJ	13.9	UJ
7440-39-3	Barium	5.2	J	4.6	U	14.	U	59.4	J	8.3	UJ
7440-41-7	Beryllium	0.2	U	0.2	U	0.2	U	0.3	U	0.3	U
7440-43-9	Cadmium	1.4	U	1.4	U	1.4	U	1.2	U	1.2	U
7440-70-2	Calcium	59000.		58800.		236000.		659000.		259000.	
7440-47-3	Chromium	2.	U	2.	U	2.	U	3.1	U	3.1	U
7440-48-4	Cobalt	2.4	U	2.4	U	2.4	U	2.1	UJ	2.1	U
7440-50-8	Copper	5.6	U	5.6	U	5.6	U	2.9	UJ	2.9	UJ
7439-89-6	Iron	317.		548.		16200.		28700.		4980.	
7439-92-1	Lead	2.6	U	1.9	U	1.9	U	1.9	UJ	1.9	U
7439-95-4	Magnesium	12800.		13100.		72300.		249000.		84800.	
7439-96-5	Manganese	22.9		33.9		1440.	J	3190.	J	700.	
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel	5.5	U	5.5	U	5.5	U	7.2	UJ	20.7	UJ
7440-09-7	Potassium	5960.		5850.		34200.		69500.		23500.	
7782-49-2	Selenium	3.7	U	4.6	U	3.6	U	2.7	UJ	2.7	U
7440-22-4	Silver	1.9	U	1.9	U	1.9	U	2.	UJ	2.	UJ
7440-23-5	Sodium	29000.		29100.		88200.		1500000.	J	216000.	
7440-28-0	Thallium	3.7	UJ	3.3	U	3.3	U	3.3	UJ	3.3	U
7440-62-2	Vanadium	2.5	U	2.5	U	2.5	U	6.3	UJ	2.4	U
7440-66-6	Zinc	6.6	J	5.8	U	5.8	U	21.4	U	2.6	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUBS-META		SAMPLE ID ----->	GDH-G-W01D-02	GDH-G-W02D-02	GDH-G-W03D-02	GDH-G-W04D-02	GDH-H-W04D-02	GDH-G-W05D-02					
		ORIGINAL ID ----->	GDHGW01D02	GDHGW02D02	GDHGW03D02	GDHGW04D02	GDHGW04D02	GDHGW05D02					
		LAB SAMPLE ID -->	43606-006	43632-015	43412-004	43472-011	43473-004	43632-014					
		ID FROM REPORT -->	GDHGW01D02	GDHGW02D02	GDHGW03D02	GDHGW04D02	GDHGW04D02	GDHGW05D02					
		SAMPLE DATE ----->	04/11/95	04/12/95	03/28/95	03/31/95	03/31/95	04/12/95					
		DATE EXTRACTED -->	04/17/95	04/17/95	04/04/95	04/06/95	04/07/95	04/17/95					
		DATE ANALYZED ----->	04/18/95	04/24/95	04/04/95	04/06/95	04/10/95	04/24/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS42	VAL	CHS42	VAL	CHS38	VAL	CHS41	VAL	CHS39	VAL	CHS42	VAL
7429-90-5	Aluminum	15.4	U	14.3	U	15.4	U	15.4	U	15.4	U	14.3	U
7440-36-0	Antimony	11.9	U	11.5	UJ	11.9	U	11.9	U	11.9	U	11.5	UJ
7440-38-2	Arsenic	2.6	UJ	2.7	UJ	2.6	U	2.6	U	2.7	U	4.3	UJ
7440-39-3	Barium	28.7	UJ	30.7	UJ	40.8	U	53.6	J	50.	J	58.1	J
7440-41-7	Beryllium	0.2	U	0.3	U	0.2	U	0.2	U	0.2	U	0.3	U
7440-43-9	Cadmium	1.4	U	1.2	U	1.4	U	1.5	J	1.4	U	2.	J
7440-70-2	Calcium	111000.		96500.		204000.		228000.		216000.		135000.	
7440-47-3	Chromium	2.	U	3.1	U	2.	U	2.7	J	2.	U	5.	U
7440-48-4	Cobalt	2.4	U	2.1	UJ	2.4	U	2.4	U	2.4	U	2.1	UJ
7440-50-8	Copper	5.6	UJ	2.9	UJ	5.6	U	5.6	U	5.6	U	2.9	UJ
7439-89-6	Iron	5940.		6280.		110.	U	369.		343.		4800.	
7439-92-1	Lead	1.	U	1.9	UJ	1.	U	1.	U	1.9	U	1.9	UJ
7439-95-4	Magnesium	905000.		618000.		918000.		990000.		843000.		920000.	
7439-96-5	Manganese	741.		146.	J	3.2		172.	J	162.		563.	J
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel	5.5	UJ	7.2	UJ	5.5	U	5.5	U	5.5	U	7.2	UJ
7440-09-7	Potassium	216000.		203000.		260000.		173000.		162000.		240000.	
7782-49-2	Selenium	3.5	U	2.7	UJ	3.5	U	3.5	U	2.7	U	2.7	UJ
7440-22-4	Silver	1.9	UJ	2.	UJ	1.9	U	1.9	U	1.9	U	2.	UJ
7440-23-5	Sodium	6200000.		4990000.	J	7600000.		7350000.		6540000.		6570000.	J
7440-28-0	Thallium	6.3	U	3.3	UJ	3.7	U	3.7	UJ	3.3	U	6.4	UJ
7440-62-2	Vanadium	5.7	U	5.5	UJ	5.3	J	5.6	J	2.5	U	5.8	UJ
7440-66-6	Zinc	5.8	U	17.1	U	5.8	U	58.	U	5.8	U	2.6	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUBS-META		SAMPLE ID ----->	GDH-G-W060-02	GDH-G-W070-02	GDH-G-W080-02	GDH-H-W080-02	GDH-G-W090-02	GDH-H-W100-02					
		ORIGINAL ID ----->	GDHGW06002	GDHGW07002	GDHGW08002	GDHGW08002	GDHGW09002	GDHGW10002					
		LAB SAMPLE ID ----->	43412-001	43472-007	43518-004	43519-007	43632-013	43670-008					
		ID FROM REPORT ----->	GDHGW06002	GDHGW07002	GDHGW08002	GDHGW08002	GDHGW09002	GDHGW10002					
		SAMPLE DATE ----->	03/28/95	03/31/95	04/04/95	04/04/95	04/12/95	04/14/95					
		DATE EXTRACTED ----->	04/04/95	04/06/95	04/06/95	04/07/95	04/17/95	04/18/95					
		DATE ANALYZED ----->	04/04/95	04/06/95	04/06/95	04/10/95	04/24/95	04/20/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CH538	VAL	CH541	VAL	CH541	VAL	CH539	VAL	CH542	VAL	CH542	VAL
7429-90-5	Aluminum	15.4	U	15.4	U	15.4	U	15.4	U	97.7	U	80.5	U
7440-36-0	Antimony	11.9	U	11.9	U	11.9	U	11.9	U	11.5	J	11.5	J
7440-38-2	Arsenic	2.6	U	2.6	U	2.7	U	2.7	U	3.	UJ	2.7	UJ
7440-39-3	Barium	87.7		92.7	J	75.1	J	75.3	J	28.7	UJ	35.3	UJ
7440-41-7	Beryllium	0.2	U	0.2	U	0.2	U	0.2	U	0.3	U	0.3	U
7440-43-9	Cadmium	1.4	U	1.4	U	1.4	U	2.4	J	1.3	U	1.2	U
7440-70-2	Calcium	156000.		199000.		183000.		187000.		117000.		86700.	
7440-47-3	Chromium	4.1		2.	U	2.	U	2.	U	3.1	U	3.1	U
7440-48-4	Cobalt	2.4	U	2.4	U	2.4	U	2.4	U	2.1	UJ	2.1	UJ
7440-50-8	Copper	5.6	U	5.6	U	5.6	U	5.6	U	3.4	UJ	3.4	UJ
7439-89-6	Iron	110.	U	510.		379.		403.		3240.		3850.	
7439-92-1	Lead	1.	U	1.	U	1.	U	1.9	U	1.9	UJ	1.9	UJ
7439-95-4	Magnesium	849000.		986000.		821000.		931000.		1130000.		742000.	
7439-96-5	Manganese	23.4		170.		477.		485.		229.	J	415.	J
7439-97-6	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel	5.5	U	5.5	U	5.5	U	5.5	U	7.2	UJ	7.2	UJ
7440-09-7	Potassium	222000.		201000.		248000.		250000.		252000.		184000.	
7782-49-2	Selenium	3.5	U	3.5	U	4.4	U	2.7	U	2.7	UJ	2.7	UJ
7440-22-4	Silver	1.9	U	1.9	U	1.9	U	1.9	U	2.	UJ	2.	UJ
7440-23-5	Sodium	6810000.		7640000.		6660000.		7130000.		6730000.	J	5500000.	J
7440-28-0	Thallium	3.7	U	3.7	UJ	3.7	UJ	3.3	U	3.3	UJ	3.3	UJ
7440-62-2	Vanadium	9.		6.3	J	4.8	J	2.9		7.9	UJ	5.8	UJ
7440-66-6	Zinc	5.8	U	58.	U	58.	U	5.8	U	56.	U	2.6	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUBS-META		SAMPLE ID ----->	GDH-H-W11D-02				
		ORIGINAL ID ----->	GDHGW11D02				
		LAB SAMPLE ID --->	43670-009				
		ID FROM REPORT -->	GDHGW11D02				
		SAMPLE DATE ----->	04/14/95				
		DATE EXTRACTED -->	04/18/95				
		DATE ANALYZED -->	04/20/95				
		MATRIX ----->	Water				
		UNITS ----->	UG/L				
CAS #	Parameter	CHS42	VAL				
7429-90-5	Aluminum	745.					
7440-36-0	Antimony	11.5	U				
7440-38-2	Arsenic	2.7	UJ				
7440-39-3	Barium	871.					
7440-41-7	Beryllium	0.62	U				
7440-43-9	Cadmium	2.3	J				
7440-70-2	Calcium	7650.					
7440-47-3	Chromium	3.2	U				
7440-48-4	Cobalt	10.2	U				
7440-50-8	Copper	8.	UJ				
7439-89-6	Iron	1810.					
7439-92-1	Lead	1.9	J				
7439-95-4	Magnesium	1290.					
7439-96-5	Manganese	821.					
7439-97-6	Mercury	0.1	U				
7440-02-0	Nickel	46.2	UJ				
7440-09-7	Potassium	9050.					
7782-49-2	Selenium	2.7	U				
7440-22-4	Silver	2.	UJ				
7440-23-5	Sodium	1360000.					
7440-28-0	Thallium	3.3	U				
7440-62-2	Vanadium	2.4	U				
7440-66-6	Zinc	1180.					

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SW846-PEST		SAMPLE ID ----->	GDH-G-W002-02	GDH-G-W009-02	GDH-G-W020-02			
		ORIGINAL ID ----->	GDHGW00202	GDHGW00902	GDHGW02002			
		LAB SAMPLE ID ---->	43606-001	43632-004	43632-005			
		ID FROM REPORT -->	GDHGW00202	GDHGW00902	GDHGW02002			
		SAMPLE DATE ----->	04/11/95	04/12/95	04/12/95			
		DATE EXTRACTED -->	04/13/95	04/14/95	04/14/95			
		DATE ANALYZED -->	04/27/95	04/21/95	04/22/95			
		MATRIX ----->	Water	Water	Water			
		UNITS ----->	UG/L	UG/L	UG/L			
CAS #	Parameter	CHS42	VAL	CHS42	VAL	CHS42	VAL	
309-00-2	Aldrin	0.06	U	0.06	U	0.06	U	
319-84-6	alpha-BHC	0.06	U	0.06	U	0.06	U	
319-85-7	beta-BHC	0.06	U	0.06	U	0.06	U	
58-89-9	gamma-BHC (Lindane)	0.06	U	0.06	U	0.06	U	
319-86-8	delta-BHC	0.06	U	0.06	U	0.06	U	
5103-71-9	alpha-Chlordane	0.06	U	0.06	U	0.06	U	
5103-74-2	gamma-Chlordane	0.06	U	0.06	U	0.06	U	
50-29-3	4,4'-DDT	0.1	U	0.1	U	0.1	U	
72-55-9	4,4'-DDE	0.06	U	0.06	U	0.06	U	
72-54-8	4,4'-DDD	0.1	U	0.1	U	0.1	U	
60-57-1	Dieldrin	0.06	U	0.06	U	0.06	U	
959-98-8	Endosulfan I	0.06	U	0.06	U	0.06	U	
33213-65-9	Endosulfan II	0.1	U	0.1	U	0.1	U	
1031-07-8	Endosulfan sulfate	0.1	U	0.1	U	0.1	U	
72-20-8	Endrin	0.06	U	0.06	U	0.06	U	
7421-93-4	Endrin aldehyde	0.1	U	0.1	U	0.1	U	
76-44-8	Heptachlor	0.06	U	0.06	U	0.06	U	
1024-57-3	Heptachlor epoxide	0.06	U	0.06	U	0.06	U	
8001-35-2	Toxaphene	2.	U	2.	U	2.	U	
53494-70-5	Endrin ketone	0.1	U	0.1	U	0.1	U	
72-43-5	Methoxychlor	0.6	U	0.6	U	0.6	U	
53469-21-9	Aroclor-1242	NR		NR		NR		
11097-69-1	Aroclor-1254	NR		NR		NR		
11104-28-2	Aroclor-1221	NR		NR		NR		
11141-16-5	Aroclor-1232	NR		NR		NR		
12672-29-6	Aroclor-1248	NR		NR		NR		
11096-82-5	Aroclor-1260	NR		NR		NR		
12674-11-2	Aroclor-1016	NR		NR		NR		

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SW846-SYDA		SAMPLE ID ----->	GDH-G-W003-02	GDH-G-W004-02	GDH-G-W006-02	GDH-G-W007-02	GDH-H-W007-02	GDH-G-W008-02					
		ORIGINAL ID ----->	GDHG00302	GDHG00402	GDHG00602	GDHG00702	GDHH00702	GDHG00802					
		LAB SAMPLE ID ---->	43412-007	43472-006	43412-006	43472-004	43473-003	43519-001					
		ID FROM REPORT -->	GDHG00302	GDHG00402	GDHG00602	GDHG00702	GDHH00702	GDHG00802					
		SAMPLE DATE ----->	03/28/95	03/31/95	03/28/95	03/31/95	03/31/95	04/04/95					
		DATE EXTRACTED -->	04/03/95	04/06/95	04/03/95	04/06/95	04/06/95	04/11/95					
		DATE ANALYZED ---->	04/10/95	04/11/95	04/10/95	04/11/95	04/11/95	04/17/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS38	VAL	CHS41	VAL	CHS38	VAL	CHS41	VAL	CHS39	VAL	CHS39	VAL
62-75-9	N-Nitrosodimethylamine	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
99-09-2	3-Nitroaniline	55.	U	58.	U	57.	U	58.	U	57.	U	58.	U
108-95-2	Phenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
83-32-9	Acenaphthene	11.	U	3.6	J	11.	U	12.	U	11.	U	12.	U
62-53-3	Aniline	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
51-28-5	2,4-Dinitrophenol	55.	U	58.	U	57.	U	58.	U	57.	U	58.	U
111-44-4	bis(2-Chloroethyl)ether	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
100-02-7	4-Nitrophenol	55.	U	58.	U	57.	U	58.	U	57.	U	58.	U
95-57-8	2-Chlorophenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
132-64-9	Dibenzofuran	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
541-73-1	1,3-Dichlorobenzene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
121-14-2	2,4-Dinitrotoluene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
106-46-7	1,4-Dichlorobenzene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
84-66-2	Diethylphthalate	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
100-51-6	Benzyl alcohol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
7005-72-3	4-Chlorophenylphenylether	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
95-50-1	1,2-Dichlorobenzene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
86-73-7	Fluorene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
95-48-7	2-Methylphenol (o-Cresol)	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
100-01-6	4-Nitroaniline	55.	U	58.	U	57.	U	58.	U	57.	U	58.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	55.	U	58.	U	57.	U	58.	U	57.	U	58.	U
106-44-5	4-Methylphenol (p-Cresol)	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
86-30-6	N-Nitrosodiphenylamine	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
621-64-7	N-Nitroso-di-n-propylamine	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
103-33-3	Azobenzene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
67-72-1	Hexachloroethane	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
101-55-3	4-Bromophenyl-phenylether	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
98-95-3	Nitrobenzene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
118-74-1	Hexachlorobenzene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
78-59-1	Isophorone	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
87-86-5	Pentachlorophenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
88-75-5	2-Nitrophenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
85-01-8	Phenanthrene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
105-67-9	2,4-Dimethylphenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
120-12-7	Anthracene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUBS46-SV0A		SAMPLE ID ----->	GDH-G-W003-02	GDH-G-W004-02	GDH-G-W006-02	GDH-G-W007-02	GDH-H-W007-02	GDH-G-W008-02					
		ORIGINAL ID ----->	GDHG00302	GDHG00402	GDHG00602	GDHG00702	GDHG00702	GDHG00802					
		LAB SAMPLE ID ---->	43412-007	43472-006	43412-006	43472-004	43473-003	43519-001					
		ID FROM REPORT -->	GDHG00302	GDHG00402	GDHG00602	GDHG00702	GDHG00702	GDHG00802					
		SAMPLE DATE ----->	03/28/95	03/31/95	03/28/95	03/31/95	03/31/95	04/04/95					
		DATE EXTRACTED -->	04/03/95	04/06/95	04/03/95	04/06/95	04/06/95	04/11/95					
		DATE ANALYZED ---->	04/10/95	04/11/95	04/10/95	04/11/95	04/11/95	04/17/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS38	VAL	CHS41	VAL	CHS38	VAL	CHS41	VAL	CHS39	VAL	CHS39	VAL
65-85-0	Benzoic acid	55.	UJ	58.	UJ	57.	UJ	58.	UJ	57.	UJ	58.	UJ
84-74-2	Di-n-butylphthalate	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
111-91-1	bis(2-Chloroethoxy)methane	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
206-44-0	Fluoranthene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
120-83-2	2,4-Dichlorophenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
92-87-5	Benidine	55.	UJ	58.	UJ	57.	UJ	58.	UJ	57.	UJ	58.	UJ
120-82-1	1,2,4-Trichlorobenzene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
129-00-0	Pyrene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
91-20-3	Naphthalene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
85-68-7	Butylbenzylphthalate	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
106-47-8	4-Chloroaniline	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
91-94-1	3,3'-Dichlorobenzidine	22.	U	23.	U	23.	U	23.	U	23.	U	23.	U
87-68-3	Hexachlorobutadiene	11.	U	12.	UJ	11.	U	12.	UJ	11.	UJ	12.	U
56-55-3	Benzo(a)anthracene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
59-50-7	4-Chloro-3-methylphenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
218-01-9	Chrysene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
91-57-6	2-Methylnaphthalene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	11.	U	17.	U	25.	U	5.6	U	11.	U	12.	U
77-47-4	Hexachlorocyclopentadiene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
117-84-0	Di-n-octyl phthalate	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
88-06-2	2,4,6-Trichlorophenol	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
205-99-2	Benzo(b)fluoranthene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
95-95-4	2,4,5-Trichlorophenol	55.	U	58.	U	57.	U	58.	U	57.	U	58.	U
207-08-9	Benzo(k)fluoranthene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
91-58-7	2-Chloronaphthalene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
50-32-8	Benzo(a)pyrene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
88-74-4	2-Nitroaniline	55.	U	58.	U	57.	U	58.	U	57.	U	58.	U
193-39-5	Indeno(1,2,3-cd)pyrene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
131-11-3	Dimethyl phthalate	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
53-70-3	Dibenz(a,h)anthracene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
208-96-8	Acenaphthylene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
191-24-2	Benzo(g,h,i)perylene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U
606-20-2	2,6-Dinitrotoluene	11.	U	12.	U	11.	U	12.	U	11.	U	12.	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUB46-SV0A		SAMPLE ID ----->	GDH-G-W009-02	GDH-G-W011-02	GDH-G-W030-02	GDH-G-W040-02	GDH-H-W040-02	GDH-G-W060-02					
		ORIGINAL ID ----->	GDHG00902	GDHG01102	GDHG03002	GDHG04002	GDHG04002	GDHG06002					
		LAB SAMPLE ID ----->	43632-001	43632-003	43412-008	43472-005	43473-001	43412-005					
		ID FROM REPORT ----->	GDHG00902	GDHG01102	GDHG03002	GDHG04002	GDHG04002	GDHG06002					
		SAMPLE DATE ----->	04/12/95	04/12/95	03/28/95	03/31/95	03/31/95	03/28/95					
		DATE EXTRACTED ----->	04/12/95	04/12/95	04/03/95	04/06/95	04/06/95	04/03/95					
		DATE ANALYZED ----->	04/21/95	04/21/95	04/10/95	04/11/95	04/11/95	04/11/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS42	VAL	CHS42	VAL	CHS38	VAL	CHS41	VAL	CHS39	VAL	CHS38	VAL
62-75-9	N-Nitrosodimethylamine	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
99-09-2	3-Nitroaniline	59.	U	59.	U	62.	U	61.	U	58.	U	110.	U
108-95-2	Phenol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
83-32-9	Acenaphthene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
62-53-3	Aniline	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
51-28-5	2,4-Dinitrophenol	59.	U	59.	U	62.	U	61.	U	58.	U	110.	U
111-44-4	bis(2-Chloroethyl)ether	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
100-02-7	4-Nitrophenol	59.	U	59.	U	62.	U	61.	U	58.	U	110.	U
95-57-8	2-Chlorophenol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
132-64-9	Dibenzofuran	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
541-73-1	1,3-Dichlorobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
121-14-2	2,4-Dinitrotoluene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
106-46-7	1,4-Dichlorobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
84-66-2	Diethylphthalate	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
100-51-6	Benzyl alcohol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
7005-72-3	4-Chlorophenylphenylether	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
95-50-1	1,2-Dichlorobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
86-73-7	Fluorene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
95-48-7	2-Methylphenol (o-Cresol)	12.	U	12.	U	12.	U	8.3	U	8.4	J	22.	U
100-01-6	4-Nitroaniline	59.	U	59.	U	62.	U	61.	U	58.	U	110.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	59.	U	59.	U	62.	U	61.	U	58.	U	110.	U
106-44-5	4-Methylphenol (p-Cresol)	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
86-30-6	N-Nitrosodiphenylamine	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
621-64-7	N-Nitroso-di-n-propylamine	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
103-33-3	Azobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
67-72-1	Hexachloroethane	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
101-55-3	4-Bromophenyl-phenylether	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
98-95-3	Nitrobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
118-74-1	Hexachlorobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
78-59-1	Isophorone	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
87-86-5	Pentachlorophenol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
88-75-5	2-Nitrophenol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
85-01-8	Phenanthrene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
105-67-9	2,4-Dimethylphenol	12.	U	12.	U	12.	U	15.	U	15.	U	22.	U
120-12-7	Anthracene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUB46-SV0A		SAMPLE ID ----->	GDH-G-W009-02	GDH-G-W011-02	GDH-G-W030-02	GDH-G-W040-02	GDH-H-W040-02	GDH-G-W060-02					
		ORIGINAL ID ----->	GDHGW00902	GDHGW01102	GDHGW03002	GDHGW04002	GDHGW04002	GDHGW06002					
		LAB SAMPLE ID ---->	43632-001	43632-003	43412-008	43472-005	43473-001	43412-005					
		ID FROM REPORT -->	GDHGW00902	GDHGW01102	GDHGW03002	GDHGW04002	GDHGW04002	GDHGW06002					
		SAMPLE DATE ----->	04/12/95	04/12/95	03/28/95	03/31/95	03/31/95	03/28/95					
		DATE EXTRACTED -->	04/12/95	04/12/95	04/03/95	04/06/95	04/06/95	04/03/95					
		DATE ANALYZED ---->	04/21/95	04/21/95	04/10/95	04/11/95	04/11/95	04/11/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS42	VAL	CHS42	VAL	CHS38	VAL	CHS41	VAL	CHS39	VAL	CHS38	VAL
65-85-0	Benzoic acid	59.	U	59.	U	62.	UJ	61.	UJ	58.	UJ	110.	UJ
84-74-2	Di-n-butylphthalate	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
111-91-1	bis(2-Chloroethoxy)methane	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
206-44-0	Fluoranthene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
120-83-2	2,4-Dichlorophenol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
92-87-5	Benidine	59.	U	59.	U	62.	UJ	61.	UJ	58.	UJ	110.	UJ
120-82-1	1,2,4-Trichlorobenzene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
129-00-0	Pyrene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
91-20-3	Naphthalene	12.	U	12.	U	12.	U	24.	U	24.	U	22.	U
85-68-7	Butylbenzylphthalate	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
106-47-8	4-Chloroaniline	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
91-94-1	3,3'-Dichlorobenzidine	24.	U	24.	U	25.	U	24.	U	23.	U	44.	U
87-68-3	Hexachlorobutadiene	12.	U	12.	U	12.	U	12.	UJ	12.	UJ	22.	UJ
56-55-3	Benzo(a)anthracene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
59-50-7	4-Chloro-3-methylphenol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
218-01-9	Chrysene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
91-57-6	2-Methylnaphthalene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BHP)	12.	U	12.	U	12.	U	110.	U	12.	U	230.	U
77-47-4	Hexachlorocyclopentadiene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
117-84-0	Di-n-octyl phthalate	12.	U	12.	U	12.	U	12.	U	5.	J	22.	U
88-06-2	2,4,6-Trichlorophenol	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
205-99-2	Benzo(b)fluoranthene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
95-95-4	2,4,5-Trichlorophenol	59.	U	59.	U	62.	U	61.	U	58.	U	110.	U
207-08-9	Benzo(k)fluoranthene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
91-58-7	2-Chloronaphthalene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
50-32-8	Benzo(a)pyrene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
88-74-4	2-Nitroaniline	59.	U	59.	U	62.	U	61.	U	58.	U	110.	U
193-39-5	Indeno(1,2,3-cd)pyrene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
131-11-3	Dimethyl phthalate	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
53-70-3	Dibenz(a,h)anthracene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
208-96-8	Acenaphthylene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
191-24-2	Benzo(g,h,i)perylene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U
606-20-2	2,6-Dinitrotoluene	12.	U	12.	U	12.	U	12.	U	12.	U	22.	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUS46-SV0A		SAMPLE ID ----->	GDH-G-W07D-02	GDH-G-W08D-02	GDH-H-W08D-02	GDH-G-W09D-02	GDH-H-W10D-02				
		ORIGINAL ID ----->	GDHG07D02	GDHG08D02	GDHH08D02	GDHG09D02	GDHG10D02				
		LAB SAMPLE ID ----->	43472-001	43518-001	43519-002	43632-002	43670-001				
		ID FROM REPORT -->	GDHG07D02	GDHG08D02	GDHH08D02	GDHG09D02	GDHG10D02				
		SAMPLE DATE ----->	03/31/95	04/04/95	04/04/95	04/12/95	04/14/95				
		DATE EXTRACTED -->	04/06/95	04/06/95	04/11/95	04/12/95	04/12/95				
		DATE ANALYZED -->	04/11/95	04/12/95	04/17/95	04/21/95	04/21/95				
		MATRIX ----->	Water	Water	Water	Water	Water				
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L				
CAS #	Parameter	CHS41	VAL	CHS41	VAL	CHS39	VAL	CHS42	VAL	CHS42	VAL
62-75-9	N-Nitrosodimethylamine	12.	U	11.	U	12.	U	12.	U	13.	U
99-09-2	3-Nitroaniline	61.	U	57.	U	59.	U	58.	U	64.	U
108-95-2	Phenol	12.	U	11.	U	12.	U	12.	U	13.	U
83-32-9	Acenaphthene	12.	U	11.	U	12.	U	12.	U	13.	U
62-53-3	Aniline	12.	U	11.	U	12.	U	12.	U	13.	U
51-28-5	2,4-Dinitrophenol	61.	U	57.	U	59.	U	58.	U	64.	U
111-44-4	bis(2-Chloroethyl)ether	12.	U	11.	U	12.	U	12.	U	13.	U
100-02-7	4-Nitrophenol	61.	U	57.	U	59.	U	58.	U	64.	U
95-57-8	2-Chlorophenol	12.	U	11.	U	12.	U	12.	U	13.	U
132-64-9	Dibenzofuran	12.	U	11.	U	12.	U	12.	U	13.	U
541-73-1	1,3-Dichlorobenzene	12.	U	11.	U	12.	U	12.	U	13.	U
121-14-2	2,4-Dinitrotoluene	12.	U	11.	U	12.	U	12.	U	13.	U
106-46-7	1,4-Dichlorobenzene	12.	U	11.	U	12.	U	12.	U	13.	U
84-66-2	Diethylphthalate	12.	U	11.	U	12.	U	12.	U	13.	U
100-51-6	Benzyl alcohol	12.	U	11.	U	12.	U	12.	U	13.	U
7005-72-3	4-Chlorophenylphenylether	12.	U	11.	U	12.	U	12.	U	13.	U
95-50-1	1,2-Dichlorobenzene	12.	U	11.	U	12.	U	12.	U	13.	U
86-73-7	Fluorene	12.	U	11.	U	12.	U	12.	U	13.	U
95-48-7	2-Methylphenol (o-Cresol)	12.	U	11.	U	12.	U	12.	U	13.	U
100-01-6	4-Nitroaniline	61.	U	57.	U	59.	U	58.	U	64.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	12.	U	11.	U	12.	U	12.	U	13.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	61.	U	57.	U	59.	U	58.	U	64.	U
106-44-5	4-Methylphenol (p-Cresol)	12.	U	11.	U	12.	U	12.	U	13.	U
86-30-6	N-Nitrosodiphenylamine	12.	U	11.	U	12.	U	12.	U	13.	U
621-64-7	N-Nitroso-di-n-propylamine	12.	U	11.	U	12.	U	12.	U	13.	U
103-33-3	Azobenzene	12.	U	11.	U	12.	U	12.	U	13.	U
67-72-1	Hexachloroethane	12.	U	11.	U	12.	U	12.	U	13.	U
101-55-3	4-Bromophenyl-phenylether	12.	U	11.	U	12.	U	12.	U	13.	U
98-95-3	Nitrobenzene	12.	U	11.	U	12.	U	12.	U	13.	U
118-74-1	Hexachlorobenzene	12.	U	11.	U	12.	U	12.	U	13.	U
78-59-1	Isophorone	12.	U	11.	U	12.	U	12.	U	13.	U
87-86-5	Pentachlorophenol	12.	U	11.	U	12.	U	12.	U	13.	U
88-75-5	2-Nitrophenol	12.	U	11.	U	12.	U	12.	U	13.	U
85-01-8	Phenanthrene	12.	U	11.	U	12.	U	12.	U	13.	U
105-67-9	2,4-Dimethylphenol	12.	U	11.	U	12.	U	12.	U	13.	U
120-12-7	Anthracene	12.	U	11.	U	12.	U	12.	U	13.	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUB46-SV0A		SAMPLE ID ----->	GDH-G-W070-02	GDH-G-W080-02	GDH-H-W080-02	GDH-G-W090-02	GDH-H-W100-02				
		ORIGINAL ID ----->	GDHGW07D02	GDHGW08D02	GDHHW08D02	GDHGW09D02	GDHGW10D02				
		LAB SAMPLE ID ---->	43472-001	43518-001	43519-002	43632-002	43670-001				
		ID FROM REPORT -->	GDHGW07D02	GDHGW08D02	GDHHW08D02	GDHGW09D02	GDHGW10D02				
		SAMPLE DATE ----->	03/31/95	04/04/95	04/04/95	04/12/95	04/14/95				
		DATE EXTRACTED -->	04/06/95	04/06/95	04/11/95	04/12/95	04/12/95				
		DATE ANALYZED ---->	04/11/95	04/12/95	04/17/95	04/21/95	04/21/95				
		MATRIX ----->	Water	Water	Water	Water	Water				
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L				
CAS #	Parameter	CHS41	VAL	CHS41	VAL	CHS39	VAL	CHS42	VAL	CHS42	VAL
65-85-0	Benzoic acid	61.	UJ	57.	UJ	59.	UJ	58.	U	64.	U
84-74-2	Di-n-butylphthalate	12.	U	11.	U	12.	U	2.4	J	2.7	J
111-91-1	bis(2-Chloroethoxy)methane	12.	U	11.	U	12.	U	12.	U	13.	U
206-44-0	Fluoranthene	12.	U	11.	U	12.	U	12.	U	13.	U
120-83-2	2,4-Dichlorophenol	12.	U	11.	U	12.	U	12.	U	13.	U
92-87-5	Benidine	61.	UJ	57.	UJ	59.	UJ	58.	U	64.	U
120-82-1	1,2,4-Trichlorobenzene	12.	U	11.	U	12.	U	12.	U	13.	U
129-00-0	Pyrene	12.	U	11.	U	12.	U	12.	U	13.	U
91-20-3	Naphthalene	12.	U	11.	U	12.	U	12.	U	13.	U
85-68-7	Butylbenzylphthalate	12.	U	11.	U	12.	U	12.	U	13.	U
106-47-8	4-Chloroaniline	12.	U	11.	U	12.	U	12.	U	13.	U
91-94-1	3,3'-Dichlorobenzidine	24.	U	23.	U	24.	U	23.	U	25.	U
87-68-3	Hexachlorobutadiene	12.	UJ	11.	U	12.	U	12.	U	13.	U
56-55-3	Benzo(a)anthracene	12.	U	11.	U	12.	U	12.	U	13.	U
59-50-7	4-Chloro-3-methylphenol	12.	U	11.	U	12.	U	12.	U	13.	U
218-01-9	Chrysene	12.	U	11.	U	12.	U	12.	U	13.	U
91-57-6	2-Methylnaphthalene	12.	U	11.	U	12.	U	12.	U	13.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	31.	U	5.1	U	32.	U	6.9	J	9.	J
77-47-4	Hexachlorocyclopentadiene	12.	U	11.	U	12.	U	12.	U	13.	U
117-84-0	Di-n-octyl phthalate	12.	U	11.	U	12.	U	12.	U	13.	U
88-06-2	2,4,6-Trichlorophenol	12.	U	11.	U	12.	U	12.	U	13.	U
205-99-2	Benzo(b)fluoranthene	12.	U	11.	U	12.	U	12.	U	13.	U
95-95-4	2,4,5-Trichlorophenol	61.	U	57.	U	59.	U	58.	U	64.	U
207-08-9	Benzo(k)fluoranthene	12.	U	11.	U	12.	U	12.	U	13.	U
91-58-7	2-Chloronaphthalene	12.	U	11.	U	12.	U	12.	U	13.	U
50-32-8	Benzo(a)pyrene	12.	U	11.	U	12.	U	12.	U	13.	U
88-74-4	2-Nitroaniline	61.	U	57.	U	59.	U	58.	U	64.	U
193-39-5	indeno(1,2,3-cd)pyrene	12.	U	11.	U	12.	U	12.	U	13.	U
131-11-3	Dimethyl phthalate	12.	U	11.	U	12.	U	12.	U	13.	U
53-70-3	Dibenz(a,h)anthracene	12.	U	11.	U	12.	U	12.	U	13.	U
208-96-8	Acenaphthylene	12.	U	11.	U	12.	U	12.	U	13.	U
191-24-2	Benzo(g,h,i)perylene	12.	U	11.	U	12.	U	12.	U	13.	U
606-20-2	2,6-Dinitrotoluene	12.	U	11.	U	12.	U	12.	U	13.	U

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUBS46-V0A		SAMPLE ID ----->	GDH-G-W004-02	GDH-G-W007-02	GDH-H-W007-02	GDH-G-W009-02	GDH-G-W040-02	GDH-H-W040-02					
		ORIGINAL ID ----->	GDHGW00402	GDHGW00702	GDHHW00702	GDHGW00902	GDHGW04002	GDHHW04002					
		LAB SAMPLE ID ---->	43472-020	43472-017	43473-010	43632-017	43472-019	43473-013					
		ID FROM REPORT -->	GDHGW00402	GDHGW00702	GDHHW00702	GDHGW00902	GDHGW04002	GDHHW04002					
		SAMPLE DATE ----->	03/31/95	03/31/95	03/31/95	04/12/95	03/31/95	03/31/95					
		DATE ANALYZED ---->	04/14/95	04/13/95	04/10/95	04/24/95	04/13/95	04/13/95					
		MATRIX ----->	Water	Water	Water	Water	Water	Water					
		UNITS ----->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L					
CAS #	Parameter	CHS41	VAL	CHS41	VAL	CHS39	VAL	CHS42	VAL	CHS41	VAL	CHS39	VAL
74-87-3	Chloromethane	10.	UJ	10.	UJ	10.	U	10.	U	10.	UJ	10.	UJ
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	UJ	10.	U	10.	UJ
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	UJ
75-00-3	Chloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
75-09-2	Methylene chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-64-1	Acetone	25.	U	25.	U	25.	U	25.	U	25.	U	25.	U
75-15-0	Carbon disulfide	84.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
109-99-9	Tetrahydrofuran	25.	U	25.	U	25.	U	25.	U	25.	U	25.	UJ
75-69-4	Trichlorofluoromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethylene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
75-34-3	1,1-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
540-59-0	1,2-Dichloroethene (total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
67-66-3	Chloroform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
107-06-2	1,2-Dichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
78-93-3	2-Butanone (MEK)	25.	U	25.	U	25.	U	25.	U	25.	U	25.	UJ
71-55-6	1,1,1-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
56-23-5	Carbon tetrachloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
108-05-4	Vinyl acetate	10.	U	10.	U	10.	U	10.	U	10.	U	10.	UJ
75-27-4	Bromodichloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
78-87-5	1,2-Dichloropropane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
10061-01-5	cis-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
10061-02-6	trans-1,3-Dichloropropene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
79-01-6	Trichloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
124-48-1	Dibromochloromethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
79-00-5	1,1,2-Trichloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
71-43-2	Benzene	5.	U	5.	U	5.	U	5.	U	4.9	J	4.	J
75-25-2	Bromoform	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	25.	U	25.	U	25.	U	17.	J	25.	U	25.	UJ
591-78-6	2-Hexanone	25.	U	25.	U	25.	U	25.	UJ	25.	U	25.	UJ
127-18-4	Tetrachloroethene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
108-88-3	Toluene	5.	U	5.	U	5.	U	5.	U	5.	U	4.2	J
108-90-7	Chlorobenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
100-41-4	Ethylbenzene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
100-42-5	Styrene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
1330-20-7	Xylene (Total)	5.	U	5.	U	5.	U	5.	U	5.	U	5.	UJ
110-75-8	2-Chloroethyl vinyl ether	NR		NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
CHARLESTON ZONE H - QUARTERLY '95
GDH 2nd Qtr Groundwater Analytical

SUB46-V0A		SAMPLE ID ----->	GDH-G-W07D-02				
		ORIGINAL ID ----->	GDHGM07D02				
		LAB SAMPLE ID ---->	43472-018				
		ID FROM REPORT -->	GDHGM07D02				
		SAMPLE DATE ----->	03/31/95				
		DATE ANALYZED ---->	04/13/95				
		MATRIX ----->	Water				
		UNITS ----->	UQ/L				
CAS #	Parameter	CHS41	VAL				
74-87-3	Chloromethane	10.	UJ				
74-83-9	Bromomethane	10.	U				
75-01-4	Vinyl chloride	10.	U				
75-00-3	Chloroethane	5.	U				
75-09-2	Methylene chloride	10.	U				
67-64-1	Acetone	32.					
75-15-0	Carbon disulfide	5.	U				
109-99-9	Tetrahydrofuran	25.	U				
75-69-4	Trichlorofluoromethane	5.	U				
75-35-4	1,1-Dichloroethylene	5.	U				
75-34-3	1,1-Dichloroethane	5.	U				
540-59-0	1,2-Dichloroethene (total)	5.	U				
67-66-3	Chloroform	5.	U				
107-06-2	1,2-Dichloroethane	5.	U				
78-93-3	2-Butanone (MEK)	25.	U				
71-55-6	1,1,1-Trichloroethane	5.	U				
56-23-5	Carbon tetrachloride	5.	U				
108-05-4	Vinyl acetate	10.	U				
75-27-4	Bromodichloromethane	5.	U				
78-87-5	1,2-Dichloropropene	5.	U				
10061-01-5	cis-1,3-Dichloropropene	5.	U				
10061-02-6	trans-1,3-Dichloropropene	5.	U				
79-01-6	Trichloroethene	5.	U				
124-48-1	Dibromochloromethane	5.	U				
79-00-5	1,1,2-Trichloroethane	5.	U				
71-43-2	Benzene	5.	U				
75-25-2	Bromoform	5.	U				
108-10-1	4-Methyl-2-Pentanone (MIBK)	25.	U				
591-78-6	2-Hexanone	25.	U				
127-18-4	Tetrachloroethene	5.	U				
79-34-5	1,1,2,2-Tetrachloroethane	5.	U				
108-88-3	Toluene	5.	U				
108-90-7	Chlorobenzene	5.	U				
100-41-4	Ethylbenzene	5.	U				
100-42-5	Styrene	5.	U				
1330-20-7	Xylene (Total)	5.	U				
110-75-8	2-Chloroethyl vinyl ether	NR					

Appendix N

Analytical Data for Soil Samples Collected in Other Impacted Areas

Section 1A

**Areas G07 and G38
Analytical Data for Soil**

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SUB46-CN		SAMPLE ID ----->	GDH-S-8007-01	GDH-S-8007-02	GDH-S-8038-01	GDH-S-8038-02			
		ORIGINAL ID ----->	GDHS800701	GDHS800702	GDHS803801	GDHS803802			
		LAB SAMPLE ID ---->	41665-051	41665-052	41742-039	41742-040			
		ID FROM REPORT -->	092818	092819	GDHS803801	GDHS803802			
		SAMPLE DATE ----->	09/27/94	09/27/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/11/94	10/11/94			
		DATE ANALYZED ---->	10/06/94	10/06/94	10/17/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS18	VAL	CHS18	VAL
CN	Cyanide	1.	U	1.	U	2.	U	1.	U

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SMB46-META		SAMPLE ID ----->	GDH-S-8007-01	GDH-S-8007-02	GDH-S-8038-01	GDH-S-8038-02			
		ORIGINAL ID ----->	GDHS800701	GDHS800702	GDHS803801	GDHS803802			
		LAB SAMPLE ID ---->	41665-051	41665-052	41742-039	41742-040			
		ID FROM REPORT -->	092818	092819	GDHS803801	GDHS803802			
		SAMPLE DATE ----->	09/27/94	09/27/94	10/05/94	10/05/94			
		DATE EXTRACTED -->	10/05/94	10/05/94	10/11/94	10/11/94			
		DATE ANALYZED --->	10/06/94	10/06/94	10/17/94	10/18/94			
		MATRIX ----->	Soil	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS15	VAL	CHS15	VAL	CHS18	VAL	CHS18	VAL
7429-90-5	Aluminum	8510.	J	6140.	J	5640.		13500.	
7439-89-6	Iron	10600.		12100.		5630.		12000.	
7439-92-1	Lead	74.		37.2		36.2		16.	
7440-02-0	Nickel	7.9		5.2		4.3		7.7	
7440-09-7	Potassium	769.		563.		333.	J	828.	
7440-22-4	Silver	0.29	UJ	0.21	UJ	0.74	J	0.34	UJ
7440-23-5	Sodium	136.	J	161.	J	90.7	J	144.	
7440-28-0	Thallium	0.33	U	0.24	U	0.3	UJ	0.46	J
7440-36-0	Antimony	1.4	U	1.5	J	1.3	U	1.7	U
7440-38-2	Arsenic	6.3		7.3		11.8		9.6	
7440-39-3	Barium	17.		11.2		14.		19.3	
7440-41-7	Beryllium	0.45	J	0.41		0.26	J	0.58	J
7440-43-9	Cadmium	0.17	U	0.88		0.19	J	0.2	U
7440-48-4	Cobalt	2.7	J	2.3		1.4	J	3.	J
7440-50-8	Copper	19.		23.5		8.2		8.4	
7440-62-2	Vanadium	25.1		18.		14.3		27.9	
7440-66-6	Zinc	92.2		233.		202.		50.	
7782-49-2	Selenium	0.33	U	0.24	U	0.3	U	0.4	U
7439-97-6	Mercury	0.83	J	1.1	J	0.06	J	0.11	J
7439-95-4	Magnesium	1790.		1180.		888.		1780.	
7439-96-5	Manganese	239.		153.		82.		124.	
7440-70-2	Calcium	63400.		11800.		32700.		15600.	
7440-47-3	Chromium	27.1		19.6		15.		21.8	

CHARLES J - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SMB46-PEST		SAMPLE ID ----->	G07-S-8001-01	G07-S-8001-02	G07-S-8002-01	G07-S-8002-02	G38-S-8001-01	G38-S-8001-02					
		ORIGINAL ID ----->	GDHSB09801	GDHSB09802	GDHSB09701	GDHSB09702	GDHSB09501	GDHSB09502					
		LAB SAMPLE ID ---->	42968-005	42968-006	42968-007	42968-008	42980-003	42980-004					
		ID FROM REPORT -->	GDHSB09801	GDHSB09802	GDHSB09701	GDHSB09702	GDHSB09501	GDHSB09502					
		SAMPLE DATE ----->	02/02/95	02/02/95	02/02/95	02/02/95	02/03/95	02/03/95					
		DATE EXTRACTED -->	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95					
		DATE ANALYZED ---->	02/09/95	02/09/95	02/09/95	02/09/95	02/09/95	02/09/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS33	VAL	CHS33	VAL	CHS33	VAL	CHS33	VAL	CHS34	VAL	CHS34	VAL
11097-69-1	Aroclor-1254	200.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11104-28-2	Aroclor-1221	200.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11141-16-5	Aroclor-1232	200.	U	40.	U	40.	U	40.	U	40.	U	40.	U
12672-29-6	Aroclor-1248	200.	U	40.	U	40.	U	40.	U	40.	U	40.	U
11096-82-5	Aroclor-1260	970.		40.	U	40.	U	40.	U	40.	U	160.	
12674-11-2	Aroclor-1016	200.	U	40.	U	40.	U	40.	U	40.	U	40.	U
53469-21-9	Aroclor-1242	200.	U	40.	U	40.	U	40.	U	40.	U	40.	U
1024-57-3	Heptachlor epoxide	NR		NR		NR		NR		NR		NR	
1031-07-8	Endosulfan sulfate	NR		NR		NR		NR		NR		NR	
309-00-2	Aldrin	NR		NR		NR		NR		NR		NR	
319-84-6	alpha-BHC	NR		NR		NR		NR		NR		NR	
319-85-7	beta-BHC	NR		NR		NR		NR		NR		NR	
319-86-8	delta-BHC	NR		NR		NR		NR		NR		NR	
33213-65-9	Endosulfan II	NR		NR		NR		NR		NR		NR	
50-29-3	4,4'-DDT	NR		NR		NR		NR		NR		NR	
5103-71-9	alpha-Chlordane	NR		NR		NR		NR		NR		NR	
5103-74-2	gamma-Chlordane	NR		NR		NR		NR		NR		NR	
53494-70-5	Endrin ketone	NR		NR		NR		NR		NR		NR	
58-89-9	gamma-BHC (Lindane)	NR		NR		NR		NR		NR		NR	
60-57-1	Dieldrin	NR		NR		NR		NR		NR		NR	
72-20-8	Endrin	NR		NR		NR		NR		NR		NR	
72-43-5	Methoxychlor	NR		NR		NR		NR		NR		NR	
72-54-8	4,4'-DDD	NR		NR		NR		NR		NR		NR	
72-55-9	4,4'-DDE	NR		NR		NR		NR		NR		NR	
7421-93-4	Endrin aldehyde	NR		NR		NR		NR		NR		NR	
76-44-8	Heptachlor	NR		NR		NR		NR		NR		NR	
8001-35-2	Toxaphene	NR		NR		NR		NR		NR		NR	
959-98-8	Endosulfan I	NR		NR		NR		NR		NR		NR	
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	G38-S-8002-01	G38-S-8002-02	G38-S-8003-01	G38-S-8003-02	GDH-S-8007-01	GDH-S-8007-02					
		ORIGINAL ID ----->	GDHS809401	GDHS809402	GDHS809601	GDHS809602	GDHS800701	GDHS800702					
		LAB SAMPLE ID ---->	42980-001	42980-002	42968-003	42968-004	41665-032	41665-033					
		ID FROM REPORT -->	GDHS809401	GDHS809402	GDHS809601	GDHS809602	092818	092819					
		SAMPLE DATE ----->	02/03/95	02/03/95	02/02/95	02/02/95	09/27/94	09/27/94					
		DATE EXTRACTED -->	02/08/95	02/08/95	02/08/95	02/08/95	10/05/94	10/05/94					
		DATE ANALYZED ---->	02/09/95	02/17/95	02/09/95	02/09/95	10/19/94	10/19/94					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS33	VAL	CHS33	VAL	CHS15	VAL	CHS15	VAL
11097-69-1	Aroclor-1254	50.	U	60.	U	200.	U	60.	U	200.	U	40.	U
11104-28-2	Aroclor-1221	50.	U	60.	U	200.	U	60.	U	200.	U	40.	U
11141-16-5	Aroclor-1232	50.	U	60.	U	200.	U	60.	U	200.	U	40.	U
12672-29-6	Aroclor-1248	50.	U	60.	U	200.	U	60.	U	200.	U	40.	U
11096-82-5	Aroclor-1260	50.	U	60.	U	1100.	U	60.	U	2600.	U	40.	U
12674-11-2	Aroclor-1016	50.	U	60.	U	200.	U	60.	U	200.	U	40.	U
53469-21-9	Aroclor-1242	50.	U	60.	U	200.	U	60.	U	200.	U	40.	U
1024-57-3	Heptachlor epoxide	NR		600.	U	NR		NR		20.	U	4.	U
1031-07-8	Endosulfan sulfate	NR		1000.	U	NR		NR		40.	U	9.	U
309-00-2	Aldrin	NR		600.	U	NR		NR		20.	U	4.	U
319-84-6	alpha-BHC	NR		600.	U	NR		NR		20.	U	4.	U
319-85-7	beta-BHC	NR		600.	U	NR		NR		20.	U	4.	U
319-86-8	delta-BHC	NR		600.	U	NR		NR		20.	U	4.	U
33213-65-9	Endosulfan II	NR		1000.	U	NR		NR		40.	U	9.	U
50-29-3	4,4'-DDT	NR		1000.	U	NR		NR		140.	J	9.	U
5103-71-9	alpha-Chlordane	NR		600.	U	NR		NR		20.	U	4.	U
5103-74-2	gamma-Chlordane	NR		600.	U	NR		NR		20.	U	4.	U
53494-70-5	Endrin ketone	NR		1000.	U	NR		NR		40.	U	9.	U
58-89-9	gamma-BHC (Lindane)	NR		600.	U	NR		NR		20.	U	4.	U
60-57-1	Dieldrin	NR		600.	U	NR		NR		20.	U	4.	U
72-20-8	Endrin	NR		600.	U	NR		NR		20.	U	4.	U
72-43-5	Methoxychlor	NR		6000.	U	NR		NR		200.	U	40.	U
72-54-8	4,4'-DDD	NR		3600.	U	NR		NR		40.	U	9.	U
72-55-9	4,4'-DDE	NR		5700.	U	NR		NR		20.	U	4.	U
7421-93-4	Endrin aldehyde	NR		1000.	U	NR		NR		100.	U	9.	U
76-44-8	Heptachlor	NR		600.	U	NR		NR		20.	U	4.	U
8001-35-2	Toxaphene	NR		30000.	U	NR		NR		800.	U	200.	U
959-98-8	Endosulfan I	NR		600.	U	NR		NR		20.	U	4.	U
57-74-9	Chlordane	NR		NR		NR		NR		NR		NR	

CHARLES J - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-8038-01	GDH-S-8038-02				
		ORIGINAL ID ----->	GDHSB03801	GDHSB03802				
		LAB SAMPLE ID ---->	41742-021	41742-022				
		ID FROM REPORT -->	GDHSB03801	GDHSB03802				
		SAMPLE DATE ----->	10/05/94	10/05/94				
		DATE EXTRACTED -->	10/14/94	10/14/94				
		DATE ANALYZED ---->	11/01/94	11/01/94				
		MATRIX ----->	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG				
CAS #	Parameter	CHS18	VAL	CHS18	VAL			
11097-69-1	Aroclor-1254	400.	U	50.	U			
11104-28-2	Aroclor-1221	400.	U	50.	U			
11141-16-5	Aroclor-1232	400.	U	50.	U			
12672-29-6	Aroclor-1248	400.	U	50.	U			
11096-82-5	Aroclor-1260	4000.		290.				
12674-11-2	Aroclor-1016	400.	U	50.	U			
53469-21-9	Aroclor-1242	400.	U	50.	U			
1024-57-3	Heptachlor epoxide	40.	U	5.	U			
1031-07-8	Endosulfan sulfate	80.	U	10.	U			
309-00-2	Aldrin	40.	U	5.	U			
319-84-6	alpha-BHC	40.	U	5.	U			
319-85-7	beta-BHC	40.	U	5.	U			
319-86-8	delta-BHC	40.	U	5.	U			
33213-65-9	Endosulfan II	80.	U	10.	U			
50-29-3	4,4'-DDT	180.		21.				
5103-71-9	alpha-Chlordane	40.	U	5.	U			
5103-74-2	gamma-Chlordane	40.	U	5.	U			
53494-70-5	Endrin ketone	80.	U	10.	U			
58-89-9	gamma-BHC (Lindane)	40.	U	5.	U			
60-57-1	Dieldrin	40.	U	5.	U			
72-20-8	Endrin	40.	U	5.	U			
72-43-5	Methoxychlor	400.	U	50.	U			
72-54-8	4,4'-DDD	80.	U	10.	U			
72-55-9	4,4'-DDE	40.	U	19.				
7421-93-4	Endrin aldehyde	80.	U	10.	U			
76-44-8	Heptachlor	40.	U	5.	U			
8001-35-2	Toxaphene	2000.	U	200.	U			
959-98-8	Endosulfan I	40.	U	5.	U			
57-74-9	Chlordane	NR		NR				

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SUB46-SVDA		SAMPLE ID ----->	G07-S-8001-01	G07-S-8001-02	G07-S-8002-01	G07-C-8002-01	G07-S-8002-02	G38-S-8003-01					
		ORIGINAL ID ----->	GDHSB09801	GDHSB09802	GDHSB09701	GDHCB10201	GDHSB09702	GDHSB09601					
		LAB SAMPLE ID ---->	42968-005	42968-006	42968-007	42980-013	42968-008	42968-003					
		ID FROM REPORT -->	GDHSB09801	GDHSB09802	GDHSB09701	GDHCB10201	GDHSB09702	GDHSB09601					
		SAMPLE DATE ----->	02/02/95	02/02/95	02/02/95	02/03/95	02/02/95	02/02/95					
		DATE EXTRACTED -->	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95					
		DATE ANALYZED ---->	02/09/95	02/09/95	02/09/95	02/14/95	02/09/95	02/09/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS33	VAL	CHS33	VAL	CHS33	VAL	CHS34	VAL	CHS33	VAL	CHS33	VAL
62-75-9	N-Nitrosodimethylamine	430.	U	370.	U	440.	U	390.	UJ	430.	U	390.	U
606-20-2	2,6-Dinitrotoluene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
108-95-2	Phenol	430.	U	370.	U	440.	U	390.	UJ	430.	U	390.	U
99-09-2	3-Nitroaniline	2100.	U	1900.	U	2200.	U	1900.	U	2100.	U	1900.	U
62-53-3	Aniline	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
83-32-9	Acenaphthene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
111-44-4	bis(2-Chloroethyl)ether	430.	U	370.	U	440.	U	390.	UJ	430.	U	390.	U
51-28-5	2,4-Dinitrophenol	2100.	U	1900.	U	2200.	U	1900.	UJ	2100.	U	1900.	U
95-57-8	2-Chlorophenol	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
100-02-7	4-Nitrophenol	2100.	U	1900.	U	2200.	U	1900.	U	2100.	U	1900.	U
541-73-1	1,3-Dichlorobenzene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
132-64-9	Oibenzofuran	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
106-46-7	1,4-Dichlorobenzene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
121-14-2	2,4-Dinitrotoluene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
100-51-6	Benzyl alcohol	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
84-66-2	Diethylphthalate	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
95-50-1	1,2-Dichlorobenzene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
7005-72-3	4-Chlorophenylphenylether	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
95-48-7	2-Methylphenol (o-Cresol)	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
86-73-7	Fluorene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
100-01-6	4-Nitroaniline	2100.	U	1900.	U	2200.	U	1900.	U	2100.	U	1900.	U
106-44-5	4-Methylphenol (p-Cresol)	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	2100.	UJ	1900.	UJ	2200.	UJ	1900.	UJ	2100.	UJ	1900.	UJ
621-64-7	N-Nitroso-di-n-propylamine	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
86-30-6	N-Nitrosodiphenylamine	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
67-72-1	Hexachloroethane	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
101-55-3	4-Bromophenylphenylether	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
98-95-3	Nitrobenzene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
118-74-1	Hexachlorobenzene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
78-59-1	Isophorone	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
87-86-5	Pentachlorophenol	430.	U	370.	U	440.	U	390.	UJ	430.	U	390.	U
88-75-5	2-Nitrophenol	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
85-01-8	Phenanthrene	430.	U	370.	U	440.	U	390.	U	430.	U	350.	J
105-67-9	2,4-Dimethylphenol	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
120-12-7	Anthracene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U

CHARLES ON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SM846-SV0A		SAMPLE ID ----->	G07-S-8001-01	G07-S-8001-02	G07-S-8002-01	G07-C-8002-01	G07-S-8002-02	G38-S-8003-01					
		ORIGINAL ID ----->	GDHSB09801	GDHSB09802	GDHSB09701	GDHCB10201	GDHSB09702	GDHSB09601					
		LAB SAMPLE ID ---->	42968-005	42968-006	42968-007	42980-013	42968-008	42968-003					
		ID FROM REPORT -->	GDHSB09801	GDHSB09802	GDHSB09701	GDHCB10201	GDHSB09702	GDHSB09601					
		SAMPLE DATE ----->	02/02/95	02/02/95	02/02/95	02/03/95	02/02/95	02/02/95					
		DATE EXTRACTED -->	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95					
		DATE ANALYZED ---->	02/09/95	02/09/95	02/09/95	02/14/95	02/09/95	02/09/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS33	VAL	CHS33	VAL	CHS33	VAL	CHS34	VAL	CHS33	VAL	CHS33	VAL
65-85-0	Benzoic acid	2100.	UJ	1900.	UJ	2200.	UJ	1900.	UJ	2100.	UJ	1900.	UJ
84-74-2	Di-n-butylphthalate	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
111-91-1	bis(2-Chloroethoxy)methane	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
206-44-0	Fluoranthene	110.	J	370.	U	120.	J	390.	U	430.	U	690.	
120-83-2	2,4-Dichlorophenol	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
92-87-5	Benzdine	2100.	UJ	1900.	UJ	2200.	UJ	1900.	U	2100.	UJ	1900.	UJ
120-82-1	1,2,4-Trichlorobenzene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
129-00-0	Pyrene	430.	U	370.	U	93.	J	390.	U	430.	U	500.	
91-20-3	Naphthalene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
85-68-7	Butylbenzylphthalate	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
106-47-8	4-Chloroaniline	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
91-94-1	3,3'-Dichlorobenzidine	850.	U	740.	U	870.	U	780.	U	850.	U	780.	U
87-68-3	Hexachlorobutadiene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
56-55-3	Benzo(a)anthracene	430.	U	370.	U	440.	U	390.	U	430.	U	190.	J
59-50-7	4-Chloro-3-methylphenol	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
218-01-9	Chrysene	430.	U	370.	U	440.	U	390.	U	430.	U	320.	J
91-57-6	2-Methylnaphthalene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	430.	U	370.	U	93.	J	390.	U	430.	U	390.	U
77-47-4	Hexachlorocyclopentadiene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
117-84-0	Di-n-octylphthalate	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
88-06-2	2,4,6-Trichlorophenol	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
205-99-2	Benzo(b)fluoranthene	430.	U	370.	U	140.	J	390.	U	430.	U	320.	J
95-95-4	2,4,5-Trichlorophenol	2100.	U	1900.	U	2200.	U	1900.	U	2100.	U	1900.	U
207-08-9	Benzo(k)fluoranthene	430.	U	370.	U	440.	U	390.	U	430.	U	240.	J
91-58-7	2-Chloronaphthalene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
50-32-8	Benzo(a)pyrene	110.	J	370.	U	440.	U	390.	U	430.	U	250.	J
88-74-4	2-Nitroaniline	2100.	U	1900.	U	2200.	U	1900.	U	2100.	U	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	430.	U	370.	U	440.	U	390.	U	430.	U	140.	J
131-11-3	Dimethylphthalate	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
53-70-3	Dibenzo(a,h)anthracene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
208-96-8	Acenaphthylene	430.	U	370.	U	440.	U	390.	U	430.	U	390.	U
191-24-2	Benzo(g,h,i)perylene	150.	J	370.	U	440.	U	390.	U	430.	U	140.	J
103-33-3	Azobenzene	NR		NR		NR		NR		NR		NR	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SW846-SVDA		SAMPLE ID ----->	G38-S-8003-02	GDH-S-8007-01	GDH-S-8007-02	GDH-S-8038-01	GDH-S-8038-02				
		ORIGINAL ID ----->	GDHS809602	GDHS800701	GDHS800702	GDHS803801	GDHS803802				
		LAB SAMPLE ID --->	42968-004	41665-032	41665-033	41742-021	41742-022				
		ID FROM REPORT -->	GDHS809602	092818	092819	GDHS803801	GDHS803802				
		SAMPLE DATE ----->	02/02/95	09/27/94	09/27/94	10/05/94	10/05/94				
		DATE EXTRACTED -->	02/08/95	10/05/94	10/05/94	10/14/94	10/17/94				
		DATE ANALYZED -->	02/09/95	10/10/94	10/10/94	10/18/94	10/18/94				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG				
CAS #	Parameter	CHS33	VAL	CHS15	VAL	CHS15	VAL	CHS18	VAL	CHS18	VAL
62-75-9	N-Nitrosodimethylamine	3000.	U	400.	U	450.	U	390.	U	490.	U
606-20-2	2,6-Dinitrotoluene	3000.	U	400.	U	450.	U	390.	U	490.	U
108-95-2	Phenol	3000.	U	400.	U	450.	U	390.	U	490.	U
99-09-2	3-Nitroaniline	15000.	U	2000.	U	2300.	U	2000.	U	2400.	U
62-53-3	Aniline	3000.	U	400.	U	450.	U	390.	U	490.	U
83-32-9	Acenaphthene	3000.	U	400.	U	450.	U	390.	U	490.	U
111-44-4	bis(2-Chloroethyl)ether	3000.	U	400.	U	450.	U	390.	U	490.	U
51-28-5	2,4-Dinitrophenol	15000.	U	2000.	U	2300.	U	2000.	U	2400.	U
95-57-8	2-Chlorophenol	3000.	U	400.	U	450.	U	390.	U	490.	U
100-02-7	4-Nitrophenol	15000.	U	2000.	U	2300.	U	2000.	U	2400.	U
541-73-1	1,3-Dichlorobenzene	3000.	U	400.	U	450.	U	390.	U	490.	U
132-64-9	Dibenzofuran	3000.	U	400.	U	450.	U	390.	U	490.	U
106-46-7	1,4-Dichlorobenzene	3000.	U	400.	U	450.	U	390.	U	490.	U
121-14-2	2,4-Dinitrotoluene	3000.	U	400.	U	450.	U	390.	U	490.	U
100-51-6	Benzyl alcohol	3000.	U	400.	U	450.	U	390.	U	490.	U
84-66-2	Diethylphthalate	3000.	U	400.	U	450.	U	390.	U	490.	U
95-50-1	1,2-Dichlorobenzene	3000.	U	400.	U	450.	U	390.	U	490.	U
7005-72-3	4-Chlorophenylphenylether	3000.	U	400.	U	450.	U	390.	U	490.	U
95-48-7	2-Methylphenol (o-Cresol)	3000.	U	400.	U	450.	U	390.	U	490.	U
86-73-7	Fluorene	3000.	U	400.	U	450.	U	390.	U	490.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3000.	U	400.	U	450.	U	390.	U	490.	U
100-01-6	4-Nitroaniline	15000.	U	2000.	U	2300.	U	2000.	U	2400.	U
106-44-5	4-Methylphenol (p-Cresol)	3000.	U	400.	U	450.	U	390.	U	490.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	15000.	UJ	2000.	U	2300.	U	2000.	U	2400.	U
621-64-7	N-Nitroso-di-n-propylamine	3000.	U	400.	U	450.	U	390.	U	490.	U
86-30-6	N-Nitrosodiphenylamine	3000.	U	400.	U	450.	U	390.	U	490.	U
67-72-1	Hexachloroethane	3000.	U	400.	U	450.	U	390.	U	490.	U
101-55-3	4-Bromophenylphenylether	3000.	U	400.	U	450.	U	390.	U	490.	U
98-95-3	Nitrobenzene	3000.	U	400.	U	450.	U	390.	U	490.	U
118-74-1	Hexachlorobenzene	3000.	U	400.	U	450.	U	390.	U	490.	U
78-59-1	Isophorone	3000.	U	400.	U	450.	U	390.	U	490.	U
87-86-5	Pentachlorophenol	3000.	U	400.	UJ	450.	UJ	390.	U	490.	U
88-75-5	2-Nitrophenol	3000.	U	400.	U	450.	U	390.	U	490.	U
85-01-8	Phenanthrene	3000.	U	160.	J	450.	U	390.	U	490.	U
105-67-9	2,4-Dimethylphenol	3000.	U	400.	U	450.	U	390.	U	490.	U
120-12-7	Anthracene	3000.	U	400.	U	450.	U	390.	U	490.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SUB46-SVOA		SAMPLE ID ----->	G38-S-8003-02	GDH-S-8007-01	GDH-S-8007-02	GDH-S-8038-01	GDH-S-8038-02				
		ORIGINAL ID ----->	GDHSB09602	GDHSB00701	GDHSB00702	GDHSB03801	GDHSB03802				
		LAB SAMPLE ID ---->	42968-004	41665-032	41665-033	41742-021	41742-022				
		ID FROM REPORT -->	GDHSB09602	092818	092819	GDHSB03801	GDHSB03802				
		SAMPLE DATE ----->	02/02/95	09/27/94	09/27/94	10/05/94	10/05/94				
		DATE EXTRACTED -->	02/08/95	10/05/94	10/05/94	10/14/94	10/17/94				
		DATE ANALYZED -->	02/09/95	10/10/94	10/10/94	10/18/94	10/18/94				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG				
CAS #	Parameter	CHS33	VAL	CHS15	VAL	CHS15	VAL	CHS18	VAL	CHS18	VAL
65-85-0	Benzoic acid	15000.	UJ	2000.	U	2300.	U	2000.	U	2400.	U
84-74-2	Di-n-butylphthalate	3000.	U	400.	U	450.	U	390.	U	490.	U
111-91-1	bis(2-Chloroethoxy)methane	3000.	U	400.	U	450.	U	390.	U	490.	U
206-44-0	Fluoranthene	3000.	U	380.	J	450.	U	390.	U	490.	U
120-83-2	2,4-Dichlorophenol	3000.	U	400.	U	450.	U	390.	U	490.	U
92-87-5	Benzidine	15000.	UJ	2000.	UJ	2300.	UJ	2000.	U	2400.	U
120-82-1	1,2,4-Trichlorobenzene	3000.	U	400.	U	450.	U	390.	U	490.	U
129-00-0	Pyrene	3000.	U	310.	J	450.	U	390.	U	490.	U
91-20-3	Naphthalene	3000.	U	400.	U	450.	U	390.	U	490.	U
85-68-7	Butylbenzylphthalate	3000.	U	400.	U	450.	U	390.	U	490.	U
106-47-8	4-Chloroaniline	3000.	U	400.	U	450.	U	390.	U	490.	U
91-94-1	3,3'-Dichlorobenzidine	6100.	U	790.	U	900.	U	780.	U	970.	U
87-68-3	Hexachlorobutadiene	3000.	U	400.	U	450.	U	390.	U	490.	U
56-55-3	Benzo(a)anthracene	3000.	U	150.	J	450.	U	390.	U	490.	U
59-50-7	4-Chloro-3-methylphenol	3000.	U	400.	U	450.	U	390.	U	490.	U
218-01-9	Chrysene	3000.	U	200.	J	450.	U	390.	U	490.	U
91-57-6	2-Methylnaphthalene	3000.	U	400.	U	450.	U	390.	U	490.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	3000.	U	93.	J	450.	UJ	390.	UJ	490.	UJ
77-47-4	Hexachlorocyclopentadiene	3000.	U	400.	U	450.	U	390.	U	490.	U
117-84-0	Di-n-octylphthalate	3000.	U	400.	UJ	450.	UJ	390.	UJ	490.	UJ
88-06-2	2,4,6-Trichlorophenol	3000.	U	400.	U	450.	U	390.	U	490.	U
205-99-2	Benzo(b)fluoranthene	3000.	U	200.	J	450.	U	390.	U	490.	U
95-95-4	2,4,5-Trichlorophenol	15000.	U	2000.	U	2300.	U	2000.	U	2400.	U
207-08-9	Benzo(k)fluoranthene	3000.	U	190.	J	450.	UJ	390.	U	490.	U
91-58-7	2-Chloronaphthalene	3000.	U	400.	U	450.	U	390.	U	490.	U
50-32-8	Benzo(a)pyrene	3000.	U	170.	J	450.	U	390.	U	490.	U
88-74-4	2-Nitroaniline	15000.	U	2000.	U	2300.	U	2000.	U	2400.	U
193-39-5	Indeno(1,2,3-cd)pyrene	3000.	U	80.	J	450.	U	390.	U	490.	U
131-11-3	Dimethylphthalate	3000.	U	400.	U	450.	U	390.	U	490.	U
53-70-3	Dibenzo(a,h)anthracene	3000.	U	400.	U	450.	U	390.	U	490.	U
208-96-8	Acenaphthylene	3000.	U	400.	U	450.	U	390.	U	490.	U
191-24-2	Benzo(g,h,i)perylene	3000.	U	400.	U	450.	U	390.	U	490.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G07 and G38 OIA Soil Analytical Data

SW846-V0A		SAMPLE ID ----->	G07-C-8002-01	GDH-S-8007-01	GDH-S-8007-02	GDH-S-8038-01	GDH-S-8038-02				
		ORIGINAL ID ----->	GDHCB10201	GDHSB00701	GDHSB00702	GDHSB03801	GDHSB03802				
		LAB SAMPLE ID ---->	42980-022	41665-013	41665-014	41742-003	41742-004				
		ID FROM REPORT -->	GDHCB10201	092818	092819	GDHSB03801	GDHSB03802				
		SAMPLE DATE ----->	02/03/95	09/27/94	09/27/94	10/05/94	10/05/94				
		DATE ANALYZED ---->	02/10/95	10/10/94	10/10/94	10/13/94	10/18/94				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG				
CAS #	Parameter	CHS34	VAL	CHS15	VAL	CHS15	VAL	CHS18	VAL	CHS18	VAL
100-41-4	Ethylbenzene	6.	U	6.	U	6.	U	6.	U	8.	U
100-42-5	Styrene	6.	U	6.	U	6.	U	6.	U	8.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	8.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	6.	U	6.	U	8.	U
107-06-2	1,2-Dichloroethane	6.	U	6.	U	6.	U	6.	U	8.	UJ
108-05-4	Vinyl acetate	12.	U	12.	U	12.	U	11.	UJ	15.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	30.	U	31.	U	31.	U	28.	U	38.	UJ
108-88-3	Toluene	6.	U	6.	U	6.	U	3.3	J	4.8	J
108-90-7	Chlorobenzene	6.	U	6.	U	6.	U	6.	U	8.	U
109-99-9	Tetrahydrofuran	30.	U	31.	U	31.	U	28.	U	38.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	6.	U	6.	U	8.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	6.	U	6.	U	8.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	6.	U	6.	U	8.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	6.	U	6.	U	8.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	6.	U	6.	U	8.	UJ
591-78-6	2-Hexanone	30.	U	31.	U	31.	U	28.	U	38.	UJ
67-64-1	Acetone	12.	U	30.	U	30.	U	20.	J	110.	J
67-66-3	Chloroform	6.	U	6.	U	6.	U	6.	U	8.	U
71-43-2	Benzene	6.	U	6.	U	6.	U	6.	U	8.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	6.	U	6.	U	8.	U
74-83-9	Bromomethane	12.	U	12.	U	12.	U	11.	U	15.	U
74-87-3	Chloromethane	12.	U	12.	UJ	12.	UJ	11.	UJ	15.	U
75-00-3	Chloroethane	6.	U	6.	U	6.	U	6.	U	8.	UJ
75-01-4	Vinyl chloride	12.	U	12.	U	12.	U	11.	U	15.	U
75-09-2	Methylene chloride	12.	U	4.9	J	5.	J	16.	U	23.	U
75-15-0	Carbon disulfide	6.	U	6.	U	6.	U	6.	UJ	8.	UJ
75-25-2	Bromoform	6.	U	6.	U	6.	U	6.	U	8.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	6.	U	6.	U	8.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	6.	U	6.	U	8.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	6.	U	6.	U	8.	U
75-69-4	Trichlorofluoromethane	6.	U	6.	U	6.	U	6.	U	8.	U
78-87-5	1,2-Dichloropropane	6.	U	6.	U	6.	U	6.	U	8.	U
78-93-3	2-Butanone (MEK)	30.	U	31.	U	31.	U	28.	U	38.	U
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	6.	U	6.	U	8.	U
79-01-6	Trichloroethene	6.	U	6.	U	6.	U	6.	U	8.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	6.	U	6.	U	8.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

Section 1B

Area G80

Analytical Data for Soil

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-CN		SAMPLE ID ----->	G80-C-8004-01				
		ORIGINAL ID ----->	GDHC809701				
		LAB SAMPLE ID ---->	42969-001				
		ID FROM REPORT -->	GDHC809701				
		SAMPLE DATE ----->	02/02/95				
		DATE EXTRACTED -->	02/09/95				
		DATE ANALYZED ---->	02/13/95				
		MATRIX ----->	Soil				
		UNITS ----->	MG/KG				
CAS #	Parameter	APX16	VAL				
CN	Cyanide	1.	U				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-DIOXI		SAMPLE ID ----->	G80-C-8004-01				
		ORIGINAL ID ----->	GDHCB09701				
		LAB SAMPLE ID ---->	1L0171-1				
		ID FROM REPORT -->	GDHCB09701				
		SAMPLE DATE ----->	02/02/95				
		DATE EXTRACTED -->	02/13/95				
		DATE ANALYZED ---->	02/27/95				
		MATRIX ----->	Soil				
		UNITS ----->	PG/G				
CAS #	Parameter	APX16	VAL				
1746-01-6	2378-TCDD	0.3387	U				
19408-74-3	123789-HxCDD	13.2661	J				
3268-87-9	OCDD	3170.8909	J				
35822-46-9	1234678-HpCDD	328.5581	J				
39001-02-0	OCDF	192.1856	J				
39227-28-6	123478-HxCDD	5.4816	EMPC				
40321-76-4	12378-PeCDD	2.4687	EMPC				
51207-31-9	2378-TCDF	2.1441	EMPC				
55673-89-7	1234789-HpCDF	4.2586	EMPC				
57117-31-4	23478-PeCDF	1.148	EMPC				
57117-41-6	12378-PeCDF	2.8275	EMPC				
57117-44-9	123678-HxCDF	2.2478	EMPC				
57653-85-7	123678-HxCDD	11.4872	J				
60851-34-5	234678-HxCDF	3.3429	EMPC				
67562-39-4	1234678-HpCDF	57.0717	J				
70648-26-9	123478-HxCDF	3.535	EMPC				
72918-21-9	123789-HxCDF	74.84	U				
9999900-00-6	Total TCDD	15.1397	J				
9999900-00-7	Total PeCDD	24.4299	J				
9999900-00-8	Total HxCDD	271.0288	J				
9999900-00-9	Total HpCDD	788.4532	J				
9999900-01-0	Total TCDF	22.1784	J				
9999900-01-1	Total PeCDF	31.7657	J				
9999900-01-2	Total HxCDF	94.6137	J				
9999900-01-3	Total HpCDF	211.427	J				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APK9-HERB	SAMPLE ID ----->	G80-C-8004-01					
	ORIGINAL ID ----->	GDHCB09701					
	LAB SAMPLE ID ---->	VWB-001					
	ID FROM REPORT -->	GDHCB09701					
	SAMPLE DATE ----->	02/02/95					
	DATE EXTRACTED -->	02/08/95					
	DATE ANALYZED -->	02/10/95					
	MATRIX ----->	Soil					
	UNITS ----->	UG/KG					

CAS #	Parameter	APX16	VAL				
93-72-1	2,4,5-TP (Silvex)	12.2	J				
93-76-5	2,4,5-T	10.	U				
94-75-7	2,4-D	50.	U				
94-82-6	2,4-DB.	NR					

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-HEXAC		SAMPLE ID ----->	G80-C-8004-01				
		ORIGINAL ID ----->	GDHCB09701				
		LAB SAMPLE ID ---->	42969-001				
		ID FROM REPORT -->	GDHCB09701				
		SAMPLE DATE ----->	02/02/95				
		DATE ANALYZED ---->	02/07/95				
		MATRIX ----->	Soil				
		UNITS ----->	MG/KG				
CAS #	Parameter	APX16	VAL				
9999900-00-5	Hexavalent Chromium	0.5	UJ				

CHARLES LN - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-METAL	SAMPLE ID ----->	G80-C-8004-01					
	ORIGINAL ID ----->	GDHCB09701					
	LAB SAMPLE ID ---->	42969-001					
	ID FROM REPORT -->	GDHCB09701					
	SAMPLE DATE ----->	02/02/95					
	DATE EXTRACTED -->	02/10/95					
	DATE ANALYZED ---->	02/13/95					
	MATRIX ----->	Soil					
	UNITS ----->	MG/KG					

CAS #	Parameter	APX16	VAL				
7439-92-1	Lead	40.5					
7439-97-6	Mercury	0.19					
7440-02-0	Nickel	8.3					
7440-22-4	Silver	0.17	UJ				
7440-31-5	Tin	0.48	U				
7440-36-0	Antimony	1.1	U				
7440-38-2	Arsenic	11.7					
7440-39-3	Barium	26.1					
7440-41-7	Beryllium	0.69					
7440-43-9	Cadmium	0.41	J				
7440-47-3	Chromium	29.3					
7440-48-4	Cobalt	3.9	U				
7440-50-8	Copper	21.2					
7440-62-2	Vanadium	38.8					
7440-66-6	Zinc	148.					
7782-49-2	Selenium	1.3	J				
7440-28-0	Thallium	0.34	U				

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-OP PE	SAMPLE ID ----->	G80-C-8004-01					
	ORIGINAL ID ----->	GDHC809701					
	LAB SAMPLE ID ---->	VWB-001					
	ID FROM REPORT -->	GDHC809701					
	SAMPLE DATE ----->	02/02/95					
	DATE EXTRACTED -->	02/08/95					
	DATE ANALYZED --->	02/10/95					
	MATRIX ----->	Soil					
	UNITS ----->	UG/KG					

CAS #	Parameter	APX16	VAL				
126-68-1	O,O,O-Triethylphosphorothioate	33.	U				
297-97-2	Thionazin	33.	U				
298-00-0	Methyl parathion	33.	U				
298-02-2	Phorate	33.	U				
298-04-4	Disulfoton	33.	U				
3689-24-5	Sulfotep	33.	U				
52-85-7	Famphur	33.	U				
56-38-2	Parathion	33.	U				
60-51-5	Dimethoate	33.	U				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-PEST		SAMPLE ID ----->	G80-C-8004-01				
		ORIGINAL ID ----->	GDHCB09701				
		LAB SAMPLE ID ---->	VWB-001				
		ID FROM REPORT -->	GDHCB09701				
		SAMPLE DATE ----->	02/02/95				
		DATE EXTRACTED -->	02/08/95				
		DATE ANALYZED ---->	02/11/95				
		MATRIX ----->	Soil				
		UNITS ----->	UG/KG				
CAS #	Parameter	APX16	VAL				
309-00-2	Aldrin	1.7	U				
319-84-6	alpha-BHC	1.7	U				
319-85-7	beta-BHC	1.7	U				
319-86-8	delta-BHC	1.7	U				
58-89-9	gamma-BHC (Lindane)	1.7	U				
5103-71-9	alpha-Chlordane	1.7	U				
5103-74-2	gamma-Chlordane	1.7	U				
510-15-6	Chlorobenzilate	33.	U				
72-54-8	4,4'-DDD	3.3	U				
72-55-9	4,4'-DDE	3.3	U				
50-29-3	4,4'-DDT	3.3	U				
2303-16-4	Diallate	33.	U				
60-57-1	Dieldrin	2.6	J				
959-98-8	Endosulfan I	1.7	U				
33213-65-9	Endosulfan II	3.3	U				
1031-07-8	Endosulfan sulfate	3.3	U				
72-20-8	Endrin	3.3	U				
7421-93-4	Endrin aldehyde	4.4					
76-44-8	Heptachlor	1.7	U				
1024-57-3	Heptachlor epoxide	1.7	U				
465-73-6	Isodrin	3.3	U				
143-50-0	Kepone	33.	U				
72-43-5	Methoxychlor	17.	U				
8001-35-2	Toxaphene	170.	U				
12674-11-2	Aroclor-1016	33.	U				
11104-28-2	Aroclor-1221	67.	U				
11141-16-5	Aroclor-1232	33.	U				
53469-21-9	Aroclor-1242	33.	U				
12672-29-6	Aroclor-1248	33.	U				
11097-69-1	Aroclor-1254	33.	U				
11096-82-5	Aroclor-1260	33.	U				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-SVDA	SAMPLE ID ----->	G80-C-8004-01					
	ORIGINAL ID ----->	GDHCB09701					
	LAB SAMPLE ID ---->	VWB-001					
	ID FROM REPORT -->	GDHCB09701					
	SAMPLE DATE ----->	02/02/95					
	DATE EXTRACTED -->	02/08/95					
	DATE ANALYZED ---->	02/22/95					
	MATRIX ----->	Soil					
	UNITS ----->	UG/KG					

CAS #	Parameter	APX16	VAL				
83-32-9	Acenaphthene	333.	U				
208-96-8	Acenaphthylene	333.	U				
98-86-2	Acetophenone	333.	U				
53-96-3	Acetamidofluorene	333.	U				
92-67-1	4-Aminobiphenyl	333.	U				
62-53-3	Aniline	333.	U				
120-12-7	Anthracene	333.	U				
140-57-8	Aramite	333.	U				
56-55-3	Benzo(a)anthracene	64.4	J				
205-99-2	Benzo(b)fluoranthene	115.	J				
207-08-9	Benzo(k)fluoranthene	66.9	J				
191-24-2	Benzo(g,h,i)perylene	333.	U				
50-32-8	Benzo(a)pyrene	78.5	J				
100-51-6	Benzyl alcohol	333.	U				
111-91-1	bis(2-Chloroethoxy)methane	333.	U				
111-44-4	bis(2-Chloroethyl) ether	333.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)	333.	U				
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	70.6	J				
101-55-3	4-Bromophenylphenylether	333.	U				
85-68-7	Butylbenzylphthalate	333.	U				
106-47-8	4-Chloroaniline	333.	U				
59-50-7	4-Chloro-3-methylphenol	333.	U				
91-58-7	2-Chloronaphthalene	333.	U				
95-57-8	2-Chlorophenol	333.	U				
7005-72-3	4-Chlorophenylphenylether	333.	U				
218-01-9	Chrysene	95.8	J				
95-48-7	2-Methylphenol (o-Cresol)	333.	U				
108-39-4	3-Methylphenol (m-Cresol)	333.	U				
106-44-5	4-Methylphenol (p-Cresol)	333.	U				
53-70-3	Dibenzo(a,h)anthracene	333.	U				
132-64-9	Dibenzofuran	333.	U				
95-50-1	1,2-Dichlorobenzene	333.	U				
541-73-1	1,3-Dichlorobenzene	333.	U				
106-46-7	1,4-Dichlorobenzene	333.	U				
91-94-1	3,3'-Dichlorobenzidine	667.	U				
120-83-2	2,4-Dichlorophenol	333.	U				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-SVDA		SAMPLE ID ----->	G80-C-8004-01				
		ORIGINAL ID ----->	GDHCB09701				
		LAB SAMPLE ID ---->	VWB-001				
		ID FROM REPORT -->	GDHCB09701				
		SAMPLE DATE ----->	02/02/95				
		DATE EXTRACTED -->	02/08/95				
		DATE ANALYZED ---->	02/22/95				
		MATRIX ----->	Soil				
		UNITS ----->	UG/KG				
CAS #	Parameter	APX16	VAL				
87-65-0	2,6-Dichlorophenol	333.	U				
84-66-2	Diethylphthalate	333.	U				
60-11-7	p-(Dimethylamino)azobenzene	333.	U				
57-97-6	7,12-Dimethylbenz(a)anthracene	333.	U				
119-93-7	3,3-Dimethylbenzidine	333.	U				
122-09-8	alpha, alpha-Dimethylphenethylamine	333.	U				
131-11-3	Dimethylphthalate	333.	U				
105-67-9	2,4-Dimethylphenol	333.	U				
84-74-2	Di-n-butylphthalate	333.	U				
99-65-0	1,3-Dinitrobenzene	333.	U				
534-52-1	2-Methyl-4,6-Dinitrophenol	1600.	UJ				
51-28-5	2,4-Dinitrophenol	1600.	UJ				
88-85-7	Dinoseb	333.	U				
121-14-2	2,4-Dinitrotoluene	333.	U				
606-20-2	2,6-Dinitrotoluene	333.	U				
117-84-0	Di-n-octylphthalate	333.	U				
122-39-4	Diphenylamine	333.	U				
97-63-2	Ethyl methacrylate	333.	U				
62-50-0	Ethyl methanesulfonate	333.	U				
206-44-0	Fluoranthene	135.	J				
86-73-7	Fluorene	333.	U				
118-74-1	Hexachlorobenzene	333.	U				
87-68-3	Hexachlorobutadiene	333.	U				
77-47-4	Hexachlorocyclopentadiene	333.	UJ				
67-72-1	Hexachloroethane	333.	U				
70-30-4	Hexachlorophene	333.	U				
1888-71-7	Hexachloropropene	333.	U				
193-39-5	Indeno(1,2,3-cd)pyrene	333.	U				
78-59-1	Isophorone	333.	U				
120-58-1	Isosafrole	333.	U				
91-80-5	Methapyrilene	333.	U				
56-49-5	3-Methylcholanthrene	333.	U				
80-62-6	Methyl methacrylate	333.	U				
66-27-3	Methyl methanesulfonate	333.	U				
91-57-6	2-Methylnaphthalene	333.	U				
91-20-3	Naphthalene	333.	U				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-SVDA	SAMPLE ID ----->	G80-C-8004-01					
	ORIGINAL ID ----->	GDHCB09701					
	LAB SAMPLE ID ---->	VWB-001					
	ID FROM REPORT -->	GDHCB09701					
	SAMPLE DATE ----->	02/02/95					
	DATE EXTRACTED -->	02/08/95					
	DATE ANALYZED ---->	02/22/95					
	MATRIX ----->	Soil					
	UNITS ----->	UG/KG					

CAS #	Parameter	APX16	VAL				
130-15-4	1,4-Naphthoquinone	1600.	U				
134-32-7	1-Naphthylamine	333.	U				
91-59-8	2-Naphthylamine	333.	U				
88-74-4	2-Nitroaniline	1600.	U				
99-09-2	3-Nitroaniline	1600.	U				
100-01-6	4-Nitroaniline	1600.	U				
98-95-3	Nitrobenzene	333.	U				
88-75-5	2-Nitrophenol	333.	U				
100-02-7	4-Nitrophenol	1600.	U				
56-57-5	4-Nitroquinoline 1-oxide	333.	UR				
924-16-3	N-Nitroso-di-n-butylamine	333.	U				
55-18-5	N-Nitrosodiethylamine	333.	U				
62-75-9	N-Nitrosodimethylamine	333.	UJ				
86-30-6	N-Nitrosodiphenylamine	333.	U				
621-64-7	N-Nitroso-di-n-propylamine	333.	U				
10595-95-6	N-Nitrosomethylethylamine	333.	U				
59-89-2	N-Nitrosomorpholine	333.	U				
100-75-4	N-Nitrosopiperidine	333.	U				
930-55-2	N-Nitrosopyrrolidine	333.	U				
99-55-8	5-Nitro-o-toluidine	333.	U				
608-93-5	Pentachlorobenzene	333.	U				
76-01-7	Pentachloroethane	333.	U				
82-68-8	Pentachloronitrobenzene	333.	U				
87-86-5	Pentachlorophenol	1600.	U				
62-44-2	Phenacetin	333.	U				
85-01-8	Phenanthrene	61.5	J				
108-95-2	Phenol	333.	U				
106-50-3	p-Phenylenediamine	333.	U				
109-06-8	2-Picoline	333.	U				
23950-58-5	Pronamide	333.	U				
129-00-0	Pyrene	99.9	J				
110-86-1	Pyridine	333.	UJ				
94-59-7	Safrole	333.	U				
95-94-3	1,2,4,5-Tetrachlorobenzene	333.	U				
58-90-2	2,3,4,6-Tetrachlorophenol	333.	U				
95-53-4	o-Toludine	333.	U				

CHARLES J - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-SV0A	SAMPLE ID ----->	G80-C-8004-01					
	ORIGINAL ID ----->	GDHC809701					
	LAB SAMPLE ID ---->	V4B-001					
	ID FROM REPORT -->	GDHC809701					
	SAMPLE DATE ----->	02/02/95					
	DATE EXTRACTED -->	02/08/95					
	DATE ANALYZED ---->	02/22/95					
	MATRIX ----->	Soil					
	UNITS ----->	UG/KG					

CAS #	Parameter	APX16	VAL				
120-82-1	1,2,4-Trichlorobenzene	333.	U				
95-95-4	2,4,5-Trichlorophenol	1600.	U				
88-06-2	2,4,6-Trichlorophenol	333.	U				
99-35-4	1,3,5-Trinitrobenzene	333.	U				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-TPH		SAMPLE ID ----->	G80-C-8004-01					
		ORIGINAL ID ----->	GDHC809701					
		LAB SAMPLE ID ---->	42969-001					
		ID FROM REPORT -->	GDHC809701					
		SAMPLE DATE ----->	02/02/95					
		DATE EXTRACTED -->	02/15/95					
		DATE ANALYZED -->	02/15/95					
		MATRIX ----->	Soil					
		UNITS ----->	UG/KG					
CAS #	Parameter	APX16	VAL					
9999900-08-3	Indeterminate Lubricating Oil	15700.	J					
9999900-02-4	Petroleum Hydrocarbons, TPH	NR						
9999900-04-9	Miscellaneous Light Products	10000.	U					
9999900-11-8	Indeterminate Diesel Fuel	NR						
9999900-06-1	Total Gasoline	15.	U					
9999900-10-7	Heavy Products	NR						
9999900-20-9	Indeterminate Gasoline	NR						

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-V0A		SAMPLE ID ----->	G80-C-8004-01				
		ORIGINAL ID ----->	GDHCB09701				
		LAB SAMPLE ID ---->	VWB-001				
		ID FROM REPORT -->	GDHCB09701				
		SAMPLE DATE ----->	02/02/95				
		DATE EXTRACTED -->	02/10/95				
		DATE ANALYZED ---->	02/10/95				
		MATRIX ----->	Soil				
		UNITS ----->	UG/KG				
CAS #	Parameter	APX16	VAL				
67-64-1	Acetone	14.3	UJ				
75-05-8	Acetonitrile	50.	UJ				
107-02-8	Acrolein	10.	UJ				
107-13-1	Acrylonitrile	10.	U				
107-05-1	3-Chloropropene	5.	U				
71-43-2	Benzene	5.	U				
75-27-4	Bromodichloromethane	5.	U				
75-25-2	Bromoform	5.	U				
75-15-0	Carbon disulfide	5.	U				
56-23-5	Carbon tetrachloride	5.	U				
108-90-7	Chlorobenzene	5.	U				
75-00-3	Chloroethane	10.	U				
67-66-3	Chloroform	5.	U				
126-99-8	Chloroprene	50.	U				
124-48-1	Dibromochloromethane	5.	U				
96-12-8	1,2-Dibromo-3-Chloropropane	5.	U				
106-93-4	1, 2-Dibromoethane	5.	U				
110-57-6	trans-1,4-Dichloro-2-butene	5.	U				
75-71-8	Dichlorodifluoromethane	50.	U				
75-34-3	1,1-Dichloroethane	5.	U				
107-06-2	1,2-Dichloroethane	5.	U				
75-35-4	1,1-Dichloroethylene	5.	U				
156-60-5	trans-1,2-Dichloroethene	5.	U				
78-87-5	1,2-Dichloropropane	5.	U				
10061-01-5	cis-1,3-Dichloropropene	5.	U				
10061-02-6	trans-1,3-Dichloropropene	5.	U				
123-91-1	1,4-Dioxane	250.	UR				
100-41-4	Ethylbenzene	5.	U				
591-78-6	2-Hexanone	10.	UJ				
78-83-1	Isobutyl alcohol	250.	UR				
126-98-7	Methacrylonitrile	5.	UJ				
74-83-9	Bromomethane	10.	U				
74-87-3	Chloromethane	10.	U				
74-95-3	Methylene bromide	5.	U				
75-09-2	Methylene chloride	5.	U				
78-93-3	2-Butanone (MEK)	10.	UJ				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

APX9-VOA		SAMPLE ID -----> G80-C-8004-01					
		ORIGINAL ID -----> GDHC809701					
		LAB SAMPLE ID ----> VWB-001					
		ID FROM REPORT --> GDHC809701					
		SAMPLE DATE -----> 02/02/95					
		DATE EXTRACTED --> 02/10/95					
		DATE ANALYZED ----> 02/10/95					
		MATRIX -----> Soil					
		UNITS -----> UG/KG					
CAS #	Parameter	APX16	VAL				
74-88-4	Methyl iodide	5.	U				
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	UJ				
107-12-0	Propionitrile	10.	U				
100-42-5	Styrene	5.	U				
630-20-6	1,1,1,2-Tetrachloroethane	5.	U				
79-34-5	1,1,2,2-Tetrachloroethane	5.	U				
127-18-4	Tetrachloroethene	5.	U				
108-88-3	Toluene	2.9	J				
71-55-6	1,1,1-Trichloroethane	5.	U				
79-00-5	1,1,2-Trichloroethane	5.	U				
79-01-6	Trichloroethene	5.	U				
75-69-4	Trichlorofluoromethane	5.	U				
96-18-4	1,2,3-Trichloropropane	5.	U				
108-05-4	Vinyl acetate	5.	UJ				
75-01-4	Vinyl chloride	10.	U				
1330-20-7	Xylene (Total)	5.	U				

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SW046-CN		SAMPLE ID ----->	GDH-S-B080-01	GDH-S-B080-02	GDH-S-W040-07			
		ORIGINAL ID ----->	GDHSB08001	GDHSB08002	GDHSW04007			
		LAB SAMPLE ID ---->	252549	252557	41900-011			
		ID FROM REPORT -->	102212	102213	102001			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/19/94			
		DATE EXTRACTED -->	11/03/94	11/03/94	10/25/94			
		DATE ANALYZED ---->	11/03/94	11/03/94	11/01/94			
		MATRIX ----->	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS22	VAL	
CN	Cyanide	1.4	U	1.7	U	1.	U	

*** Validation Complete ***

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SW046-META		SAMPLE ID ----->	GDH-S-8080-01	GDH-S-8080-02	GDH-S-W040-07			
		ORIGINAL ID ----->	GDHS808001	GDHS808002	GDHSW04007			
		LAB SAMPLE ID ---->	252549	252557	41900-011			
		ID FROM REPORT -->	102212	102213	102001			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/19/94			
		DATE EXTRACTED -->	11/10/94	11/10/94	10/25/94			
		DATE ANALYZED ---->	11/11/94	11/11/94	11/01/94			
		MATRIX ----->	Soil	Soil	Soil			
		UNITS ----->	MG/KG	MG/KG	MG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS22	VAL	
7429-90-5	Aluminum	8490.		7120.		2640.		
7439-89-6	Iron	5880.		7310.		6530.		
7439-92-1	Lead	42.7		3.1		21.	UJ	
7440-02-0	Nickel	9.7	J	23.6	J	11.	J	
7440-09-7	Potassium	446.	J	1030.	J	496.	J	
7440-22-4	Silver	0.91	U	1.1	U	2.5	U	
7440-23-5	Sodium	165.	J	669.	J	670.	J	
7440-28-0	Thallium	0.91	U	1.1	U	0.42	U	
7440-36-0	Antimony	6.8	UJ	19.9	UJ	12.2	U	
7440-38-2	Arsenic	3.5		7.5		6.7	U	
7440-39-3	Barium	31.2	J	10.9	J	0.84	U	
7440-41-7	Beryllium	0.23	U	0.31	J	0.28	U	
7440-43-9	Cadmium	0.68	U	0.85	U	1.6	J	
7440-48-4	Cobalt	1.2	J	1.8	J	2.6	U	
7440-50-8	Copper	9.2		9.		2.6	J	
7440-62-2	Vanadium	24.1		27.6		18.1		
7440-66-6	Zinc	51.7		51.1		49.8		
7782-49-2	Selenium	1.2		3.9		1.5	U	
7439-97-6	Mercury	0.11	U	0.14	U	0.02	J	
7439-95-4	Magnesium	1230.		8360.		4930.		
7439-96-5	Manganese	43.4		114.		86.6		
7440-70-2	Calcium	21300.		198000.		150000.		
7440-47-3	Chromium	22.2		43.7		25.8		

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SW846-PEST		SAMPLE ID ----->	GDH-S-B080-01	GDH-S-B080-02	GDH-S-WD4D-07			
		ORIGINAL ID ----->	GDHSB08001	GDHSB08002	GDHSW04D07			
		LAB SAMPLE ID ---->	25254.9	25255.7	41900-007			
		ID FROM REPORT -->	102212	102213	102001			
		SAMPLE DATE ----->	10/21/94	10/21/94	10/19/94			
		DATE EXTRACTED -->	11/01/94	11/01/94	10/21/94			
		DATE ANALYZED ---->	11/16/94	11/15/94	11/19/94			
		MATRIX ----->	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS23	VAL	CHS23	VAL	CHS22	VAL	
11097-69-1	Aroclor-1254	34.	U	43.	U	500.	U	
11104-28-2	Aroclor-1221	34.	U	43.	U	500.	U	
11141-16-5	Aroclor-1232	34.	U	43.	U	500.	U	
12672-29-6	Aroclor-1248	34.	U	43.	U	500.	U	
11096-82-5	Aroclor-1260	34.	U	43.	U	500.	U	
12674-11-2	Aroclor-1016	34.	U	43.	U	500.	U	
53469-21-9	Aroclor-1242	34.	U	43.	U	500.	U	
1024-57-3	Heptachlor epoxide	1.9	U	2.4	U	50.	U	
1031-07-8	Endosulfan sulfate	3.4	U	4.3	U	90.	U	
309-00-2	Aldrin	1.6	U	2.	U	50.	U	
319-84-6	alpha-BHC	1.7	U	2.1	U	50.	U	
319-85-7	beta-BHC	1.3	U	4.2	U	50.	U	
319-86-8	delta-BHC	1.7	U	2.1	U	50.	U	
33213-65-9	Endosulfan II	1.9	U	2.4	U	90.	U	
50-29-3	4,4'-ODT	11.	U	3.1	U	90.	U	
5103-71-9	alpha-Chlordane	1.9	U	2.1	U	50.	U	
5103-74-2	gamma-Chlordane	1.8	U	2.1	U	50.	U	
53494-70-5	Endrin ketone	3.8	U	4.7	U	90.	U	
58-89-9	gamma-BHC (Lindane)	1.1	U	1.4	U	50.	U	
60-57-1	Dieldrin	3.4	U	4.3	U	50.	U	
72-20-8	Endrin	1.6	U	2.	U	50.	U	
72-43-5	Methoxychlor	13.	U	16.	U	500.	U	
72-54-8	4,4'-DDD	12.	U	3.1	U	90.	U	
72-55-9	4,4'-DDE	88.	U	4.3	U	50.	U	
7421-93-4	Endrin aldehyde	3.4	U	4.3	U	90.	U	
76-44-8	Heptachlor	1.6	U	2.	U	50.	U	
8001-35-2	Toxaphene	170.	U	210.	U	2000.	U	
959-98-8	Endosulfan I	1.7	U	2.1	U	50.	U	
57-74-9	Chlordane	NR		NR		NR		

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SUB46-SVOA		SAMPLE ID ----->	G80-S-8001-01	G80-S-8001-02	G80-S-8002-01	G80-S-8002-02	G80-S-8003-01	G80-S-8003-02					
		ORIGINAL ID ----->	GDHSB10001	GDHSB10002	GDHSB10301	GDHSB10302	GDHSB10101	GDHSB10102					
		LAB SAMPLE ID ---->	42980-011	42980-012	42980-007	42980-010	42980-005	42980-006					
		ID FROM REPORT -->	GDHSB10001	GDHSB10002	GDHSB10301	GDHSB10302	GDHSB10101	GDHSB10102					
		SAMPLE DATE ----->	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95					
		DATE EXTRACTED -->	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95					
		DATE ANALYZED ---->	02/14/95	02/14/95	02/09/95	02/09/95	02/09/95	02/09/95					
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil					
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG					
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL		
62-75-9	N-Nitrosodimethylamine	380.	UJ	380.	UJ	380.	U	440.	U	370.	U	410.	U
606-20-2	2,6-Dinitrotoluene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
108-95-2	Phenol	380.	UJ	380.	UJ	380.	U	440.	U	370.	U	410.	U
99-09-2	3-Nitroaniline	1900.	U	1900.	U	1900.	U	2200.	U	1900.	U	2000.	U
62-53-3	Aniline	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
83-32-9	Acenaphthene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
111-44-4	bis(2-Chloroethyl)ether	380.	UJ	380.	UJ	380.	U	440.	U	370.	U	410.	U
51-28-5	2,4-Dinitrophenol	1900.	UJ	1900.	UJ	1900.	U	2200.	U	1900.	U	2000.	U
95-57-8	2-Chlorophenol	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
100-02-7	4-Nitrophenol	1900.	U	1900.	U	1900.	U	2200.	U	1900.	U	2000.	U
541-73-1	1,3-Dichlorobenzene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
132-64-9	Dibenzofuran	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
106-46-7	1,4-Dichlorobenzene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
121-14-2	2,4-Dinitrotoluene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
100-51-6	Benzyl alcohol	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
84-66-2	Diethylphthalate	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
95-50-1	1,2-Dichlorobenzene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
7005-72-3	4-Chlorophenylphenylether	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
95-48-7	2-Methylphenol (o-Cresol)	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
86-73-7	Fluorene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
100-01-6	4-Nitroaniline	1900.	U	1900.	U	1900.	U	2200.	U	1900.	U	2000.	U
106-44-5	4-Methylphenol (p-Cresol)	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1900.	UJ	1900.	UJ	1900.	U	2200.	U	1900.	UJ	2000.	UJ
621-64-7	N-Nitroso-di-n-propylamine	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
86-30-6	N-Nitrosodiphenylamine	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
67-72-1	Hexachloroethane	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
101-55-3	4-Bromophenylphenylether	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
98-95-3	Nitrobenzene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
118-74-1	Hexachlorobenzene	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
78-59-1	Isophorone	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
87-86-5	Pentachlorophenol	380.	UJ	380.	UJ	380.	U	440.	U	370.	U	410.	U
88-75-5	2-Nitrophenol	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
85-01-8	Phenanthrene	380.	U	380.	U	140.	J	440.	U	430.	U	410.	U
105-67-9	2,4-Dimethylphenol	380.	U	380.	U	380.	U	440.	U	370.	U	410.	U
120-12-7	Anthracene	380.	U	380.	U	380.	U	440.	U	90.	J	410.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SMB46-SVDA		SAMPLE ID ----->	G80-S-8001-01	G80-S-8001-02	G80-S-8002-01	G80-S-8002-02	G80-S-8003-01	G80-S-8003-02			
		ORIGINAL ID ----->	GDHSB10001	GDHSB10002	GDHSB10301	GDHSB10302	GDHSB10101	GDHSB10102			
		LAB SAMPLE ID ---->	42980-011	42980-012	42980-007	42980-010	42980-005	42980-006			
		ID FROM REPORT ---->	GDHSB10001	GDHSB10002	GDHSB10301	GDHSB10302	GDHSB10101	GDHSB10102			
		SAMPLE DATE ----->	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95			
		DATE EXTRACTED -->	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95	02/08/95			
		DATE ANALYZED ---->	02/14/95	02/14/95	02/09/95	02/09/95	02/09/95	02/09/95			
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil			
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG			
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL	CHS34	VAL
65-85-0	Benzoic acid	1900.	UJ	1900.	UJ	1900.	U	2200.	U	1900.	UJ
84-74-2	Di-n-butylphthalate	380.	U	380.	U	380.	U	440.	U	370.	U
111-91-1	bis(2-Chloroethoxy)methane	380.	U	380.	U	380.	U	440.	U	370.	U
206-44-0	Fluoranthene	380.	U	380.	U	210.	J	440.	U	510.	U
120-83-2	2,4-Dichlorophenol	380.	U	380.	U	380.	U	440.	U	370.	U
92-87-5	Benzidine	1900.	U	1900.	U	1900.	U	2200.	U	1900.	UJ
120-82-1	1,2,4-Trichlorobenzene	380.	U	380.	U	380.	U	440.	U	370.	U
129-00-0	Pyrene	380.	U	380.	U	160.	J	440.	U	350.	J
91-20-3	Naphthalene	380.	U	380.	U	380.	U	440.	U	370.	U
85-68-7	Butylbenzylphthalate	380.	U	380.	U	380.	U	440.	U	370.	U
106-47-8	4-Chloroaniline	380.	U	380.	U	380.	U	440.	U	370.	U
91-94-1	3,3'-Dichlorobenzidine	760.	U	760.	U	760.	U	880.	U	740.	U
87-68-3	Hexachlorobutadiene	380.	U	380.	U	380.	U	440.	U	370.	U
56-55-3	Benzo(a)anthracene	380.	U	380.	U	86.	J	440.	U	170.	J
59-50-7	4-Chloro-3-methylphenol	380.	U	380.	U	380.	U	440.	U	370.	U
218-01-9	Chrysene	380.	U	380.	U	85.	J	440.	U	180.	J
91-57-6	2-Methylnaphthalene	380.	U	380.	U	380.	U	440.	U	370.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	110.	J	380.	U	380.	U	440.	U	370.	U
77-47-4	Hexachlorocyclopentadiene	380.	U	380.	U	380.	U	440.	U	370.	U
117-84-0	Di-n-octylphthalate	380.	U	380.	U	380.	U	440.	U	370.	U
88-06-2	2,4,6-Trichlorophenol	380.	U	380.	U	380.	U	440.	U	370.	U
205-99-2	Benzo(b)fluoranthene	380.	U	380.	U	160.	J	440.	U	210.	J
95-95-4	2,4,5-Trichlorophenol	1900.	U	1900.	U	1900.	U	2200.	U	1900.	U
207-08-9	Benzo(k)fluoranthene	380.	U	380.	U	380.	U	440.	U	110.	J
91-58-7	2-Chloronaphthalene	380.	U	380.	U	380.	U	440.	U	370.	U
50-32-8	Benzo(a)pyrene	380.	U	380.	U	380.	U	440.	U	140.	J
88-74-4	2-Nitroaniline	1900.	U	1900.	U	1900.	U	2200.	U	1900.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U	380.	U	380.	U	440.	U	370.	U
131-11-3	Dimethylphthalate	380.	U	380.	U	380.	U	440.	U	370.	U
53-70-3	Dibenzo(b,h)anthracene	380.	U	380.	U	380.	U	440.	U	370.	U
208-96-8	Acenaphthylene	380.	U	380.	U	380.	U	440.	U	370.	U
191-24-2	Benzo(g,h,i)perylene	380.	U	380.	U	380.	U	440.	U	370.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SUB46-SV0A		SAMPLE ID ----->	G80-S-8004-01	G80-S-8004-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-W040-07				
		ORIGINAL ID ----->	GDHSB10201	GDHSB10202	GDHSB08001	GDHSB08002	GDHSW04007				
		LAB SAMPLE ID ---->	42980-008	42980-009	25254.9	25255.7	41900-007				
		ID FROM REPORT -->	GDHSB10201	GDHSB10202	102212	102213	102001				
		SAMPLE DATE ----->	02/03/95	02/03/95	10/21/94	10/21/94	10/19/94				
		DATE EXTRACTED -->	02/08/95	02/08/95	11/01/94	11/01/94	10/21/94				
		DATE ANALYZED -->	02/09/95	02/09/95	11/14/94	11/15/94	10/27/94				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG				
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS23	VAL	CHS23	VAL	CHS22	VAL
62-75-9	N-Nitrosodimethylamine	380.	U	450.	U	NR		NR		50000.	U
606-20-2	2,6-Dinitrotoluene	380.	U	450.	U	340.	U	430.	U	50000.	U
108-95-2	Phenol	380.	U	450.	U	340.	U	430.	U	50000.	U
99-09-2	3-Nitroaniline	1900.	U	2300.	U	1800.	U	2300.	U	250000.	U
62-53-3	Aniline	380.	U	450.	U	NR		NR		50000.	U
83-32-9	Acenaphthene	380.	U	450.	U	340.	U	430.	U	500000.	U
111-44-4	bis(2-Chloroethyl)ether	380.	U	450.	U	340.	U	430.	U	50000.	U
51-28-5	2,4-Dinitrophenol	1900.	U	2300.	U	1800.	UJ	2300.	U	250000.	U
95-57-8	2-Chlorophenol	380.	U	450.	U	340.	U	430.	U	50000.	U
100-02-7	4-Nitrophenol	1900.	U	2300.	U	1800.	UJ	2300.	U	250000.	U
541-73-1	1,3-Dichlorobenzene	380.	U	450.	U	340.	U	430.	U	50000.	U
132-64-9	Dibenzofuran	380.	U	450.	U	340.	U	430.	U	390000.	U
106-46-7	1,4-Dichlorobenzene	380.	U	450.	U	340.	U	430.	U	50000.	U
121-14-2	2,4-Dinitrotoluene	380.	U	450.	U	340.	U	430.	U	50000.	U
100-51-6	Benzyl alcohol	380.	U	450.	U	NR		NR		50000.	U
84-66-2	Diethylphthalate	380.	U	450.	U	340.	U	430.	U	50000.	U
95-50-1	1,2-Dichlorobenzene	380.	U	450.	U	340.	U	430.	U	50000.	U
7005-72-3	4-Chlorophenylphenylether	380.	U	450.	U	340.	U	430.	U	50000.	U
95-48-7	2-Methylphenol (o-Cresol)	380.	U	450.	U	340.	U	430.	U	50000.	UJ
86-73-7	Fluorene	380.	U	450.	U	340.	U	430.	U	490000.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U	450.	U	340.	U	430.	U	50000.	U
100-01-6	4-Nitroaniline	1900.	U	2300.	U	1800.	U	2300.	U	250000.	U
106-44-5	4-Methylphenol (p-Cresol)	380.	U	450.	U	340.	U	430.	U	50000.	U
534-52-1	2-Methyl-4,6-Dinitrophenol	1900.	U	2300.	U	1800.	U	2300.	U	250000.	U
621-64-7	N-Nitroso-di-n-propylamine	380.	U	450.	U	340.	U	430.	U	50000.	U
86-30-6	N-Nitrosodiphenylamine	380.	U	450.	U	350.	U	440.	U	50000.	U
67-72-1	Hexachloroethane	380.	U	450.	U	340.	U	430.	U	50000.	U
101-55-3	4-Bromophenylphenylether	380.	U	450.	U	340.	U	430.	U	50000.	U
98-95-3	Nitrobenzene	380.	U	450.	U	340.	U	430.	U	50000.	U
118-74-1	Hexachlorobenzene	380.	U	450.	U	340.	U	430.	U	50000.	U
78-59-1	Isophorone	380.	U	450.	U	340.	U	430.	U	50000.	U
87-86-5	Pentachlorophenol	380.	U	450.	U	1100.	U	1400.	U	50000.	U
88-75-5	2-Nitrophenol	380.	U	450.	U	340.	U	430.	U	50000.	U
85-01-8	Phenanthrene	380.	U	450.	U	380.	U	460.	U	630000.	U
105-67-9	2,4-Dimethylphenol	380.	U	450.	U	690.	U	870.	U	50000.	U
120-12-7	Anthracene	380.	U	450.	U	94.	J	74.	J	190000.	U

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SWB46-SV0A		SAMPLE ID ----->	G80-S-8004-01	G80-S-8004-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-8040-07				
		ORIGINAL ID ----->	GDHSB10201	GDHSB10202	GDHSB08001	GDHSB08002	GDHSW04007				
		LAB SAMPLE ID ---->	42980-008	42980-009	25254.9	25255.7	41900-007				
		ID FROM REPORT -->	GDHSB10201	GDHSB10202	102212	102213	102001				
		SAMPLE DATE ----->	02/03/95	02/03/95	10/21/94	10/21/94	10/19/94				
		DATE EXTRACTED -->	02/08/95	02/08/95	11/01/94	11/01/94	10/21/94				
		DATE ANALYZED ---->	02/09/95	02/09/95	11/14/94	11/15/94	10/27/94				
		MATRIX ----->	Soil	Soil	Soil	Soil	Soil				
		UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG				
CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS23	VAL	CHS23	VAL	CHS22	VAL
65-85-0	Benzoic acid	1900.	U	2300.	U	NR		NR		250000.	U
84-74-2	Di-n-butylphthalate	380.	U	450.	U	340.	U	430.	U	50000.	U
111-91-1	bis(2-Chloroethoxy)methane	380.	U	450.	U	340.	U	430.	U	50000.	U
206-44-0	Fluoranthene	380.	U	150.	J	480.	U	490.	U	620000.	U
120-83-2	2,4-Dichlorophenol	380.	U	450.	U	340.	U	430.	U	50000.	U
92-87-5	Benzidine	1900.	U	2300.	U	NR		NR		250000.	U
120-82-1	1,2,4-Trichlorobenzene	380.	U	450.	U	340.	U	430.	U	50000.	U
129-00-0	Pyrene	380.	U	120.	J	410.	U	420.	J	430000.	U
91-20-3	Naphthalene	380.	U	450.	U	340.	U	430.	U	710000.	U
85-68-7	Butylbenzylphthalate	380.	U	450.	U	340.	U	430.	U	50000.	U
106-47-8	4-Chloroaniline	380.	U	450.	U	340.	U	430.	U	50000.	U
91-94-1	3,3'-Dichlorobenzidine	760.	U	900.	U	680.	U	860.	U	99000.	U
87-68-3	Hexachlorobutadiene	380.	U	450.	U	340.	UJ	430.	UJ	50000.	U
56-55-3	Benzo(a)anthracene	380.	U	450.	U	220.	J	190.	J	140000.	U
59-50-7	4-Chloro-3-methylphenol	380.	U	450.	U	340.	U	430.	U	50000.	U
218-01-9	Chrysene	380.	U	450.	U	230.	J	200.	J	110000.	U
91-57-6	2-Methylnaphthalene	380.	U	450.	U	340.	U	430.	U	430000.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	380.	U	450.	U	39.	J	430.	U	50000.	U
77-47-4	Hexachlorocyclopentadiene	380.	U	450.	U	360.	UJ	460.	UJ	50000.	UJ
117-84-0	Di-n-octylphthalate	380.	U	450.	U	340.	U	430.	U	50000.	U
88-06-2	2,4,6-Trichlorophenol	380.	U	450.	U	350.	U	440.	U	50000.	U
205-99-2	Benzo(b)fluoranthene	380.	U	450.	U	300.	J	270.	J	39000.	J
95-95-4	2,4,5-Trichlorophenol	1900.	U	2300.	U	1800.	U	2300.	U	250000.	U
207-08-9	Benzo(k)fluoranthene	380.	U	450.	U	140.	J	430.	U	42000.	J
91-58-7	2-Chloronaphthalene	380.	U	450.	U	360.	U	460.	U	50000.	U
50-32-8	Benzo(a)pyrene	380.	U	450.	U	200.	J	180.	J	34000.	J
88-74-4	2-Nitroaniline	1900.	U	2300.	U	1800.	U	2300.	U	250000.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U	450.	U	98.	J	430.	U	50000.	U
131-11-3	Dimethylphthalate	380.	U	450.	U	340.	U	430.	U	50000.	U
53-70-3	Dibenzo(a,h)anthracene	380.	U	450.	U	360.	U	460.	U	50000.	U
208-96-8	Acenaphthylene	380.	U	450.	U	340.	U	430.	U	17000.	J
191-24-2	Benzo(g,h,i)perylene	380.	U	450.	U	97.	J	470.	U	50000.	U
103-33-3	Azobenzene	NR		NR		NR		NR		NR	

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SW846-VOA	SAMPLE ID ----->	G80-S-8001-01	G80-S-8001-02	G80-S-8002-01	G80-S-8002-02	G80-S-8003-01	G80-S-8003-02
	ORIGINAL ID ----->	GDHSB10001	GDHSB10002	GDHSB10301	GDHSB10302	GDHSB10101	GDHSB10102
	LAB SAMPLE ID ----->	42980-020	42980-020	42980-016	42980-019	42980-014	42980-015
	ID FROM REPORT --->	GDHSB10001	GDHSB10002	GDHSB10301	GDHSB10302	GDHSB10101	GDHSB10102
	SAMPLE DATE ----->	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95	02/03/95
	DATE ANALYZED ----->	02/10/95	02/10/95	02/10/95	02/10/95	02/13/95	02/10/95
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil	Soil
	UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

CAS #	Parameter	CHS34	VAL								
100-41-4	Ethylbenzene	6.	U	6.	U	6.	U	7.	U	9.	U
100-42-5	Styrene	6.	U	6.	U	6.	U	7.	U	9.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	6.	U	6.	U	7.	U	9.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	6.	U	6.	U	7.	U	9.	U
107-06-2	1,2-Dichloroethane	6.	U	6.	U	6.	U	7.	U	9.	U
108-05-4	Vinyl acetate	12.	U	12.	U	12.	U	13.	U	18.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	29.	U	29.	U	30.	U	33.	U	46.	U
108-88-3	Toluene	6.	U	6.	U	6.	U	11.	U	9.	U
108-90-7	Chlorobenzene	6.	U	6.	U	6.	U	7.	U	9.	U
109-99-9	Tetrahydrofuran	29.	U	29.	U	30.	U	33.	U	46.	U
124-48-1	Dibromochloromethane	6.	U	6.	U	6.	U	7.	U	9.	U
127-18-4	Tetrachloroethene	6.	U	6.	U	6.	U	7.	U	9.	U
1330-20-7	Xylene (Total)	6.	U	6.	U	6.	U	7.	U	9.	U
540-59-0	1,2-Dichloroethene (total)	6.	U	6.	U	6.	U	7.	U	9.	U
56-23-5	Carbon tetrachloride	6.	U	6.	U	6.	U	7.	U	9.	U
591-78-6	2-Hexanone	29.	U	29.	U	30.	U	33.	U	46.	U
67-64-1	Acetone	33.	UJ	12.	UJ	12.	U	12.	U	160.	U
67-66-3	Chloroform	6.	U	6.	U	6.	U	7.	U	9.	U
71-43-2	Benzene	6.	U	6.	U	6.	U	7.	U	9.	U
71-55-6	1,1,1-Trichloroethane	6.	U	6.	U	6.	U	7.	U	9.	U
74-83-9	Bromomethane	12.	U	12.	U	12.	U	13.	U	18.	U
74-87-3	Chloromethane	12.	UJ	12.	UJ	12.	U	13.	U	18.	U
75-00-3	Chloroethane	6.	U	6.	U	6.	U	7.	U	9.	U
75-01-4	Vinyl chloride	12.	U	12.	U	12.	U	13.	U	18.	U
75-09-2	Methylene chloride	12.	U	12.	U	12.	U	12.	U	18.	U
75-15-0	Carbon disulfide	6.	UJ	6.	UJ	6.	U	7.	U	9.	UJ
75-25-2	Bromine	6.	U	6.	U	6.	U	7.	U	9.	U
75-27-4	Bromodichloromethane	6.	U	6.	U	6.	U	7.	U	9.	U
75-34-3	1,1-Dichloroethane	6.	U	6.	U	6.	U	7.	U	9.	U
75-35-4	1,1-Dichloroethylene	6.	U	6.	U	6.	U	7.	U	9.	U
75-69-4	Trichlorofluoromethane	6.	U	6.	U	6.	U	7.	U	9.	UJ
78-97-5	1,2-Dichloropropane	6.	U	6.	U	6.	U	7.	U	9.	U
78-93-3	2-Butanone (MEK)	29.	U	29.	U	30.	U	33.	U	46.	U
79-00-5	1,1,2-Trichloroethane	6.	U	6.	U	6.	U	7.	U	9.	U
79-01-6	Trichloroethene	6.	U	6.	U	6.	U	7.	U	9.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	6.	U	6.	U	7.	U	9.	U
110-75-8	2-Chloroethylvinyl ether	NR									

CHARLESTON - ZONE H
NAVAL BASE CHARLESTON ZONE H (NBCH)
G80 OIA Soil Analytical Data

SW846-VDA	SAMPLE ID ----->	G80-S-8004-01	G80-S-8004-02	GDH-S-8080-01	GDH-S-8080-02	GDH-S-W040-07
	ORIGINAL ID ----->	GDHSB10201	GDHSB10202	GDHSB08001	GDHSB08002	GDHSW04007
	LAB SAMPLE ID ---->	42980-017	42980-018	25254.9	25255.7	41900-001
	ID FROM REPORT -->	GDHSB10201	GDHSB10202	102212	102213	102001
	SAMPLE DATE ----->	02/03/95	02/03/95	10/21/94	10/21/94	10/19/94
	DATE ANALYZED -->	02/10/95	02/13/95	11/03/94	11/03/94	11/01/94
	MATRIX ----->	Soil	Soil	Soil	Soil	Soil
UNITS ----->	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	

CAS #	Parameter	CHS34	VAL	CHS34	VAL	CHS23	VAL	CHS23	VAL	CHS22	VAL
100-41-4	Ethylbenzene	6.	U	7.	U	6.	U	7.	U	4600.	
100-42-5	Styrene	6.	U	7.	U	6.	U	7.	U	840.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U	7.	U	6.	U	7.	U	840.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U	7.	U	6.	U	7.	U	840.	U
107-06-2	1,2-Dichloroethane	6.	U	7.	U	6.	U	7.	U	840.	U
108-05-4	Vinyl acetate	12.	U	13.	U	11.	U	14.	U	1700.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	29.	U	33.	U	11.	U	14.	U	4200.	U
108-88-3	Toluene	6.	U	7.	U	6.	U	8.	U	7100.	
108-90-7	Chlorobenzene	6.	U	7.	U	6.	U	7.	U	840.	U
109-99-9	Tetrahydrofuran	29.	U	33.	U	NR		NR		4200.	U
124-48-1	Dibromochloromethane	6.	U	7.	U	6.	U	7.	U	840.	U
127-18-4	Tetrachloroethene	6.	U	7.	U	6.	U	7.	U	840.	U
1330-20-7	Xylene (Total)	6.	U	7.	U	6.	U	7.	U	21000.	
540-59-0	1,2-Dichloroethene (total)	6.	U	7.	U	5.7	U	7.1	U	840.	U
56-23-5	Carbon tetrachloride	6.	U	7.	U	6.	U	7.	U	840.	U
591-78-6	2-Hexanone	29.	U	33.	U	11.	U	14.	U	4200.	U
67-64-1	Acetone	12.	U	13.	U	21.		11.	J	4200.	U
67-66-3	Chloroform	6.	U	7.	U	6.	U	7.	U	840.	U
71-43-2	Benzene	6.	U	7.	U	6.	U	7.	U	910.	
71-55-6	1,1,1-Trichloroethane	6.	U	7.	U	6.	U	7.	U	840.	U
74-83-9	Bromomethane	12.	U	13.	U	11.	U	14.	U	1700.	U
74-87-3	Chloromethane	12.	U	13.	U	11.	UJ	14.	U	1700.	U
75-00-3	Chloroethane	6.	U	7.	U	11.	U	14.	U	840.	U
75-01-4	Vinyl chloride	12.	U	13.	U	11.	U	14.	U	1700.	U
75-09-2	Methylene chloride	12.	U	13.	U	6.	U	7.	U	1700.	U
75-15-0	Carbon disulfide	6.	U	6.	J	6.	U	7.	U	840.	UJ
75-25-2	Bromoform	6.	U	7.	U	6.	U	7.	U	840.	U
75-27-4	Bromodichloromethane	6.	U	7.	U	6.	U	7.	U	840.	U
75-34-3	1,1-Dichloroethane	6.	U	7.	U	6.	U	7.	U	840.	U
75-35-4	1,1-Dichloroethylene	6.	U	7.	U	6.	U	7.	U	840.	UJ
75-69-4	Trichlorofluoromethane	6.	U	7.	UJ	NR		NR		840.	U
78-87-5	1,2-Dichloropropane	6.	U	7.	U	6.	U	7.	U	840.	U
78-93-3	2-Butanone (MEK)	29.	U	33.	U	11.	U	14.	U	4200.	U
79-00-5	1,1,2-Trichloroethane	6.	U	7.	U	6.	U	7.	U	840.	U
79-01-6	Trichloroethene	6.	U	7.	U	6.	U	7.	U	840.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U	7.	U	6.	U	7.	U	840.	U
110-75-8	2-Chloroethylvinyl ether	NR		NR		NR		NR		NR	

Appendix O
Terrestrial Species List

**Charleston Zone H
Terrestrial Species List**

Common Name	Scientific Name
Raccoon	<i>Procyon lotor</i>
Opossum	<i>Didelphis virginiana</i>
Grey fox	<i>Urocyon cinereoargenteus</i>
Grey squirrel	<i>Sciurus carolinensis</i>
Fox squirrel	<i>S. niger</i>
Eastern cottontail	<i>Sylvilagus floridanus</i>
Marsh rabbit	<i>S. palustris</i>
Golden mouse	<i>Ochrotomys nuttalli</i>
Short-tailed shrew	<i>Blarina brevicauda</i>
Northern diamond back terrapin	<i>Malaclemys terrapin terrapin</i>
Green anole	<i>Anolis carolinensis</i>
Broad-headed skink	<i>Eumeces laticeps</i>
Eastern garter snake	<i>Thamnophis sirtalis</i>
Southern leopard frog	<i>Rana utricularia</i>
American robin	<i>Turdus migratorius</i>
Northern cardinal	<i>Cardinalis cardinalis</i>
Purple finch	<i>Carpodacus prpureus</i>
Fish crow	<i>Corvus ossifragus</i>
European starling	<i>Sturnus vulgaris</i>
Gulls	<i>Larus spp.</i>
Carolina chickadee	<i>Parus carolinensis</i>
Northern junco	<i>Junco hyemalis</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>
Eastern meadowlark	<i>Sturnella magna</i>
Northern mockingbird	<i>Mimis polyglottis</i>
Barn swallow	<i>Hirundo rustica</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
Clapper rail	<i>Rallus longirostis</i>
Boat-tailed grackle	<i>Quiscalus major</i>

Charleston Zone H
Terrestrial Species List

Common Name	Scientific Name
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Hérons, egrets, bitterns	<i>Family Ardeidae</i>
Plovers	<i>Chardrius spp.</i>
Curllews	<i>Numenium spp.</i>
Sandpipers	<i>Tringa spp. and Calidris spp.</i>
Terns	<i>Sterna spp.</i>
Brown pelican	<i>Pelecanus occidentalis</i>
Osprey	<i>Pandion halieatus</i>

Appendix P
Wildlife Toxicity Data

Appendix N
Wildlife Toxicity Data
Baseline Risk Assessment
Zone H
Naval Base Charleston

Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
SVOCs							
Anthracene	Mouse	Oral	NR	Mortality	17000		RTECS, 1993
Benzo(a)pyrene	Rat	Oral (chronic)	Pregnancy	Sterility in offspring		40	USEPA, 1984
	Rat	Oral (chronic)	3.5 months	Reproductive		50	USEPA, 1984
	Rodents	Single oral dose	NR	Mortality	50		Eieler, 1987
Bis(2-ethylhexyl)phthalate	Rat	Oral	NR	Mortality	30600		RTECS, 1993
	Rat	Oral	NR	Reproductive effects		7140	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		35	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		6000	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		17200	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		10000	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		9766	RTECS, 1993
	Mouse	Oral	NR	Mortality	30000		RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		78880	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		4200	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		50	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		1000	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		2040	RTECS, 1993
	Rabbit	Oral	NR	Mortality	34000		RTECS, 1993
Guinea pig	Oral	NR	Mortality	26000		RTECS, 1993	

**Appendix N
Wildlife Toxicity Data
Baseline Risk Assessment
Zone H
Naval Base Charleston**

Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Bis(2-ethylhexyl)phthalate (Continued)	Guinea pig	Oral	NR	Reproductive effects		20000	RTECS, 1993
	Mammal	Oral	NR	Reproductive effects		20000	RTECS, 1993
	Mammal	Oral	NR	Reproductive effects		509000	RTECS, 1993
	Mouse	Single oral dose		Mortality	800		RTECS, 1993 and NIOSH, 1985
	Mouse	Oral (subchronic)	13 weeks	Renal effects		125	RTECS, 1993
Butylbenzylphthalate	Rat	Oral	NR	Mortality	2330		RTECS, 1994
	Rat	Oral	NR	Reproductive effects		21000	RTECS, 1994
	Rat	Oral	NR	Reproductive effects		16400	RTECS, 1994
	Rat	Oral	NR	Reproductive effects		16400	RTECS, 1994
	Rat	Oral	NR	Reproductive effects		4900	RTECS, 1994
	Mouse	Oral	NR	Mortality	4170		RTECS, 1994
	Guinea Pig	Oral	NR	Mortality	13750		RTECS, 1994
1,4-Dichlorobenzene	Rat	Oral	NR	Mortality	500		RTECS, 1994
	Rat	Oral	NR	Reproductive effects		7500	RTECS, 1994
	Rat	Oral	NR	Reproductive effects		10000	RTECS, 1994
	Mouse	Oral	NR	Mortality	2950		RTECS, 1994
	Rabbit	Oral	NR	Mortality	2830		RTECS, 1994
Di-n-butylphthalate	Rat	Oral (subchronic)	48 days	Reproductive		125	ATSDR, 1989
	Rat	Oral	1 year	Mortality		600	IRIS, 1991

Appendix N
Wildlife Toxicity Data
Baseline Risk Assessment
Zone H
Naval Base Charleston

Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Fluoranthene	Rat	Oral	NR	Mortality	2000		RTECS, 1994
Phenanthrene	Mouse	Oral	NR	Mortality	700		RTECS, 1994
Pyrene	Rat	Single oral dose	NR	Mortality	2700		RTECS, 1993 and NIOSH, 1985
	Mouse	Single oral dose	NR	Mortality	800		RTECS, 1993 and NIOSH, 1985
Pesticides/PCBs							
Aroclor 1248	Rat	Oral	NR	Mortality	11000		RTECS, 1993
	Rabbit	Oral	NR	Reproductive effects		105	RTECS, 1993
	Monkey	Oral	NR	Reproductive effects		32	RTECS, 1993
	Monkey	Oral	NR	Reproductive effects		55	RTECS, 1993
	Monkey	Oral	NR	Reproductive effects		17	RTECS, 1993
	Monkey	Oral	NR	Reproductive effects		35	RTECS, 1993
	Monkey	Oral	NR	Reproductive effects		24	RTECS, 1993
	Monkey	Oral	NR	Reproductive effects		83	RTECS, 1993
	Chicken	Oral	8-9 weeks	Egg hatchability		4.88	USEPA, 1993
	Chicken	Oral	NR	Egg production and hatchability		9.8	USEPA, 1993
	Chicken	Maternal diet	NR	Chick growth		0.98	USEPA, 1993
	Chicken	Oral	8 weeks	Egg production and hatchability		4.9	USEPA, 1993

Appendix N
Wildlife Toxicity Data
Baseline Risk Assessment
Zone H
Naval Base Charleston

Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Aroclor 1254	Mouse	Oral	NR	Reproductive		1.53	USEPA, 1993
	Chicken	Oral (chronic)	NR	Embryonic mortality		0.9 ^a	USEPA, 1993
	Rock dove	Oral (chronic)	NR	Parental incubation behavior		0.9 ^a	Peakall and Peakall, 1973
	American kestrel	Oral (chronic)	69 days	Reduced sperm concentration		9	Eisler, 1986
	Mink	Oral dose of contaminated meat	160 days	Reproductive		0.096	USEPA, 1993
Aroclor 1260	Rat	Oral	NR	Mortality	1315		RTECS, 1993
	Rat	Single oral dose	NR	Mortality	500		Eisler, 1986
	Rat	Single oral dose	NR	Mortality	1300		Eisler, 1986
	Rat	Oral	NR	Reproductive effects		1674	RTECS, 1993
	Rat	Oral (chronic)	2 generations	Reduced litter size		7.6	USEPA, 1985
	Rat	Oral (subchronic)	9 weeks	Fetal mortality; maternal toxicity		6.4	ATSDR, 1987
	Mouse	Oral	NR	Reproductive effects		74	RTECS, 1993
	Mink	Single oral dose		Mortality	4000		Eisler, 1986
	Mink	Single oral dose		Mortality	3000		Eisler, 1986
	Mink	Single oral dose		Mortality	750		Eisler, 1986
	Mink	Oral (subchronic)	4 months	Impaired reproduction		0.0075 ^b	Newell et al., 1987
	Chicken	Oral (chronic)	NR	Embryonic mortality		0.9 ^a	USEPA, 1976

Appendix N
Wildlife Toxicity Data
Baseline Risk Assessment
Zone H
Naval Base Charleston

Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Chlordane	Rat	Oral	NR	Mortality	283		RTECS, 1993
	Rat	Single oral dose		Mortality	430		Allen et al., 1979
	Rat	Single oral dose		Mortality	335		Allen et al., 1979
	Rabbit	Single oral dose		Mortality	300		Allen et al., 1979
	Rabbit	Single oral dose		Mortality	100		Allen et al., 1979
	Dog	Single oral dose		Mortality	200		Allen et al., 1979
	Goat	Single oral dose		Mortality	180		Allen et al., 1979
	Japanese quail	Oral (acute)	5 days	Mortality	35*		Hill et al., 1975
	Bobwhite	Oral (acute)	5 days	Mortality	29*		Hill et al., 1975
	Mallard	Oral (acute)	5 days	Mortality	62*		Hill et al., 1975
	Pheasant	Single oral dose		Mortality	24		USFWS, 1984
4,4'-DDE	Rat	Oral	NR	Mortality	800		RTECS, 1993
	Mouse	Oral	NR	Mortality	700		RTECS, 1993
	Hamster	Oral	NR	Mortality	>5000		RTECS, 1993
	Mallard	Oral	NR	Eggshell thinning		2.91	USEPA, 1993
	Mallard	Oral	2 years	Reproductive: embryo mortality, cracked eggs		0.58	USEPA, 1993
		Kestrel	Oral	NR	Eggshell thinning		0.39
4,4'-DDT	Rat	Oral	NR	Mortality	87		RTECS, 1993
	Rat	Single oral dose		Mortality	100		USEPA, 1985

Appendix N
Wildlife Toxicity Data
Baseline Risk Assessment
Zone H
Naval Base Charleston

Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
4,4'-DDT (Continued)	Rat	Oral	NR	Reproductive		112	RTECS, 1993
	Rat	Oral	NR	Reproductive		100	RTECS, 1993
	Rat	Oral	NR	Reproductive		430	RTECS, 1993
	Rat	Oral	NR	Reproductive		1890	RTECS, 1993
	Rat	Oral	NR	Reproductive		250	RTECS, 1993
	Rat	Oral	NR	Reproductive		50	RTECS, 1993
	Rat	Oral (chronic)	3 generations	Reproductive		0.2	IRIS, 1991
	Rat	Oral	2 years	Reproductive		2.5	USEPA, 1993
	Mouse	Oral	NR	Mortality	135		RTECS, 1993
	Mouse	Single oral dose		Mortality	200		USEPA, 1985
	Mouse	Oral	NR	Reproductive		504	RTECS, 1993
	Mouse	Oral	NR	Reproductive		81	RTECS, 1993
	Mouse	Oral	NR	Reproductive		124	RTECS, 1993
	Mouse	Oral	NR	Reproductive		148	RTECS, 1993
	Rabbit	Oral	NR	Mortality	250		RTECS, 1993
	Rabbit	Oral	NR	Reproductive		150	RTECS, 1993
	Guinea pig	Oral	NR	Mortality	150		RTECS, 1993
	Hamster	Oral	NR	Mortality	> 5000		RTECS, 1993
	Dog	Oral	NR	Mortality	150		RTECS, 1993
	Dog	Single oral dose		Mortality	60		USEPA, 1985

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Wildlife Toxicity Data
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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
4,4'-DDT (Continued)	Dog	Oral	NR	Reproductive		3540	RTECS, 1993
	Monkey	Oral	NR	Mortality	200		RTECS, 1993
	Chicken	Oral (subchronic)	10 weeks	Decreased reproductive success; toxic symptoms		91.4 ^a	USEPA, 1985
	Rock dove	Single oral dose		Mortality	4000		USFWS, 1984
	Black duck	Oral (chronic)	2 years	Reduced eggshell thickness		0.14 ^a	Longcore and Stendell, 1977
	Mallard	Single oral dose		Mortality	2240		USFWS, 1984
	Mallard	Oral (subchronic)	96 days	Reduced eggshell thickness		2.8	Longcore and Stendell, 1977
	Mallard	Oral	NR	Eggshell thinning		1.16	USEPA, 1993
	Mallard	Oral	NR	Eggshell thinning		2.91	USEPA, 1993
	Mallard	Oral	2 years	Reproductive		1.45	USEPA, 1993
	California quail	Single oral dose		Mortality	595		USFWS, 1984
	Japanese quail	Single oral dose		Mortality	841		USFWS, 1984
	Pheasant	Single oral dose		Mortality	1334		USFWS, 1984
	Sandhill crane	Single oral dose		Mortality	1200		USFWS, 1984
	Kestrel	Oral (chronic)	7 wk - 1 yr	Reduced eggshell thickness		0.56 ^a	USEPA, 1985
Kestrel	Oral (chronic)	1 year	Reduced eggshell thickness		0.16 ^a	Wiemeyer, et al., 1986	

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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
4,4'-DDT (Continued)	Barn owl	Oral (chronic)	2 years	Reduced eggshell thickness		0.14 ^a	Longcore and Stendell, 1977
Dieldrin	Mouse	Single oral dose	NR	Mortality	38		Allen et al., 1979
	Mouse	Oral (chronic)	80 weeks	Body tremors		0.33	ATSDR, 1992
	Rat	Single oral dose	NR	Mortality	46		Allen et al., 1979
	Guinea pig	Single oral dose	NR	Mortality	25		Allen et al., 1979
	Rabbit	Single oral dose	NR	Mortality	45		Allen et al., 1979
	House sparrow	Single oral dose	NR	Mortality	48		USFWS, 1984
	Chicken	Single oral dose	NR	Mortality	20		Allen et al., 1979
	Rock dove	Single oral dose	NR	Mortality	27		USFWS, 1984
	Gray partridge	Single oral dose	NR	Mortality	9		USFWS, 1984
	Chukar	Single oral dose	NR	Mortality	25		USFWS, 1984
	Japanese quail	Oral (acute)	5 days	Mortality	6 ^a		Hill et al., 1975
	Japanese quail	Single oral dose	NR	Mortality	70		USFWS, 1984
	California quail	Single oral dose	NR	Mortality	9		USFWS, 1984
	Bobwhite	Oral (acute)	5 days	Mortality	3 ^a		Hill et al., 1975
	Pheasant	Single oral dose	NR	Mortality	79		USFWS, 1984
Mallard	Oral (acute)	5 days	Mortality	12 ^a		Hill et al., 1975	
Mallard	Oral (acute)	5 days	Mortality	11 ^a		Hill et al., 1975	
Mallard	Single oral dose	NR	Mortality	381		USFWS, 1984	

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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Dieldrin	Whistling duck	Single oral dose	NR	Mortality	100		USFWS, 1984
	Canada goose	Single oral dose	NR	Mortality	141		USFWS, 1984
	Goat	Single oral dose	NR	Mortality	100		Allen et al., 1979
	Sheep	Single oral dose	NR	Mortality	50		Allen et al., 1979
	Cattle	Single oral dose	NR	Mortality	60		Allen et al., 1979
	Mule deer	Single oral dose	NR	Mortality	75		Allen et al., 1979
	Cat	Single oral dose	NR	Mortality	300		Allen et al., 1979
	Dog	Single oral dose	NR	Mortality	65		Allen et al., 1979
Endosulfan	Mouse	Oral (chronic)	78 weeks	Mortality		0.9	ATSDR, 1991
	Mouse	Oral (chronic)	78 weeks	Ovarian cyst development		0.26	ATSDR, 1991
	Rat	Single oral dose	NR	Mortality	24		ATSDR, 1991
	Rat	Oral (chronic)	2 years	Reduced testes weight		10	USEPA, 1980
	Mallard	Single oral dose	NR	Mortality	33		USFWS, 1984
	Mallard	Single oral dose	NR	Mortality	31.2		USFWS, 1984
	Pheasant	Single oral dose	NR	Mortality	80		USFWS, 1984
Endrin	Mouse	Oral (chronic)	80 weeks	Mortality		0.53	ATSDR, 1990
	Dog	Oral (chronic)	19 months	Decreased weight gain		0.1	USEPA, 1985
2,3,7,8-TCDD	Northern Bobwhite	Single oral dose	NR	Mortality	.015		Hudson et al., 1984
	Ringed Turtle Dove	Single oral dose	NR	Mortality	.810		Hudson et al., 1984

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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
2,3,7,8-TCDD (Continued)	Mallards	Single oral dose	NR	Mortality	.108		Hudeon et al., 1984
	Chicken	Single oral dose	NR	Mortality	.037		Kociba & Schwetz, 1982
	Guinea pig	Oral	NR	Mortality	.002		Kociba & Schwetz, 1982
	Mouse	Oral	NR	Mortality	.284		Kociba & Schwetz, 1982
	Guinea Pig	Single oral dose	NR	Mortality	.0005		Harless et al., 1982
	Rat	Single oral dose	NR	Mortality	.022		Kociba & Schwetz, 1982
	Monkey	Single oral dose	NR	Mortality	.070		Oleon et al., 1980
	Dog	Single oral dose	NR	Mortality	.1		Kociba & Schwetz, 1982
	Mouse	Single oral dose	NR	Mortality	.114		Kociba & Schwetz, 1982
	Rabbit	Single oral dose	NR	Mortality	.115		Oleon et al., 1980
	Hamster	Single oral dose	NR	Mortality	1.157		Kociba & Schwetz, 1982
	Rat	Oral (chronic)	NR	Reproductive effects		1.0E-05	McNulty, 1977
	Monkey	Oral (chronic)	NR	Reproductive effects		1.7E-06	Ramel, 1978
Chicken	Oral (chronic)	21 days	Chick liver disease		.001	NRCC 1981	

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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Inorganics							
Aluminum	Mouse	Oral	2-3 genrtns	Reduced bodyweight gain of newborns		425	NIOSH, 1985
	Rat	Oral	15 days	Reduced growth		100	Barnuzzi, et al., 1989
Arsenic	Rat	Oral	NR	Reproductive effects		0.61	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		0.58	RTECS, 1993
	Rat	Oral	NR	Mortality	763		RTECS, 1993
	Mouse	Oral	NR	Mortality	145		RTECS, 1993
Beryllium	Rat	Single oral dose	NR	Mortality	10		USEPA, 1985
Cadmium	Rat	Oral	NR	Reproductive effects		155	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		220	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		21.5	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		23	RTECS, 1993
	Rat	Single oral dose		Mortality	250		Eisler, 1985
	Rat	Oral	NR	Mortality	225		RTECS, 1993
	Mouse	Oral	NR	Mortality	890		RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		448	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		1700	RTECS, 1993
	Guinea pig	Single oral dose		Mortality	150		Eisler, 1985
Mallard	Oral (subchronic)	90 days	Egg production suppressed		10	Eisler, 1985	

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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Chromium (Potassium dichromate)	Japanese quail	Oral (acute)	5 days	Mortality	126		Hill and Camardese, 1986
Copper	Rat	Single oral dose		Reproductive effects		152	NIOSH, 1985 and RTECS, 1993
	Mallard	Oral (subchronic)	29 days	NOAEL for survivorship		10.5 ^b	Demayo et al., 1982
Iron	Rat	Single oral dose	NR	Mortality	319		Sax, 1984
	Mouse	Single oral dose	NR	Mortality	979		Sax, 1984
	Guinea pig	Single oral dose	NR	Mortality	1200		Sax, 1984
Lead	Rat	Oral	NR	Reproductive effects		790	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		1140	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		520	RTECS, 1993
	Rat	Oral	NR	Reproductive effects		1100	RTECS, 1993
	Calf	Single oral dose	NR	Mortality	220		Eisler, 1988
	Mouse	Oral	NR	Reproductive effects		1120	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		6300	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		300	RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		4800	RTECS, 1993
	Domestic animal	Oral	NR	Reproductive effects		662	RTECS, 1993
	Mammal	Oral	NR	Reproductive effects		2118	RTECS, 1993
Kestrel	Diet	NR	Decreased egg laying fertility; decreased egg shell thickness		250 ^b	Eisler, 1988	

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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Lead	Nestlings	Oral	NR	Reduced growth and brain weight; abnormal development		125	Eisler, 1988
	Japanese quail	Diet	5 days	Mortality	24752		Hill and Camardese, 1986
Manganese	Mouse	Oral (subchronic)	90 days	Delayed growth of testes		140	ATSDR, 1990
	Mouse	Oral (chronic)	103 weeks	Mortality		4050	ATSDR, 1990
	Rat	Single oral dose	NR	Mortality	410		ATSDR, 1990
	Rat	Oral (acute)	20 days	Mortality	225		ATSDR, 1990
	Rat	Oral (subchronic)	20 days	Decreased litter weight during gestation		3100 ^b	ATSDR, 1990
	Rat	Oral (chronic)	103 weeks	Mortality		930	ATSDR, 1990
	Guinea pig	Single oral dose	NR	Mortality	400		USEPA, 1984
	Monkey	Oral (chronic)	18 months	Weakness, rigidity		25	ATSDR, 1990
Mercury	Mouse	Single oral dose		Mortality	22		NIOSH, 1985
	Rat	Oral (chronic)	NR	Reduced fertility		0.5	Eisler, 1987
	Rat	Single oral dose		Mortality	18		NIOSH, 1985
	Pig	Oral (subchronic)	Pregnancy	High incidence of stillbirths		0.5	Eisler, 1987
	Mule deer	Single oral dose		Mortality	17.9		Eisler, 1987
	River otter	Single oral dose		Mortality	2		Eisler, 1987
	Mink	Single oral dose		Mortality	1		Eisler, 1987

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Wildlife Toxicity Data
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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Mercury (Continued)	Dog	Oral (subchronic)	Pregnancy	High incidence of stillbirths		0.1	Eisler, 1987
	House sparrow	Single oral dose		Mortality	12.6		Eisler, 1987
	Rock dove	Single oral dose		Mortality	22.8		Eisler, 1987
	Chicken	Single oral dose		Mortality	20		Fimreite, 1979
	Bantam chicken	Single oral dose		Mortality	190		Fimreite, 1979
	Prairie chicken	Single oral dose		Mortality	11.5		Eisler, 1987
	Chukar	Single oral dose		Mortality	26.9		Eisler, 1987
	Coturnix	Single oral dose		Mortality	11		Eisler, 1987
	Mallard	Oral	NR	Reproduction, behavior		0.064	USEPA, 1993
	Black duck	Oral (subchronic)	28 weeks	Reproduction inhibited		0.22 ^a	Eisler, 1987
	Fulvous whistling duck	Single oral dose		Mortality	37.8		Eisler, 1987
	Northern bobwhite	Single oral dose		Mortality	23.8		Eisler, 1987
	Bobwhite quail	Oral (acute)	5 days	Mortality	523		Hill et al., 1975
	Japanese quail	Single oral dose		Mortality	14.4		Eisler, 1987
	Gray partridge	Single oral dose		Mortality	17.6		Eisler, 1987
Gray pheasant	Oral (subchronic)	30 days	Reduced reproductive ability		0.64	Eisler, 1987	
Ring-necked pheasant	Single oral dose		Mortality	11.5		Eisler, 1987	
Nickel	Rat	Oral	NR	Reproductive effects		168	RTECS, 1994
	Rat	Single oral dose	NR	Mortality	67		ATSDR, 1987

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Chemical	Test Species	Test Type	Duration	Effect	Oral LD ₅₀ (mg/kg/BW)	LOAEL (mg/kgBW/day)	Reference
Selenium	Rat	Oral	NR	Mortality	6700		RTECS, 1993
	Mouse	Oral	NR	Reproductive effects		134	RTECS, 1993
	Mallard	Oral (subchronic)	3 months	Reduced hatchability		1.75	Eisler, 1985
Vanadium	Japanese quail	Oral (acute)	5 days	Mortality	96		Hill and Camardee, 1986
Zinc	Rat	Single oral dose		Mortality	2510		RTECS, 1993
	Rat	Oral (subchronic)	NR	Kidney toxicity		160	Llobet, et al., 1988

- Notes:**
- LD50 = Dose resulting in 50% mortality in test population.
 - BW = Body weight.
 - LOAEL = Lowest Observed Adverse Effect Level.
 - NR = Not reported.
 - e = Converted to dose per kilogram body weight by multiplying by ingestion and dividing by body weight.
 - b = Estimated by applying a LOAEL-NOAEL ratio of 5 (Newell et al., 1987).

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Appendix Q
Risk/Hazard Data

Industrial Scenario

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 014

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
014SB001	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Total			0.000	0.000
014SB002	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Total			0.000	0.000
014SB003	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Total			0.000	0.000
014SB004	Arsenic (As)	MG/KG	11.90	0.027	4.397
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.88	0.000	0.932
	Total			0.027	5.329
014SB005	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	6.30	0.000	0.021
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Total			0.000	0.021
014SB006	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.00	0.000	1.059
	Total			0.000	1.059
014SB007	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	76.03	0.000	0.256
	Beryllium (Be)	MG/KG	1.00	0.000	1.059
	Total			0.000	1.315
014SB008	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.82	0.000	0.869
	Total			0.000	0.869
014SB009	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.00	0.000	1.059
	Total			0.000	1.059
014SB010	Arsenic (As)	MG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 014

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
014SB010	Beryllium (Be)	MG/KG	1.20	0.000	1.271
	Total			0.000	1.271
014SB011	Arsenic (As)	MG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.82	0.000	0.869
	Total			0.000	0.869
014SB106	Arsenic (As)	MG/KG	13.60	0.031	5.025
	B(a)P Equiv.	UG/KG	925.21	0.000	3.115
	Beryllium (Be)	MG/KG	1.10	0.000	1.165
	Total			0.031	9.306

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 015

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
015SB001	Arsenic (As)	MG/KG	6.40	0.015	2.365
	B(a)P Equiv.	UG/KG	108.29	0.000	0.365
	Total			0.015	2.729
015SB002	Arsenic (As)	MG/KG	3.60	0.008	1.330
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.008	1.330
015SB003	Arsenic (As)	MG/KG	15.00	0.034	5.543
	B(a)P Equiv.	UG/KG	402.83	0.000	1.356
	Total			0.034	6.899
015SB004	Arsenic (As)	MG/KG	53.10	0.122	19.621
	B(a)P Equiv.	UG/KG	2,028.40	0.000	6.830
	Total			0.122	26.451
015SB005	B(a)P Equiv.	UG/KG	246.38	0.000	0.830
	Total			0.000	0.830
015SB006	B(a)P Equiv.	UG/KG	405.32	0.000	1.365
	Total			0.000	1.365
015SB007	B(a)P Equiv.	UG/KG	106.94	0.000	0.360
	Total			0.000	0.360
015SB008	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 017

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
017SB001	Aroclor-1260	UG/KG	1,860.00	0.000	6.606
	Total			0.000	6.606
017SB002	Aroclor-1260	UG/KG	23,100.00	0.000	82.043
	Total			0.000	82.043
017SB003	Aroclor-1260	UG/KG	160.00	0.000	0.568
	Total			0.000	0.568
017SB004	Aroclor-1260	UG/KG	3,850.00	0.000	13.674
	Total			0.000	13.674
017SB005	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
017SB006	Aroclor-1260	UG/KG	18,000.00	0.000	63.930
	Total			0.000	63.930
017SB007	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
017SB008	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
017SB009	Aroclor-1260	UG/KG	6,420.00	0.000	22.802
	Total			0.000	22.802
017SB010	Aroclor-1260	UG/KG	367.00	0.000	1.303
	Total			0.000	1.303
017SB011	Aroclor-1260	UG/KG	187.00	0.000	0.664
	Total			0.000	0.664
017SB012	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
017SB013	Aroclor-1260	UG/KG	59.20	0.000	0.210
	Total			0.000	0.210
017SB014	Aroclor-1260	UG/KG	340.00	0.000	1.208
	Total			0.000	1.208
017SB015	Aroclor-1260	UG/KG	54.00	0.000	0.192
	Total			0.000	0.192

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 017

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
017SB016	Aroclor-1260	UG/KG	67.00	0.000	0.238
	Total			0.000	0.238
017SB017	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
017SB018	Aroclor-1260	UG/KG	66.10	0.000	0.235
	Total			0.000	0.235
017SB019	Aroclor-1260	UG/KG	1,900.00	0.000	6.748
	Total			0.000	6.748
017SB020	Aroclor-1260	UG/KG	180,000.00	0.000	639.295
	Total			0.000	639.295
017SB021	Aroclor-1260	UG/KG	36.00	0.000	0.128
	Total			0.000	0.128
017SB022	Aroclor-1260	UG/KG	710.00	0.000	2.522
	Total			0.000	2.522
017SB023	Aroclor-1260	UG/KG	1,000.00	0.000	3.552
	Total			0.000	3.552
017SB024	Aroclor-1260	UG/KG	61.00	0.000	0.217
	Total			0.000	0.217
017SB025	Aroclor-1260	UG/KG	160.00	0.000	0.568
	Total			0.000	0.568
017SB026	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
017SB027	Aroclor-1260	UG/KG	295.00	0.000	1.048
	Total			0.000	1.048
017SB028	Aroclor-1260	UG/KG	180.00	0.000	0.639
	Total			0.000	0.639
017SB029	Aroclor-1260	UG/KG	530.00	0.000	1.882
	Total			0.000	1.882
017SB030	Aroclor-1260	UG/KG	310.00	0.000	1.101
	Total			0.000	1.101

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 017

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
017SB031	Aroclor-1260	UG/KG	96.00	0.000	0.341
	Total			<u>0.000</u>	<u>0.341</u>
017SB032	Aroclor-1260	UG/KG	50.00	0.000	0.178
	Total			<u>0.000</u>	<u>0.178</u>
017SB033	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 019

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
019SB001	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	16.50	0.038	6.097
	B(a)P Equiv.	UG/KG	142.26	0.000	0.479
	Beryllium (Be)	MG/KG	0.33	0.000	0.350
	Total			<u>0.038</u>	<u>6.925</u>
019SB002	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	12.30	0.028	4.545
	B(a)P Equiv.	UG/KG	808.41	0.000	2.722
	Beryllium (Be)	MG/KG	0.48	0.000	0.508
	Total			<u>0.028</u>	<u>7.775</u>
019SB003	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	21.40	0.049	7.907
	B(a)P Equiv.	UG/KG	0.09	0.000	0.000
	Beryllium (Be)	MG/KG	0.42	0.000	0.445
	Total			<u>0.049</u>	<u>8.353</u>
019SB004	Aroclor-1260	UG/KG	400.00	0.000	1.421
	Arsenic (As)	MG/KG	4.70	0.011	1.737
	B(a)P Equiv.	UG/KG	199.00	0.000	0.670
	Beryllium (Be)	MG/KG	3.00	0.000	3.178
	Total			<u>0.011</u>	<u>7.005</u>
019SB005	Aroclor-1260	UG/KG	110.00	0.000	0.391
	Arsenic (As)	MG/KG	8.80	0.020	3.252
	B(a)P Equiv.	UG/KG	332.88	0.000	1.121
	Beryllium (Be)	MG/KG	0.56	0.000	0.593
	Total			<u>0.020</u>	<u>5.356</u>
019SB006	Aroclor-1260	UG/KG	190.00	0.000	0.675
	Arsenic (As)	MG/KG	5.40	0.012	1.995
	B(a)P Equiv.	UG/KG	21.17	0.000	0.071
	Beryllium (Be)	MG/KG	0.65	0.000	0.689
	Total			<u>0.013</u>	<u>3.430</u>
019SB007	Aroclor-1260	UG/KG	560.00	0.000	1.989
	Arsenic (As)	MG/KG	4.10	0.009	1.515
	B(a)P Equiv.	UG/KG	20.10	0.000	0.068
	Beryllium (Be)	MG/KG	1.20	0.000	1.271
	Total			<u>0.010</u>	<u>4.843</u>
019SB008	Aroclor-1260	UG/KG	32.00	0.000	0.114
	Arsenic (As)	MG/KG	10.70	0.025	3.954
	B(a)P Equiv.	UG/KG	0.10	0.000	0.000
	Beryllium (Be)	MG/KG	0.96	0.000	1.017
	Total			<u>0.025</u>	<u>5.085</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 019

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
019SB009	Aroclor-1260	UG/KG	130.00	0.000	0.462
	Arsenic (As)	MG/KG	22.10	0.051	8.166
	B(a)P Equiv.	UG/KG	151.19	0.000	0.509
	Beryllium (Be)	MG/KG	0.78	0.000	0.826
	Total			0.051	9.963
019SB010	Aroclor-1260	UG/KG	68.00	0.000	0.242
	Arsenic (As)	MG/KG	8.20	0.019	3.030
	B(a)P Equiv.	UG/KG	592.19	0.000	1.994
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Total			0.019	5.265
019SB011	Aroclor-1260	UG/KG	180.00	0.000	0.639
	Arsenic (As)	MG/KG	3.80	0.009	1.404
	B(a)P Equiv.	UG/KG	561.60	0.000	1.891
	Beryllium (Be)	MG/KG	0.77	0.000	0.816
	Total			0.009	4.750
019SB012	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	10.90	0.025	4.028
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Total			0.025	4.028
019SB013	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	3.00	0.007	1.109
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.15	0.000	0.159
	Total			0.007	1.267
019SB014	Aroclor-1260	UG/KG	41.80	0.000	0.148
	Arsenic (As)	MG/KG	5.70	0.013	2.106
	B(a)P Equiv.	UG/KG	174.00	0.000	0.586
	Beryllium (Be)	MG/KG	0.65	0.000	0.689
	Total			0.013	3.529
019SB016	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.15	0.000	0.159
	Total			0.000	0.159
019SB017	Aroclor-1260	UG/KG	92.00	0.000	0.327
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	258.33	0.000	0.870
	Beryllium (Be)	MG/KG	0.51	0.000	0.540
	Total			0.000	1.737

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 019

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
019SB018	Aroclor-1260	UG/KG	370.00	0.000	1.314
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	371.85	0.000	1.252
	Beryllium (Be)	MG/KG	0.65	0.000	0.689
	Total			<u>0.000</u>	<u>3.255</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 020

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
020SB001	B(a)P Equiv.	UG/KG	215.12	0.000	0.724
	Total			0.000	0.724
020SB002	B(a)P Equiv.	UG/KG	29.02	0.000	0.098
	Total			0.000	0.098
020SB003	B(a)P Equiv.	UG/KG	266.95	0.000	0.899
	Total			0.000	0.899
020SB004	B(a)P Equiv.	UG/KG	107.71	0.000	0.363
	Total			0.000	0.363
020SB005	B(a)P Equiv.	UG/KG	1,083.30	0.000	3.648
	Total			0.000	3.648
020SB006	B(a)P Equiv.	UG/KG	278.34	0.000	0.937
	Total			0.000	0.937
020SB007	B(a)P Equiv.	UG/KG	185.26	0.000	0.624
	Total			0.000	0.624
020SB008	B(a)P Equiv.	UG/KG	830.16	0.000	2.795
	Total			0.000	2.795
020SB009	B(a)P Equiv.	UG/KG	795.60	0.000	2.679
	Total			0.000	2.679
020SB010	B(a)P Equiv.	UG/KG	160.99	0.000	0.542
	Total			0.000	0.542
020SB011	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
121SB001	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	3.50	0.008	1.293
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.52	0.000	0.551
	Total			<u>0.008</u>	<u>1.844</u>
121SB002	Aroclor-1254	UG/KG	840.00	0.054	2.983
	Aroclor-1260	UG/KG	120.00	0.000	0.426
	Arsenic (As)	MG/KG	5.30	0.012	1.958
	B(a)P Equiv.	UG/KG	129.57	0.000	0.436
	Beryllium (Be)	MG/KG	0.63	0.000	0.662
	Total			<u>0.067</u>	<u>6.466</u>
121SB003	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	110.00	0.000	0.391
	Arsenic (As)	MG/KG	12.00	0.028	4.434
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.70	0.000	1.801
	Total			<u>0.028</u>	<u>6.625</u>
121SB004	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	120.00	0.000	0.426
	Arsenic (As)	MG/KG	18.70	0.043	6.910
	B(a)P Equiv.	UG/KG	96.30	0.000	0.324
	Beryllium (Be)	MG/KG	4.80	0.001	5.084
	Total			<u>0.044</u>	<u>12.745</u>
121SB005	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	5.40	0.012	1.995
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.81	0.000	0.858
	Total			<u>0.013</u>	<u>2.853</u>
121SB006	Aroclor-1254	UG/KG	140.00	0.009	0.497
	Aroclor-1260	UG/KG	130.00	0.000	0.462
	Arsenic (As)	MG/KG	9.00	0.021	3.326
	B(a)P Equiv.	UG/KG	13.00	0.000	0.044
	Beryllium (Be)	MG/KG	4.70	0.001	4.978
	Total			<u>0.030</u>	<u>9.307</u>
121SB007	Aroclor-1254	UG/KG	210.00	0.014	0.746
	Aroclor-1260	UG/KG	270.00	0.000	0.959
	Arsenic (As)	MG/KG	6.20	0.014	2.291
	B(a)P Equiv.	UG/KG	123.09	0.000	0.414
	Beryllium (Be)	MG/KG	14.60	0.002	15.465
	Total			<u>0.030</u>	<u>19.875</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
121SB008	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	10.70	0.025	3.954
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.91	0.000	0.964
	Total				0.025
121SB009	Aroclor-1254	UG/KG	240.00	0.015	0.852
	Aroclor-1260	UG/KG	330.00	0.000	1.172
	Arsenic (As)	MG/KG	8.00	0.018	2.956
	B(a)P Equiv.	UG/KG	812.66	0.000	2.736
	Beryllium (Be)	MG/KG	3.20	0.000	3.390
	Total				0.034
121SB010	Aroclor-1254	UG/KG	350.00	0.023	1.243
	Aroclor-1260	UG/KG	430.00	0.000	1.527
	Arsenic (As)	MG/KG	7.40	0.017	2.734
	B(a)P Equiv.	UG/KG	927.60	0.000	3.123
	Beryllium (Be)	MG/KG	1.70	0.000	1.801
	Total				0.040
121SB011	Aroclor-1254	UG/KG	320.00	0.021	1.137
	Aroclor-1260	UG/KG	540.00	0.000	1.918
	Arsenic (As)	MG/KG	8.80	0.020	3.252
	B(a)P Equiv.	UG/KG	2,524.90	0.000	8.502
	Beryllium (Be)	MG/KG	2.00	0.000	2.119
	Total				0.041
121SB013	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,106.70	0.000	7.094
	Beryllium (Be)	MG/KG	0.76	0.000	0.805
	Total				0.000
121SB014	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	110.00	0.000	0.391
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	113.01	0.000	0.381
	Beryllium (Be)	MG/KG	4.10	0.001	4.343
	Total				0.001
121SB015	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	120.00	0.000	0.426
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	305.49	0.000	1.029

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
121SB015	Beryllium (Be)	MG/KG	1.40	0.000	1.483
	Total			0.000	2.938
121SB016	Aroclor-1254	UG/KG	4,300.00	0.278	15.272
	Aroclor-1260	UG/KG	1,100.00	0.000	3.907
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	907.63	0.000	3.056
	Beryllium (Be)	MG/KG	4.60	0.001	4.873
	Total			0.278	27.108
121SB017	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	170.00	0.000	0.604
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.16	0.000	0.169
	Total			0.000	0.773

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 136

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
136SB002	Aroclor-1254	UG/KG	695.00	0.045	2.468
	Arsenic (As)	MG/KG	7.30	0.017	2.697
	B(a)P Equiv.	UG/KG	1,316.60	0.000	4.433
	Total			0.062	9.599
136SB003	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	11.40	0.026	4.212
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.026	4.212
136SB004	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	23.90	0.055	8.831
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.055	8.831

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 655

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
655SB001	Aroclor-1260	UG/KG	610.00	0.000	2.167
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>2.167</u>
655SB002	Aroclor-1260	UG/KG	100.00	0.000	0.355
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.355</u>
655SB003	Aroclor-1260	UG/KG	82.00	0.000	0.291
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.291</u>
655SB004	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
655SB005	Aroclor-1260	UG/KG	60.00	0.000	0.213
	B(a)P Equiv.	UG/KG	21.20	0.000	0.071
	Total			<u>0.000</u>	<u>0.284</u>
655SB006	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
655SB007	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
655SB008	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
655SB009	Aroclor-1260	UG/KG	150.00	0.000	0.533
	Total			<u>0.000</u>	<u>0.533</u>
655SB010	Aroclor-1260	UG/KG	36.00	0.000	0.128
	Total			<u>0.000</u>	<u>0.128</u>
655SB011	Aroclor-1260	UG/KG	260.00	0.000	0.923
	Total			<u>0.000</u>	<u>0.923</u>
655SB012	Aroclor-1260	UG/KG	160.00	0.000	0.568
	Total			<u>0.000</u>	<u>0.568</u>
655SB013	Aroclor-1260	UG/KG	25.80	0.000	0.092
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.092</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 655

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
655SSGC9	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	3,590.70	0.000	12.090
	Total			<u>0.000</u>	<u>12.090</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 663

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
663SB001	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	5.80	0.013	2.143
	B(a)P Equiv.	UG/KG	106.76	0.000	0.359
	Total			<u>0.013</u>	<u>2.503</u>
663SB002	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	3.30	0.008	1.219
	B(a)P Equiv.	UG/KG	308.79	0.000	1.040
	Total			<u>0.008</u>	<u>2.259</u>
663SB004	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	6.30	0.014	2.328
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.014</u>	<u>2.328</u>
663SB005	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	6.80	0.016	2.513
	B(a)P Equiv.	UG/KG	285.85	0.000	0.962
	Total			<u>0.016</u>	<u>3.475</u>
663SB006	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	4.00	0.009	1.478
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.009</u>	<u>1.478</u>
663SB007	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	16.20	0.037	5.986
	B(a)P Equiv.	UG/KG	4,421.50	0.000	14.888
	Total			<u>0.037</u>	<u>20.874</u>
663SB009	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 666

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
666SB001	B(a)P Equiv.	UG/KG	214.23	0.000	0.721
	N-Nitroso-di-n-propylamine	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.721</u>
666SB002	B(a)P Equiv.	UG/KG	1,469.80	0.000	4.949
	N-Nitroso-di-n-propylamine	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>4.949</u>
666SB003	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	N-Nitroso-di-n-propylamine	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
666SB004	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	N-Nitroso-di-n-propylamine	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
666SB005	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	N-Nitroso-di-n-propylamine	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
666SB006	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	N-Nitroso-di-n-propylamine	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
666SB007	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	N-Nitroso-di-n-propylamine	UG/KG	380.00	0.000	1.227
	Total			<u>0.000</u>	<u>1.227</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 670

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB001	Arsenic (As)	MG/KG	15.60	0.036	5.764
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.036	5.764
670SB002	Arsenic (As)	MG/KG	9.70	0.022	3.584
	B(a)P Equiv.	UG/KG	309.23	0.000	1.041
	Total			0.022	4.625
670SB003	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	4,880.70	0.000	16.434
	Total			0.000	16.434
670SB004	Arsenic (As)	MG/KG	11.30	0.026	4.175
	B(a)P Equiv.	UG/KG	1,020.70	0.000	3.437
	Total			0.026	7.612
670SB005	Arsenic (As)	MG/KG	15.20	0.035	5.617
	B(a)P Equiv.	UG/KG	1,590.90	0.000	5.357
	Total			0.035	10.973
670SB006	Arsenic (As)	MG/KG	13.80	0.032	5.099
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.032	5.099
670SB007	Arsenic (As)	MG/KG	8.90	0.020	3.289
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.020	3.289
670SB008	Arsenic (As)	MG/KG	9.70	0.022	3.584
	B(a)P Equiv.	UG/KG	955.62	0.000	3.218
	Total			0.022	6.802
670SB009	Arsenic (As)	MG/KG	9.10	0.021	3.363
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.021	3.363
670SB010	Arsenic (As)	MG/KG	10.40	0.024	3.843
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.024	3.843
670SB011	Arsenic (As)	MG/KG	8.90	0.020	3.289
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.020	3.289
670SB012	Arsenic (As)	MG/KG	23.70	0.054	8.757
	B(a)P Equiv.	UG/KG	704.82	0.000	2.373
	Total			0.054	11.131

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 670

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB013	Arsenic (As)	MG/KG	10.90	0.025	4.028
	B(a)P Equiv.	UG/KG	58.68	0.000	0.198
	Total			0.025	4.225
670SB014	Arsenic (As)	MG/KG	9.50	0.022	3.510
	B(a)P Equiv.	UG/KG	0.17	0.000	0.001
	Total			0.022	3.511
670SB015	Arsenic (As)	MG/KG	9.70	0.022	3.584
	B(a)P Equiv.	UG/KG	101.72	0.000	0.343
	Total			0.022	3.927
670SB016	Arsenic (As)	MG/KG	12.10	0.028	4.471
	B(a)P Equiv.	UG/KG	205.17	0.000	0.691
	Total			0.028	5.162
670SB017	Arsenic (As)	MG/KG	8.20	0.019	3.030
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.019	3.030
670SB018	Arsenic (As)	MG/KG	10.10	0.023	3.732
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.023	3.732
670SB019	Arsenic (As)	MG/KG	7.00	0.016	2.587
	B(a)P Equiv.	UG/KG	80.43	0.000	0.271
	Total			0.016	2.857
670SB020	Arsenic (As)	MG/KG	8.40	0.019	3.104
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.019	3.104
670SB021	Arsenic (As)	MG/KG	7.90	0.018	2.919
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.018	2.919
670SB022	Arsenic (As)	MG/KG	9.30	0.021	3.436
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.021	3.436
670SB023	Arsenic (As)	MG/KG	69.00	0.159	25.496
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.159	25.496
670SB024	Arsenic (As)	MG/KG	13.00	0.030	4.804

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 670

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB024	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.030	4.804
670SB025	Arsenic (As)	MG/KG	ND	0.000	0.000
	Total			0.000	0.000
670SB026	Arsenic (As)	MG/KG	12.30	0.028	4.545
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.028	4.545
670SB027	Arsenic (As)	MG/KG	8.30	0.019	3.067
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.019	3.067
670SB028	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
670SB029	B(a)P Equiv.	UG/KG	7,525.10	0.000	25.338
	Total			0.000	25.338
670SB030	B(a)P Equiv.	UG/KG	165.34	0.000	0.557
	Total			0.000	0.557
670SB031	Arsenic (As)	MG/KG	15.40	0.035	5.690
	B(a)P Equiv.	UG/KG	27,883.00	0.000	93.886
	Total			0.035	99.576
670SB032	Arsenic (As)	MG/KG	17.20	0.040	6.356
	B(a)P Equiv.	UG/KG	870.21	0.000	2.930
	Total			0.040	9.286
670SB033	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
670SB034	B(a)P Equiv.	UG/KG	2,136.30	0.000	7.193
	Total			0.000	7.193
670SB035	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB001	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB002	Arsenic (As)	MG/KG	7.00	0.016	2.587
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.016</u>	<u>2.587</u>
684SB003	Arsenic (As)	MG/KG	8.50	0.020	3.141
	B(a)P Equiv.	UG/KG	8,567.00	0.000	28.846
	Total			<u>0.020</u>	<u>31.987</u>
684SB004	Arsenic (As)	MG/KG	12.70	0.029	4.693
	B(a)P Equiv.	UG/KG	4,361.00	0.000	14.684
	Total			<u>0.029</u>	<u>19.377</u>
684SB005	Arsenic (As)	MG/KG	7.40	0.017	2.734
	B(a)P Equiv.	UG/KG	75.02	0.000	0.253
	Total			<u>0.017</u>	<u>2.987</u>
684SB006	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB007	Arsenic (As)	MG/KG	9.00	0.021	3.326
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.021</u>	<u>3.326</u>
684SB008	Arsenic (As)	MG/KG	1.90	0.004	0.702
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.004</u>	<u>0.702</u>
684SB009	Arsenic (As)	MG/KG	12.90	0.030	4.767
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.030</u>	<u>4.767</u>
684SB010	Arsenic (As)	MG/KG	5.20	0.012	1.921
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.012</u>	<u>1.921</u>
684SB011	Arsenic (As)	MG/KG	1.40	0.003	0.517
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.003</u>	<u>0.517</u>
684SB012	Arsenic (As)	MG/KG	0.89	0.002	0.329
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.002</u>	<u>0.329</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB013	Arsenic (As)	MG/KG	2.80	0.006	1.035
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.006	1.035
684SB014	Arsenic (As)	MG/KG	11.70	0.027	4.323
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.027	4.323
684SB015	Arsenic (As)	MG/KG	13.50	0.031	4.988
	B(a)P Equiv.	UG/KG	1,515.50	0.000	5.103
	Total			0.031	10.091
684SB016	Arsenic (As)	MG/KG	4.80	0.011	1.774
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.011	1.774
684SB017	Arsenic (As)	MG/KG	3.60	0.008	1.330
	B(a)P Equiv.	UG/KG	120.27	0.000	0.405
	Total			0.008	1.735
684SB018	Arsenic (As)	MG/KG	6.40	0.015	2.365
	B(a)P Equiv.	UG/KG	122.75	0.000	0.413
	Total			0.015	2.778
684SB019	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	194.83	0.000	0.656
	Total			0.000	0.656
684SB020	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,153.50	0.000	7.251
	Total			0.000	7.251
684SB021	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	25,501.00	0.000	85.865
	Total			0.000	85.865
684SB022	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	395.10	0.000	1.330
	Total			0.000	1.330
684SB023	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	1,194.70	0.000	4.023
	Total			0.000	4.023
684SB024	Arsenic (As)	MG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB024	B(a)P Equiv.	UG/KG	4,228.40	0.000	14.238
	Total			<u>0.000</u>	<u>14.238</u>
684SB025	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	287.18	0.000	0.967
	Total			<u>0.000</u>	<u>0.967</u>
684SB026	Arsenic (As)	MG/KG	16.30	0.037	6.023
	B(a)P Equiv.	UG/KG	1,922.40	0.000	6.473
	Total			<u>0.037</u>	<u>12.496</u>
684SB027	Arsenic (As)	MG/KG	9.90	0.023	3.658
	B(a)P Equiv.	UG/KG	502.47	0.000	1.692
	Total			<u>0.023</u>	<u>5.350</u>
684SB028	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	232.11	0.000	0.782
	Total			<u>0.000</u>	<u>0.782</u>
684SB029	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB030	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB031	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB032	B(a)P Equiv.	UG/KG	170.80	0.000	0.575
	Total			<u>0.000</u>	<u>0.575</u>
684SB033	B(a)P Equiv.	UG/KG	259.12	0.000	0.872
	Total			<u>0.000</u>	<u>0.872</u>
684SB034	B(a)P Equiv.	UG/KG	195.73	0.000	0.659
	Total			<u>0.000</u>	<u>0.659</u>
684SB035	B(a)P Equiv.	UG/KG	29,871.00	0.000	100.580
	Total			<u>0.000</u>	<u>100.580</u>
684SB036	Arsenic (As)	MG/KG	11.70	0.027	4.323
	B(a)P Equiv.	UG/KG	1,162.20	0.000	3.913
	Total			<u>0.027</u>	<u>8.237</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 684

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB037	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
684SB038	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
684SB039	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
684SB040	B(a)P Equiv.	UG/KG	696.10	<u>0.000</u>	<u>2.344</u>
	Total			<u>0.000</u>	<u>2.344</u>
684SB041	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
684SB042	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
684SB043	B(a)P Equiv.	UG/KG	4,266.70	<u>0.000</u>	<u>14.367</u>
	Total			<u>0.000</u>	<u>14.367</u>
684SB044	B(a)P Equiv.	UG/KG	9,215.20	<u>0.000</u>	<u>31.029</u>
	Total			<u>0.000</u>	<u>31.029</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site G07

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
G07SB001	Aroclor-1260	UG/KG	970.00	0.000	3.445
	Total			<u>0.000</u>	<u>3.445</u>
G07SB002	Aroclor-1260	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site G38

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
G38SB001	Aroclor-1260	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
G38SB002	Aroclor-1260	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
G38SB003	Aroclor-1260	UG/KG	1,100.00	<u>0.000</u>	<u>3.907</u>
	B(a)P Equiv.	UG/KG	317.72	<u>0.000</u>	<u>1.070</u>
	Total			<u>0.000</u>	<u>4.977</u>

Risk and Hazard for COC's Identified In Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB001	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	1,955.80	0.000	6.585
	Dieldrin	UG/KG	300.00	0.008	2.214
	Total			<u>0.008</u>	<u>8.799</u>
GDHSB002	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB003	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB004	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB005	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB006	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB007	Aroclor-1260	UG/KG	2,820.00	0.000	10.016
	B(a)P Equiv.	UG/KG	251.28	0.000	0.846
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>10.862</u>
GDHSB008	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB009	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB010	Aroclor-1260	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB010	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB011	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	4.06	0.000	0.014
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.014</u>
GDHSB012	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	565.49	0.000	1.904
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>1.904</u>
GDHSB013	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	6.00	0.000	0.044
	Total			<u>0.000</u>	<u>0.044</u>
GDHSB014	Aroclor-1260	UG/KG	110.00	0.000	0.391
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	21.00	0.001	0.155
	Total			<u>0.001</u>	<u>0.546</u>
GDHSB015	Aroclor-1260	UG/KG	58.00	0.000	0.206
	B(a)P Equiv.	UG/KG	105.00	0.000	0.354
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.560</u>
GDHSB016	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB017	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	379.91	0.000	1.279
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>1.279</u>
GDHSB018	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB019	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB019	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB020	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB021	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	140.15	0.000	0.472
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.472
GDHSB022	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB023	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	90.80	0.000	0.306
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.306
GDHSB024	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	267.69	0.000	0.901
	Dieldrin	UG/KG	160.00	0.004	1.181
	Total			0.004	2.082
GDHSB025	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,396.00	0.000	8.068
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	151.00	0.000	1.254
	Total			0.000	9.321
GDHSB026	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	1,790.70	0.000	6.030
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	6.030
GDHSB027	Aroclor-1260	UG/KG	110.00	0.000	0.391
	B(a)P Equiv.	UG/KG	1,065.90	0.000	3.589
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	3.980
GDHSB028	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,006.70	0.000	6.757

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB028	Dieldrin	UG/KG	4.00	0.000	0.030
	Total			0.000	6.786
GDHSB029	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB030	Aroclor-1260	UG/KG	58.00	0.000	0.206
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.206
GDHSB031	Aroclor-1260	UG/KG	100.00	0.000	0.355
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.355
GDHSB032	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	268.28	0.000	0.903
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.903
GDHSB033	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB034	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB035	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB036	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB037	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB038	Aroclor-1260	UG/KG	4,000.00	0.000	14.207
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>14.207</u>
GDHSB039	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	0.09	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB040	Aroclor-1260	UG/KG	91.00	0.000	0.323
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.323</u>
GDHSB041	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB042	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB043	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB044	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB045	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB046	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB047	Aroclor-1260	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB047	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB048	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB049	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB050	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB051	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB052	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB053	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB054	Aroclor-1260	UG/KG	82.00	0.000	0.291
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.291</u>
GDHSB055	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB056	Aroclor-1260	UG/KG	65.00	0.000	0.231
	B(a)P Equiv.	UG/KG	1,257.70	0.000	4.235

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB056	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	4.466
GDHSB057	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB058	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB059	Aroclor-1260	UG/KG	71.00	0.000	0.252
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.252
GDHSB060	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB061	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB062	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB063	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB064	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB065	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB065	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB066	Aroclor-1260	UG/KG	23.00	0.000	0.082
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.082
GDHSB067	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB068	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB069	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB070	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB071	Aroclor-1260	UG/KG	250.00	0.000	0.888
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.888
GDHSB072	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB073	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB074	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB074	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB075	Aroclor-1260	UG/KG	125.00	0.000	0.444
	B(a)P Equiv.	UG/KG	11.65	0.000	0.039
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.483</u>
GDHSB076	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB077	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB078	Aroclor-1260	UG/KG	63.00	0.000	0.224
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.224</u>
GDHSB079	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB080	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	263.43	0.000	0.887
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.887</u>
GDHSB081	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	767.56	0.000	2.584
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>2.584</u>
GDHSB082	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB083	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB083	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB084	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB085	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB086	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB087	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB088	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB089	Aroclor-1260	UG/KG	100.00	0.000	0.355
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.355</u>
GDHSB090	Aroclor-1260	UG/KG	46.00	0.000	0.163
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.163</u>
GDHSB091	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB092	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site GDH

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB093	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB104	Aroclor-1260	UG/KG	23.00	0.000	0.082
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.082</u>
GDHSB105	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB107	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site SGC

Industrial Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
SGCSB001	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB002	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB003	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB004	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB005	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB006	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB007	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB008	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Residential Scenario

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 014

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
014SB001	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	50.10	0.098	0.000
	Total			0.098	0.000
014SB002	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	65.10	0.128	0.000
	Total			0.128	0.000
014SB003	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	68.60	0.134	0.000
	Total			0.134	0.000
014SB004	Arsenic (As)	MG/KG	11.90	0.544	31.083
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.88	0.002	6.589
	Vanadium (V)	MG/KG	62.20	0.122	0.000
	Total			0.668	37.672
014SB005	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	6.30	0.000	0.104
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	65.70	0.129	0.000
	Total			0.129	0.104
014SB006	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.00	0.003	7.488
	Vanadium (V)	MG/KG	68.80	0.135	0.000
	Total			0.138	7.488
014SB007	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	76.03	0.000	1.259
	Beryllium (Be)	MG/KG	1.00	0.003	7.488
	Vanadium (V)	MG/KG	62.50	0.122	0.000
	Total			0.125	8.747
014SB008	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.82	0.002	6.140
	Vanadium (V)	MG/KG	40.40	0.079	0.000
	Total			0.081	6.140

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 014

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
014SB009	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.00	0.003	7.488
	Vanadium (V)	MG/KG	63.10	0.124	0.000
	Total				<u>0.126</u>
014SB010	Aluminum (Al)	MG/KG	29,600.00	0.406	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.20	0.003	8.985
	Vanadium (V)	MG/KG	71.90	0.141	0.000
	Total				<u>0.550</u>
014SB011	Aluminum (Al)	MG/KG	14,800.00	0.203	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.82	0.002	6.140
	Vanadium (V)	MG/KG	49.30	0.097	0.000
	Total				<u>0.302</u>
014SB106	Aluminum (Al)	MG/KG	24,600.00	0.337	0.000
	Arsenic (As)	MG/KG	13.60	0.622	35.523
	B(a)P Equiv.	UG/KG	925.21	0.000	15.322
	Beryllium (Be)	MG/KG	1.10	0.003	8.237
	Vanadium (V)	MG/KG	67.90	0.133	0.000
	Total				<u>1.095</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 015

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
015SB001	Arsenic (As)	MG/KG	6.40	0.293	16.717
	B(a)P Equiv.	UG/KG	108.29	0.000	1.793
	Total			0.293	18.510
015SB002	Arsenic (As)	MG/KG	3.60	0.165	9.403
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.165	9.403
015SB003	Arsenic (As)	MG/KG	15.00	0.686	39.180
	B(a)P Equiv.	UG/KG	402.83	0.000	6.671
	Total			0.686	45.851
015SB004	Arsenic (As)	MG/KG	53.10	2.427	138.697
	B(a)P Equiv.	UG/KG	2,028.40	0.000	33.591
	Total			2.427	172.288
015SB005	B(a)P Equiv.	UG/KG	246.38	0.000	4.080
	Total			0.000	4.080
015SB006	B(a)P Equiv.	UG/KG	405.32	0.000	6.712
	Total			0.000	6.712
015SB007	B(a)P Equiv.	UG/KG	106.94	0.000	1.771
	Total			0.000	1.771
015SB008	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 017

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
017SB001	Aroclor-1260	UG/KG	1,860.00	0.000	32.490
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>32.490</u>
017SB002	Aroclor-1260	UG/KG	23,100.00	0.000	403.504
	B(a)P Equiv.	UG/KG	7.71	0.000	0.128
	Total			<u>0.000</u>	<u>403.632</u>
017SB003	Aroclor-1260	UG/KG	160.00	0.000	2.795
	B(a)P Equiv.	UG/KG	5.43	0.000	0.090
	Total			<u>0.000</u>	<u>2.885</u>
017SB004	Aroclor-1260	UG/KG	3,850.00	0.000	67.251
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>67.251</u>
017SB005	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
017SB006	Aroclor-1260	UG/KG	18,000.00	0.000	314.419
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>314.419</u>
017SB007	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
017SB008	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
017SB009	Aroclor-1260	UG/KG	6,420.00	0.000	112.143
	B(a)P Equiv.	UG/KG	139.38	0.000	2.308
	Total			<u>0.000</u>	<u>114.451</u>
017SB010	Aroclor-1260	UG/KG	367.00	0.000	6.411
	B(a)P Equiv.	UG/KG	5.16	0.000	0.085
	Total			<u>0.000</u>	<u>6.496</u>
017SB011	Aroclor-1260	UG/KG	187.00	0.000	3.266
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>3.266</u>
017SB012	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 017

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
017SB013	Aroclor-1260	UG/KG	59.20	0.000	1.034
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	1.034
017SB014	Aroclor-1260	UG/KG	340.00	0.000	5.939
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	5.939
017SB015	Aroclor-1260	UG/KG	54.00	0.000	0.943
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.943
017SB016	Aroclor-1260	UG/KG	67.00	0.000	1.170
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	1.170
017SB017	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
017SB018	Aroclor-1260	UG/KG	66.10	0.000	1.155
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	1.155
017SB019	Aroclor-1260	UG/KG	1,900.00	0.000	33.189
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	33.189
017SB020	Aroclor-1260	UG/KG	180,000.00	0.000	3,144.191
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	3,144.191
017SB021	Aroclor-1260	UG/KG	36.00	0.000	0.629
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.629
017SB022	Aroclor-1260	UG/KG	710.00	0.000	12.402
	B(a)P Equiv.	UG/KG	220.30	0.000	3.648
	Total			0.000	16.050
017SB023	Aroclor-1260	UG/KG	1,000.00	0.000	17.468
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	17.468
017SB024	Aroclor-1260	UG/KG	61.00	0.000	1.066

**Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 017**

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
017SB024	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			0.000	1.066
017SB025	Aroclor-1260	UG/KG	160.00	0.000	2.795
	B(a)P Equiv.	UG/KG	9.00	<u>0.000</u>	<u>0.149</u>
	Total			0.000	2.944
017SB026	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			0.000	0.000
017SB027	Aroclor-1260	UG/KG	295.00	<u>0.000</u>	<u>5.153</u>
	Total			0.000	5.153
017SB028	Aroclor-1260	UG/KG	180.00	<u>0.000</u>	<u>3.144</u>
	Total			0.000	3.144
017SB029	Aroclor-1260	UG/KG	530.00	<u>0.000</u>	<u>9.258</u>
	Total			0.000	9.258
017SB030	Aroclor-1260	UG/KG	310.00	<u>0.000</u>	<u>5.415</u>
	Total			0.000	5.415
017SB031	Aroclor-1260	UG/KG	96.00	<u>0.000</u>	<u>1.677</u>
	Total			0.000	1.677
017SB032	Aroclor-1260	UG/KG	50.00	<u>0.000</u>	<u>0.873</u>
	Total			0.000	0.873
017SB033	Aroclor-1260	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 019

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
019SB001	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	16.50	0.754	43.098
	B(a)P Equiv.	UG/KG	142.26	0.000	2.356
	Beryllium (Be)	MG/KG	0.33	0.001	2.471
	Copper (Cu)	MG/KG	169.00	0.058	0.000
	Nickel (Ni)	MG/KG	12.70	0.009	0.000
	Zinc (Zn)	MG/KG	250.00	0.011	0.000
	Total				<u>0.833</u>
019SB002	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	12.30	0.562	32.128
	B(a)P Equiv.	UG/KG	808.41	0.000	13.388
	Beryllium (Be)	MG/KG	0.48	0.001	3.594
	Copper (Cu)	MG/KG	264.50	0.091	0.000
	Nickel (Ni)	MG/KG	24.95	0.017	0.000
	Zinc (Zn)	MG/KG	415.00	0.019	0.000
	Total				<u>0.690</u>
019SB003	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	21.40	0.978	55.897
	B(a)P Equiv.	UG/KG	0.09	0.000	0.002
	Beryllium (Be)	MG/KG	0.42	0.001	3.145
	Copper (Cu)	MG/KG	241.00	0.083	0.000
	Nickel (Ni)	MG/KG	23.10	0.016	0.000
	Zinc (Zn)	MG/KG	150.00	0.007	0.000
	Total				<u>1.085</u>
019SB004	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	400.00	0.000	6.987
	Arsenic (As)	MG/KG	4.70	0.215	12.276
	B(a)P Equiv.	UG/KG	199.00	0.000	3.296
	Beryllium (Be)	MG/KG	3.00	0.008	22.463
	Copper (Cu)	MG/KG	1,730.00	0.593	0.000
	Nickel (Ni)	MG/KG	282.00	0.193	0.000
	Zinc (Zn)	MG/KG	2,800.00	0.128	0.000
	Total				<u>1.137</u>
019SB005	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	110.00	0.000	1.921
	Arsenic (As)	MG/KG	8.80	0.402	22.986
	B(a)P Equiv.	UG/KG	332.88	0.000	5.513
	Beryllium (Be)	MG/KG	0.56	0.002	4.193
	Copper (Cu)	MG/KG	609.00	0.209	0.000
	Nickel (Ni)	MG/KG	52.40	0.036	0.000

Risk and Hazard for COC's Identified In Zone H Surface Soil
Site 019

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
019SB005	Zinc (Zn)	MG/KG	503.00	0.023	0.000
	Total			<u>0.671</u>	<u>34.613</u>
019SB006	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	190.00	0.000	3.319
	Arsenic (As)	MG/KG	5.40	0.247	14.105
	B(a)P Equiv.	UG/KG	21.17	0.000	0.351
	Beryllium (Be)	MG/KG	0.65	0.002	4.867
	Copper (Cu)	MG/KG	699.00	0.240	0.000
	Nickel (Ni)	MG/KG	51.40	0.035	0.000
	Zinc (Zn)	MG/KG	684.00	0.031	0.000
	Total			<u>0.555</u>	<u>22.641</u>
019SB007	Aroclor-1254	UG/KG	2,300.00	1.897	40.176
	Aroclor-1260	UG/KG	560.00	0.000	9.782
	Arsenic (As)	MG/KG	4.10	0.187	10.709
	B(a)P Equiv.	UG/KG	20.10	0.000	0.333
	Beryllium (Be)	MG/KG	1.20	0.003	8.985
	Copper (Cu)	MG/KG	3,040.00	1.042	0.000
	Nickel (Ni)	MG/KG	23.20	0.016	0.000
	Zinc (Zn)	MG/KG	478.00	0.022	0.000
	Total			<u>3.167</u>	<u>69.985</u>
019SB008	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	32.00	0.000	0.559
	Arsenic (As)	MG/KG	10.70	0.489	27.948
	B(a)P Equiv.	UG/KG	0.10	0.000	0.002
	Beryllium (Be)	MG/KG	0.96	0.003	7.188
	Copper (Cu)	MG/KG	286.00	0.098	0.000
	Nickel (Ni)	MG/KG	28.50	0.020	0.000
	Zinc (Zn)	MG/KG	393.00	0.018	0.000
	Total			<u>0.627</u>	<u>35.697</u>
019SB009	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	130.00	0.000	2.271
	Arsenic (As)	MG/KG	22.10	1.010	57.725
	B(a)P Equiv.	UG/KG	151.19	0.000	2.504
	Beryllium (Be)	MG/KG	0.78	0.002	5.840
	Copper (Cu)	MG/KG	427.00	0.146	0.000
	Nickel (Ni)	MG/KG	31.40	0.022	0.000
	Zinc (Zn)	MG/KG	427.00	0.020	0.000
	Total			<u>1.200</u>	<u>68.340</u>
019SB010	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	68.00	0.000	1.188
	Arsenic (As)	MG/KG	8.20	0.375	21.418
	B(a)P Equiv.	UG/KG	592.19	0.000	9.807
	Beryllium (Be)	MG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 019

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
019SB010	Copper (Cu)	MG/KG	426.00	0.146	0.000
	Nickel (Ni)	MG/KG	56.40	0.039	0.000
	Zinc (Zn)	MG/KG	246.00	0.011	0.000
	Total			<u>0.571</u>	<u>32.413</u>
019SB011	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	180.00	0.000	3.144
	Arsenic (As)	MG/KG	3.80	0.174	9.926
	B(a)P Equiv.	UG/KG	561.60	0.000	9.300
	Beryllium (Be)	MG/KG	0.77	0.002	5.766
	Copper (Cu)	MG/KG	1,120.00	0.384	0.000
	Nickel (Ni)	MG/KG	136.00	0.093	0.000
	Zinc (Zn)	MG/KG	1,230.00	0.056	0.000
Total			<u>0.709</u>	<u>28.136</u>	
019SB012	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	10.90	0.498	28.471
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Copper (Cu)	MG/KG	ND	0.000	0.000
	Nickel (Ni)	MG/KG	ND	0.000	0.000
	Zinc (Zn)	MG/KG	ND	0.000	0.000
Total			<u>0.498</u>	<u>28.471</u>	
019SB013	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	3.00	0.137	7.836
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.15	0.000	1.123
	Copper (Cu)	MG/KG	5.90	0.002	0.000
	Nickel (Ni)	MG/KG	ND	0.000	0.000
	Zinc (Zn)	MG/KG	12.30	0.001	0.000
Total			<u>0.140</u>	<u>8.959</u>	
019SB014	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	41.80	0.000	0.730
	Arsenic (As)	MG/KG	5.70	0.261	14.888
	B(a)P Equiv.	UG/KG	174.00	0.000	2.881
	Beryllium (Be)	MG/KG	0.65	0.002	4.867
	Copper (Cu)	MG/KG	1,510.00	0.518	0.000
	Nickel (Ni)	MG/KG	76.55	0.052	0.000
	Zinc (Zn)	MG/KG	623.00	0.028	0.000
Total			<u>0.861</u>	<u>23.367</u>	
019SB016	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 019

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
019SB016	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.15	0.000	1.123
	Copper (Cu)	MG/KG	ND	0.000	0.000
	Nickel (Ni)	MG/KG	2.70	0.002	0.000
	Zinc (Zn)	MG/KG	16.20	0.001	0.000
	Total				<u>0.003</u>
019SB017	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	92.00	0.000	1.607
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	258.33	0.000	4.278
	Beryllium (Be)	MG/KG	0.51	0.001	3.819
	Copper (Cu)	MG/KG	130.00	0.045	0.000
	Nickel (Ni)	MG/KG	18.00	0.012	0.000
	Zinc (Zn)	MG/KG	354.00	0.016	0.000
	Total			<u>0.074</u>	<u>9.704</u>
019SB018	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	370.00	0.000	6.463
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	371.85	0.000	6.158
	Beryllium (Be)	MG/KG	0.65	0.002	4.867
	Copper (Cu)	MG/KG	562.00	0.193	0.000
	Nickel (Ni)	MG/KG	99.90	0.068	0.000
	Zinc (Zn)	MG/KG	762.00	0.035	0.000
	Total			<u>0.298</u>	<u>17.488</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 020

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
020SB001	B(a)P Equiv.	UG/KG	215.12	<u>0.000</u>	<u>3.562</u>
	Total			0.000	3.562
020SB002	B(a)P Equiv.	UG/KG	29.02	<u>0.000</u>	<u>0.481</u>
	Total			0.000	0.481
020SB003	B(a)P Equiv.	UG/KG	266.95	<u>0.000</u>	<u>4.421</u>
	Total			0.000	4.421
020SB004	B(a)P Equiv.	UG/KG	107.71	<u>0.000</u>	<u>1.784</u>
	Total			0.000	1.784
020SB005	B(a)P Equiv.	UG/KG	1,083.30	<u>0.000</u>	<u>17.940</u>
	Total			0.000	17.940
020SB006	B(a)P Equiv.	UG/KG	278.34	<u>0.000</u>	<u>4.609</u>
	Total			0.000	4.609
020SB007	B(a)P Equiv.	UG/KG	185.26	<u>0.000</u>	<u>3.068</u>
	Total			0.000	3.068
020SB008	B(a)P Equiv.	UG/KG	830.16	<u>0.000</u>	<u>13.748</u>
	Total			0.000	13.748
020SB009	B(a)P Equiv.	UG/KG	795.60	<u>0.000</u>	<u>13.175</u>
	Total			0.000	13.175
020SB010	B(a)P Equiv.	UG/KG	160.99	<u>0.000</u>	<u>2.666</u>
	Total			0.000	2.666
020SB011	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
121SB001	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	3.50	0.160	9.142
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.52	0.001	3.894
	Copper (Cu)	MG/KG	60.00	0.021	0.000
	Mercury (Hg)	MG/KG	0.11	0.005	0.000
	Nickel (Ni)	MG/KG	13.80	0.009	0.000
	Thallium (Tl)	MG/KG	2.70	0.463	0.000
	Vanadium (V)	MG/KG	6.50	0.013	0.000
	Zinc (Zn)	MG/KG	305.00	0.014	0.000
	Total				<u>0.686</u>
121SB002	Antimony (Sb)	MG/KG	3.10	0.106	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	840.00	0.693	14.673
	Aroclor-1260	UG/KG	120.00	0.000	2.096
	Arsenic (As)	MG/KG	5.30	0.242	13.844
	B(a)P Equiv.	UG/KG	129.57	0.000	2.146
	Beryllium (Be)	MG/KG	0.63	0.002	4.680
	Copper (Cu)	MG/KG	460.00	0.158	0.000
	Mercury (Hg)	MG/KG	3.50	0.160	0.000
	Nickel (Ni)	MG/KG	191.50	0.131	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	358.50	0.702	0.000
	Zinc (Zn)	MG/KG	2,835.00	0.130	0.000
	Total				<u>2.324</u>
121SB003	Antimony (Sb)	MG/KG	4.90	0.168	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	110.00	0.000	1.921
	Arsenic (As)	MG/KG	12.00	0.548	31.344
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.70	0.005	12.729
	Copper (Cu)	MG/KG	455.00	0.156	0.000
	Mercury (Hg)	MG/KG	0.29	0.013	0.000
	Nickel (Ni)	MG/KG	113.00	0.077	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	24.30	0.048	0.000
	Zinc (Zn)	MG/KG	1,250.00	0.057	0.000
	Total				<u>1.073</u>
121SB004	Antimony (Sb)	MG/KG	2.80	0.096	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	120.00	0.000	2.096

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
121SB004	Arsenic (As)	MG/KG	18.70	0.855	48.844
	B(a)P Equiv.	UG/KG	96.30	0.000	1.595
	Beryllium (Be)	MG/KG	4.80	0.013	35.941
	Copper (Cu)	MG/KG	1,360.00	0.466	0.000
	Mercury (Hg)	MG/KG	0.96	0.044	0.000
	Nickel (Ni)	MG/KG	374.00	0.256	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	76.30	0.149	0.000
	Zinc (Zn)	MG/KG	4,470.00	0.204	0.000
	Total			<u>2.084</u>	<u>88.476</u>
121SB005	Antimony (Sb)	MG/KG	7.30	0.250	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	5.40	0.247	14.105
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.81	0.002	6.065
	Copper (Cu)	MG/KG	460.00	0.158	0.000
	Mercury (Hg)	MG/KG	0.27	0.012	0.000
	Nickel (Ni)	MG/KG	88.00	0.060	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	32.60	0.064	0.000
	Zinc (Zn)	MG/KG	689.00	0.031	0.000
	Total			<u>0.825</u>	<u>20.170</u>
121SB006	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	140.00	0.115	2.445
	Aroclor-1260	UG/KG	130.00	0.000	2.271
	Arsenic (As)	MG/KG	9.00	0.411	23.508
	B(a)P Equiv.	UG/KG	13.00	0.000	0.215
	Beryllium (Be)	MG/KG	4.70	0.013	35.192
	Copper (Cu)	MG/KG	1,690.00	0.579	0.000
	Mercury (Hg)	MG/KG	0.85	0.039	0.000
	Nickel (Ni)	MG/KG	383.00	0.263	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	93.80	0.184	0.000
	Zinc (Zn)	MG/KG	4,520.00	0.207	0.000
	Total			<u>1.811</u>	<u>63.632</u>
121SB007	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	66.00	0.000	1.153
	Aroclor-1254	UG/KG	210.00	0.173	3.668
	Aroclor-1260	UG/KG	270.00	0.000	4.716
	Arsenic (As)	MG/KG	6.20	0.283	16.194
	B(a)P Equiv.	UG/KG	123.09	0.000	2.038
	Beryllium (Be)	MG/KG	14.60	0.040	109.321
	Copper (Cu)	MG/KG	4,060.00	1.392	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Residential Scenario

SITETAG	PARAMETER	UNITS	ANALYTICAL RESULT	HAZARD QUOTIENT	RISK (E-6)
121SB007	Mercury (Hg)	MG/KG	3.30	0.151	0.000
	Nickel (Ni)	MG/KG	995.00	0.682	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	470.00	0.921	0.000
	Zinc (Zn)	MG/KG	15,100.00	0.690	0.000
	Total			<u>4.332</u>	<u>137.091</u>
121SB008	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	10.70	0.489	27.948
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.91	0.002	6.814
	Copper (Cu)	MG/KG	74.10	0.025	0.000
	Mercury (Hg)	MG/KG	0.03	0.001	0.000
	Nickel (Ni)	MG/KG	27.10	0.019	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	12.00	0.024	0.000
	Zinc (Zn)	MG/KG	253.00	0.012	0.000
	Total			<u>0.572</u>	<u>34.762</u>
121SB009	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	140.00	0.000	2.445
	Aroclor-1254	UG/KG	240.00	0.198	4.192
	Aroclor-1260	UG/KG	330.00	0.000	5.764
	Arsenic (As)	MG/KG	8.00	0.366	20.896
	B(a)P Equiv.	UG/KG	812.66	0.000	13.458
	Beryllium (Be)	MG/KG	3.20	0.009	23.961
	Copper (Cu)	MG/KG	984.00	0.337	0.000
	Mercury (Hg)	MG/KG	0.98	0.045	0.000
	Nickel (Ni)	MG/KG	217.00	0.149	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	60.30	0.118	0.000
	Zinc (Zn)	MG/KG	3,170.00	0.145	0.000
	Total			<u>1.366</u>	<u>70.717</u>
121SB010	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	100.00	0.000	1.747
	Aroclor-1254	UG/KG	350.00	0.289	6.114
	Aroclor-1260	UG/KG	430.00	0.000	7.511
	Arsenic (As)	MG/KG	7.40	0.338	19.329
	B(a)P Equiv.	UG/KG	927.60	0.000	15.361
	Beryllium (Be)	MG/KG	1.70	0.005	12.729
	Copper (Cu)	MG/KG	585.00	0.201	0.000
	Mercury (Hg)	MG/KG	1.10	0.050	0.000
	Nickel (Ni)	MG/KG	164.00	0.112	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Vanadium (V)	MG/KG	41.20	0.081	0.000	

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
121SB010	Zinc (Zn)	MG/KG	1,910.00	0.087	0.000
	Total			1.163	62.791
121SB011	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	160.00	0.000	2.795
	Aroclor-1254	UG/KG	320.00	0.264	5.590
	Aroclor-1260	UG/KG	540.00	0.000	9.433
	Arsenic (As)	MG/KG	8.80	0.402	22.986
	B(a)P Equiv.	UG/KG	2,524.90	0.000	41.813
	Beryllium (Be)	MG/KG	2.00	0.005	14.975
	Copper (Cu)	MG/KG	762.00	0.261	0.000
	Mercury (Hg)	MG/KG	1.10	0.050	0.000
	Nickel (Ni)	MG/KG	154.00	0.106	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	119.00	0.233	0.000
	Zinc (Zn)	MG/KG	2,110.00	0.096	0.000
	Total			1.418	97.591
121SB013	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,106.70	0.000	34.888
	Beryllium (Be)	MG/KG	0.76	0.002	5.691
	Copper (Cu)	MG/KG	239.00	0.082	0.000
	Mercury (Hg)	MG/KG	0.29	0.013	0.000
	Nickel (Ni)	MG/KG	49.10	0.034	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	30.00	0.059	0.000
	Zinc (Zn)	MG/KG	536.00	0.024	0.000
	Total			0.214	40.578
121SB014	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	110.00	0.000	1.921
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	113.01	0.000	1.871
	Beryllium (Be)	MG/KG	4.10	0.011	30.700
	Copper (Cu)	MG/KG	883.00	0.303	0.000
	Mercury (Hg)	MG/KG	0.96	0.044	0.000
	Nickel (Ni)	MG/KG	259.00	0.178	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	93.90	0.184	0.000
	Zinc (Zn)	MG/KG	3,840.00	0.176	0.000
	Total			0.895	34.493
121SB015	Antimony (Sb)	MG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 121

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
121SB015	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	120.00	0.000	2.096
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	305.49	0.000	5.059
	Beryllium (Be)	MG/KG	1.40	0.004	10.483
	Copper (Cu)	MG/KG	734.00	0.252	0.000
	Mercury (Hg)	MG/KG	0.26	0.012	0.000
	Nickel (Ni)	MG/KG	127.00	0.087	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	26.50	0.052	0.000
	Zinc (Zn)	MG/KG	1,600.00	0.073	0.000
	Total				<u>0.479</u>
121SB016	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	4,300.00	3.546	75.111
	Aroclor-1260	UG/KG	1,100.00	0.000	19.214
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	907.63	0.000	15.031
	Beryllium (Be)	MG/KG	4.60	0.013	34.444
	Copper (Cu)	MG/KG	1,090.00	0.374	0.000
	Mercury (Hg)	MG/KG	1.40	0.064	0.000
	Nickel (Ni)	MG/KG	240.00	0.165	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	38.50	0.075	0.000
	Zinc (Zn)	MG/KG	3,180.00	0.145	0.000
Total				<u>4.382</u>	<u>143.800</u>
121SB017	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1248	UG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	170.00	0.000	2.970
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.16	0.000	1.198
	Copper (Cu)	MG/KG	ND	0.000	0.000
	Mercury (Hg)	MG/KG	0.05	0.002	0.000
	Nickel (Ni)	MG/KG	4.60	0.003	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	6.20	0.012	0.000
	Zinc (Zn)	MG/KG	79.00	0.004	0.000
Total				<u>0.022</u>	<u>4.168</u>

Risk and Hazard for COC's Identified In Zone H Surface Soil
Site 136

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
136SB002	4,4'-DDE	UG/KG	26.10	0.000	0.020
	Aluminum (Al)	MG/KG	5,140.00	0.070	0.000
	Aroclor-1254	UG/KG	695.00	0.573	12.140
	Arsenic (As)	MG/KG	7.30	0.334	19.068
	B(a)P Equiv.	UG/KG	1,316.60	0.000	21.803
	Vanadium (V)	MG/KG	30.00	0.059	0.000
	Total				<u>1.036</u>
136SB003	4,4'-DDE	UG/KG	4.00	0.000	0.003
	Aluminum (Al)	MG/KG	2,750.00	0.038	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	11.40	0.521	29.777
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	10.60	0.021	0.000
	Total				<u>0.580</u>
136SB004	4,4'-DDE	UG/KG	3.00	0.000	0.002
	Aluminum (Al)	MG/KG	31,900.00	0.437	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	23.90	1.092	62.427
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	84.50	0.166	0.000
	Total				<u>1.695</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 159

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
159SB001	B(a)P Equiv.	UG/KG	19.50	0.000	0.323
	Total			0.000	0.323
159SB002	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB003	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB004	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB005	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB006	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB007	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB008	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB009	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB010	B(a)P Equiv.	UG/KG	0.18	0.000	0.003
	Total			0.000	0.003
159SB011	B(a)P Equiv.	UG/KG	127.45	0.000	2.111
	Total			0.000	2.111
159SB012	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB013	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB014	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
159SB015	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 159

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
159SB016	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 178

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
178SB001	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
178SB002	B(a)P Equiv.	UG/KG	8.80	<u>0.000</u>	<u>0.146</u>
	Total			<u>0.000</u>	<u>0.146</u>
178SB003	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
178SB004	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
178SB005	B(a)P Equiv.	UG/KG	175.45	<u>0.000</u>	<u>2.906</u>
	Total			<u>0.000</u>	<u>2.906</u>
178SB006	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 649

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
649SB001	B(a)P Equiv.	UG/KG	125.12	<u>0.000</u>	<u>2.072</u>
	Total			<u>0.000</u>	<u>2.072</u>
649SB002	B(a)P Equiv.	UG/KG	107.24	<u>0.000</u>	<u>1.776</u>
	Total			<u>0.000</u>	<u>1.776</u>
649SB003	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
649SB004	B(a)P Equiv.	UG/KG	402.87	<u>0.000</u>	<u>6.672</u>
	Total			<u>0.000</u>	<u>6.672</u>
649SB005	B(a)P Equiv.	UG/KG	0.06	<u>0.000</u>	<u>0.001</u>
	Total			<u>0.000</u>	<u>0.001</u>
649SB006	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
649SB007	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
649SB008	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
649SB009	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
649SB010	B(a)P Equiv.	UG/KG	137.48	<u>0.000</u>	<u>2.277</u>
	Total			<u>0.000</u>	<u>2.277</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 650

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
650SB001	B(a)P Equiv.	UG/KG	137.30	0.000	2.274
	Total			<u>0.000</u>	<u>2.274</u>
650SB002	B(a)P Equiv.	UG/KG	106.30	0.000	1.760
	Total			<u>0.000</u>	<u>1.760</u>
650SB003	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
650SB004	B(a)P Equiv.	UG/KG	968.71	0.000	16.042
	Total			<u>0.000</u>	<u>16.042</u>
650SB005	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
650SB006	B(a)P Equiv.	UG/KG	3,072.90	0.000	50.888
	Total			<u>0.000</u>	<u>50.888</u>
650SB007	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
650SB009	B(a)P Equiv.	UG/KG	9.81	0.000	0.162
	Total			<u>0.000</u>	<u>0.162</u>
650SB010	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 655

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
655SB001	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	610.00	0.000	10.655
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>10.655</u>
655SB002	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	100.00	0.000	1.747
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>1.747</u>
655SB003	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	82.00	0.000	1.432
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>1.432</u>
655SB004	Aroclor-1254	UG/KG	110.00	0.091	1.921
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.091</u>	<u>1.921</u>
655SB005	Aroclor-1254	UG/KG	94.00	0.078	1.642
	Aroclor-1260	UG/KG	60.00	0.000	1.048
	B(a)P Equiv.	UG/KG	21.20	0.000	0.351
	Dieldrin	UG/KG	16.00	0.005	0.581
	Total			<u>0.083</u>	<u>3.622</u>
655SB006	Aroclor-1254	UG/KG	81.00	0.067	1.415
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.067</u>	<u>1.415</u>
655SB007	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	360.00	0.119	13.067
	Total			<u>0.119</u>	<u>13.067</u>
655SB008	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 655

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
655SB009	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	150.00	0.000	2.620
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>2.620</u>
655SB010	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	36.00	0.000	0.629
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.629</u>
655SB011	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	260.00	0.000	4.542
	Dieldrin	UG/KG	5.00	0.002	0.181
	Total			<u>0.002</u>	<u>4.723</u>
655SB012	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	160.00	0.000	2.795
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>2.795</u>
655SB013	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	25.80	0.000	0.451
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	2.40	0.001	0.087
	Total			<u>0.001</u>	<u>0.538</u>
655SSGC9	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	3,590.70	0.000	59.463
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>59.463</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 656

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
656SB001	B(a)P Equiv.	UG/KG	593.88	<u>0.000</u>	<u>9.835</u>
	Total			<u>0.000</u>	<u>9.835</u>
656SB002	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB003	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB004	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB005	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB006	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB007	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB008	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB009	B(a)P Equiv.	UG/KG	208.16	<u>0.000</u>	<u>3.447</u>
	Total			<u>0.000</u>	<u>3.447</u>
656SB010	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
656SB011	B(a)P Equiv.	UG/KG	171.93	<u>0.000</u>	<u>2.847</u>
	Total			<u>0.000</u>	<u>2.847</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 663

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
663SB001	4,4'-DDE	UG/KG	27.30	0.000	0.021
	Aluminum (Al)	MG/KG	7,530.00	0.103	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	5.80	0.265	15.150
	B(a)P Equiv.	UG/KG	106.76	0.000	1.768
	Vanadium (V)	MG/KG	23.90	0.047	0.000
	Total				<u>0.415</u>
663SB002	4,4'-DDE	UG/KG	30.90	0.000	0.024
	Aluminum (Al)	MG/KG	4,500.00	0.062	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	3.30	0.151	8.620
	B(a)P Equiv.	UG/KG	308.79	0.000	5.114
	Vanadium (V)	MG/KG	15.50	0.030	0.000
	Total				<u>0.243</u>
663SB004	4,4'-DDE	UG/KG	4,480.00	0.000	3.455
	Aluminum (Al)	MG/KG	4,740.00	0.065	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	6.30	0.288	16.456
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	14.60	0.029	0.000
	Total				<u>0.382</u>
663SB005	4,4'-DDE	UG/KG	388.00	0.000	0.299
	Aluminum (Al)	MG/KG	4,520.00	0.062	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	6.80	0.311	17.762
	B(a)P Equiv.	UG/KG	285.85	0.000	4.734
	Vanadium (V)	MG/KG	18.30	0.036	0.000
	Total				<u>0.409</u>
663SB006	4,4'-DDE	UG/KG	ND	0.000	0.000
	Aluminum (Al)	MG/KG	724.00	0.010	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	4.00	0.183	10.448
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Vanadium (V)	MG/KG	4.40	0.009	0.000
	Total				<u>0.201</u>
663SB007	4,4'-DDE	UG/KG	89.00	0.000	0.069
	Aluminum (Al)	MG/KG	7,280.00	0.100	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	16.20	0.740	42.314
	B(a)P Equiv.	UG/KG	4,421.50	0.000	73.221
	Vanadium (V)	MG/KG	29.20	0.057	0.000
	Total				<u>0.897</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 663

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
663SB009	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 665

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
665SB001	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			0.000	0.000
665SB002	B(a)P Equiv.	UG/KG	150.67	<u>0.000</u>	<u>2.495</u>
	Total			0.000	2.495
665SB003	B(a)P Equiv.	UG/KG	85.10	<u>0.000</u>	<u>1.409</u>
	Total			0.000	1.409
665SB004	B(a)P Equiv.	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil

Site 666

Scenario: Residential

<u>GROUP</u>	<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>RESULT</u>	<u>HQ</u>	<u>RISK (E-6)</u>
666	666SB001	Aroclor-1260	ug/kg	ND	0.0000	0.0000
		Arsenic (As)	mg/kg	6.00	0.2742	15.6720
		B(a)P Equiv.	ug/kg	214.23	0.0000	3.5477
		N-Nitroso-di-n-propylamine	ug/kg	ND	0.0000	0.0000
		Vanadium (V)	mg/kg	37.30	0.0731	0.0000
				<u>0.3473</u>	<u>19.2197</u>	
666	666SB002	Aroclor-1260	ug/kg	ND	0.0000	0.0000
		Arsenic (As)	mg/kg	16.50	0.7542	43.0980
		B(a)P Equiv.	ug/kg	1,469.83	0.0000	24.3408
		N-Nitroso-di-n-propylamine	ug/kg	ND	0.0000	0.0000
		Vanadium (V)	mg/kg	120.00	0.2351	0.0000
				<u>0.9892</u>	<u>67.4388</u>	
666	666SB003	Aroclor-1260	ug/kg	ND	0.0000	0.0000
		Arsenic (As)	mg/kg	0.76	0.0347	1.9851
		B(a)P Equiv.	ug/kg	ND	0.0000	0.0000
		N-Nitroso-di-n-propylamine	ug/kg	ND	0.0000	0.0000
		Vanadium (V)	mg/kg	12.00	0.0235	0.0000
				<u>0.0582</u>	<u>1.9851</u>	
666	666SB004	Aroclor-1260	ug/kg	ND	0.0000	0.0000
		Arsenic (As)	mg/kg	30.50	1.3941	79.6660
		B(a)P Equiv.	ug/kg	ND	0.0000	0.0000
		N-Nitroso-di-n-propylamine	ug/kg	ND	0.0000	0.0000
		Vanadium (V)	mg/kg	124.00	0.2429	0.0000
				<u>1.6370</u>	<u>79.6660</u>	
666	666SB005	Aroclor-1260	ug/kg	88.40	0.0000	1.5440
		Arsenic (As)	mg/kg	3.10	0.1417	8.0972
		B(a)P Equiv.	ug/kg	ND	0.0000	0.0000
		N-Nitroso-di-n-propylamine	ug/kg	ND	0.0000	0.0000
		Vanadium (V)	mg/kg	147.00	0.2880	0.0000
				<u>0.4297</u>	<u>9.6412</u>	
666	666SB006	Aroclor-1260	ug/kg	ND	0.0000	0.0000
		Arsenic (As)	mg/kg	ND	0.0000	0.0000
		B(a)P Equiv.	ug/kg	ND	0.0000	0.0000
		N-Nitroso-di-n-propylamine	ug/kg	ND	0.0000	0.0000
		Vanadium (V)	mg/kg	41.50	0.0813	0.0000
				<u>0.0813</u>	<u>0.0000</u>	
666	666SB007	Aroclor-1260	ug/kg	ND	0.0000	0.0000
		Arsenic (As)	mg/kg	ND	0.0000	0.0000
		B(a)P Equiv.	ug/kg	ND	0.0000	0.0000
		N-Nitroso-di-n-propylamine	ug/kg	380.00	0.0000	6.0343
		Vanadium (V)	mg/kg	275.00	0.5387	0.0000
				<u>0.5387</u>	<u>6.0343</u>	

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 670

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB001	Aluminum (Al)	MG/KG	14,200.00	0.195	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	15.60	0.713	40.747
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.908</u>
670SB002	Aluminum (Al)	MG/KG	11,400.00	0.156	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	9.70	0.443	25.336
	B(a)P Equiv.	UG/KG	309.23	0.000	5.121
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.600</u>
670SB003	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	4,880.70	0.000	80.826
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>80.826</u>
670SB004	Aluminum (Al)	MG/KG	13,700.00	0.188	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	11.30	0.516	29.516
	B(a)P Equiv.	UG/KG	1,020.70	0.000	16.903
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.704</u>	<u>46.419</u>
670SB005	Aluminum (Al)	MG/KG	21,700.00	0.298	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	15.20	0.695	39.702
	B(a)P Equiv.	UG/KG	1,590.90	0.000	26.346
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.992</u>	<u>66.048</u>
670SB006	Aluminum (Al)	MG/KG	19,100.00	0.262	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	13.80	0.631	36.046
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.893</u>	<u>36.046</u>
670SB007	Aluminum (Al)	MG/KG	6,150.00	0.084	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	8.90	0.407	23.247
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	0.48	0.082	0.000
	Total			<u>0.573</u>	<u>23.247</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 670

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB008	Aluminum (Al)	MG/KG	10,800.00	0.148	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	9.70	0.443	25.336
	B(a)P Equiv.	UG/KG	955.62	0.000	15.825
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.591</u>
670SB009	Aluminum (Al)	MG/KG	6,740.00	0.092	0.000
	Antimony (Sb)	MG/KG	9.50	0.326	0.000
	Arsenic (As)	MG/KG	9.10	0.416	23.769
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.834</u>
670SB010	Aluminum (Al)	MG/KG	14,800.00	0.203	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	10.40	0.475	27.165
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	0.82	0.141	0.000
	Total				<u>0.819</u>
670SB011	Aluminum (Al)	MG/KG	3,220.00	0.044	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	8.90	0.407	23.247
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.451</u>
670SB012	Aluminum (Al)	MG/KG	9,190.00	0.126	0.000
	Antimony (Sb)	MG/KG	11.40	0.391	0.000
	Arsenic (As)	MG/KG	23.70	1.083	61.904
	B(a)P Equiv.	UG/KG	704.82	0.000	11.672
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>1.600</u>
670SB013	Aluminum (Al)	MG/KG	9,940.00	0.136	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	10.90	0.498	28.471
	B(a)P Equiv.	UG/KG	58.68	0.000	0.972
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.635</u>
670SB014	Aluminum (Al)	MG/KG	11,200.00	0.154	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	9.50	0.434	24.814
	B(a)P Equiv.	UG/KG	0.17	0.000	0.003
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.588</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 670

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB015	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	9.70	0.443	25.336
	B(a)P Equiv.	UG/KG	101.72	0.000	1.685
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.443</u>	<u>27.021</u>
670SB016	Aluminum (Al)	MG/KG	20,200.00	0.277	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	12.10	0.553	31.605
	B(a)P Equiv.	UG/KG	205.17	0.000	3.398
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total			<u>0.830</u>	<u>35.003</u>	
670SB017	Aluminum (Al)	MG/KG	6,630.00	0.091	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	8.20	0.375	21.418
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total			<u>0.466</u>	<u>21.418</u>	
670SB018	Aluminum (Al)	MG/KG	11,000.00	0.151	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	10.10	0.462	26.381
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total			<u>0.612</u>	<u>26.381</u>	
670SB019	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	7.00	0.320	18.284
	B(a)P Equiv.	UG/KG	80.43	0.000	1.332
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total			<u>0.320</u>	<u>19.616</u>	
670SB020	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	8.40	0.384	21.941
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total			<u>0.384</u>	<u>21.941</u>	
670SB021	Aluminum (Al)	MG/KG	5,540.00	0.076	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	7.90	0.361	20.635
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total			<u>0.437</u>	<u>20.635</u>	
670SB022	Aluminum (Al)	MG/KG	10,800.00	0.148	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 670

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB022	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	9.30	0.425	24.292
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.573</u>
670SB023	Aluminum (Al)	MG/KG	14,900.00	0.204	0.000
	Antimony (Sb)	MG/KG	167.00	5.725	0.000
	Arsenic (As)	MG/KG	69.00	3.154	180.228
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	1.40	0.240	0.000
Total				<u>9.323</u>	<u>180.228</u>
670SB024	Aluminum (Al)	MG/KG	20,800.00	0.285	0.000
	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	13.00	0.594	33.956
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total				<u>0.879</u>	<u>33.956</u>
670SB025	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total				<u>0.000</u>	<u>0.000</u>
670SB026	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	12.30	0.562	32.128
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total				<u>0.562</u>	<u>32.128</u>
670SB027	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	8.30	0.379	21.680
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total				<u>0.379</u>	<u>21.680</u>
670SB028	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
670SB029	B(a)P Equiv.	UG/KG	7,525.10	0.000	124.618
	Total			<u>0.000</u>	<u>124.618</u>
670SB030	B(a)P Equiv.	UG/KG	165.34	0.000	2.738
	Total			<u>0.000</u>	<u>2.738</u>
670SB031	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	15.40	0.704	40.225

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site 670

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
670SB031	B(a)P Equiv.	UG/KG	27,883.00	0.000	461.751
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.704</u>	<u>501.976</u>
670SB032	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	17.20	0.786	44.926
	B(a)P Equiv.	UG/KG	870.21	0.000	14.411
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.786</u>	<u>59.337</u>
670SB033	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
670SB034	B(a)P Equiv.	UG/KG	2,136.30	0.000	35.378
	Total			<u>0.000</u>	<u>35.378</u>
670SB035	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB001	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.000</u>
684SB002	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	7.00	0.320	18.284
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.32	0.001	2.396
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.321</u>
684SB003	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	8.50	0.389	22.200
	B(a)P Equiv.	UG/KG	8,567.00		14
	Beryllium (Be)	MG/KG	0.62		
	Thallium (Tl)	MG/KG	ND		
	Total				<u>0.390</u>
684SB004	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	12.70	0.580	33.172
	B(a)P Equiv.	UG/KG	4,361.00	0.000	72.220
	Beryllium (Be)	MG/KG	0.90	0.002	6.739
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.583</u>
684SB005	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	7.40	0.338	19.329
	B(a)P Equiv.	UG/KG	75.02	0.000	1.242
	Beryllium (Be)	MG/KG	0.53	0.001	3.969
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.340</u>
684SB006	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB006	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.000</u>
684SB007	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	376.00	0.000	6.568
	Arsenic (As)	MG/KG	9.00	0.411	23.508
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.67	0.002	5.017
	Thallium (Tl)	MG/KG	ND	0.000	0.000
Total				<u>0.413</u>	<u>35.093</u>
684SB008	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	1.90	0.087	4.963
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.28	0.001	2.097
	Thallium (Tl)	MG/KG	0.09	0.016	0.000
Total				<u>0.103</u>	<u>7.059</u>
684SB009	Antimony (Sb)	MG/KG	5.60	0.192	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	12.90	0.590	33.695
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.51	0.004	11.306
	Thallium (Tl)	MG/KG	2.90	0.497	0.000
Total				<u>1.283</u>	<u>45.001</u>
684SB010	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	5.20	0.238	13.582
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.40	0.001	2.995
	Thallium (Tl)	MG/KG	0.07	0.013	0.000
Total				<u>0.251</u>	<u>16.577</u>
684SB011	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	1.40	0.064	3.657
	Beryllium (Be)	MG/KG	0.13	0.000	0.973

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB011	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.064	4.630
684SB012	Antimony (Sb)	MG/KG	6.20	0.213	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	0.89	0.041	2.325
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.15	0.000	1.123
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.254	3.448
684SB013	Antimony (Sb)	MG/KG	4.60	0.158	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	2.80	0.128	7.314
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.19	0.001	1.423
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.286	8.736
684SB014	Antimony (Sb)	MG/KG	12.40	0.425	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	11.70	0.535	30.560
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	1.23	0.003	9.210
	Thallium (Tl)	MG/KG	1.20	0.206	0.000
	Total			1.169	39.770
684SB015	Antimony (Sb)	MG/KG	11.90	0.408	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	13.50	0.617	35.262
	B(a)P Equiv.	UG/KG	1,515.50	0.000	25.097
	Beryllium (Be)	MG/KG	1.30	0.004	9.734
	Thallium (Tl)	MG/KG	1.30	0.223	0.000
	Total			1.251	70.093
684SB016	Antimony (Sb)	MG/KG	5.30	0.182	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	4.80	0.219	12.538
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	0.49	0.001	3.669
	Thallium (Tl)	MG/KG	1.50	0.257	0.000
	Total			0.660	16.207

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB017	Antimony (Sb)	MG/KG	7.70	0.264	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	3.60	0.165	9.403
	B(a)P Equiv.	UG/KG	120.27	0.000	1.992
	Beryllium (Be)	MG/KG	0.37	0.001	2.770
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.430</u>
684SB018	Antimony (Sb)	MG/KG	10.10	0.346	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	6.40	0.293	16.717
	B(a)P Equiv.	UG/KG	122.75	0.000	2.033
	Beryllium (Be)	MG/KG	0.48	0.001	3.594
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.640</u>
684SB019	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	194.83	0.000	3.226
	Beryllium (Be)	MG/KG	0.41	0.001	3.070
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.001</u>
684SB020	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,153.50	0.000	35.663
	Beryllium (Be)	MG/KG	0.87	0.002	6.514
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.002</u>
684SB021	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	25,501.00	0.000	422.305
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				<u>0.000</u>
684SB022	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB022	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	395.10	0.000	6.543
	Beryllium (Be)	MG/KG	0.54	0.001	4.043
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				0.001
684SB023	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	1,194.70	0.000	19.785
	Beryllium (Be)	MG/KG	0.48	0.001	3.594
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				0.001
684SB024	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	4,228.40	0.000	70.024
	Beryllium (Be)	MG/KG	1.20	0.003	8.985
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				0.003
684SB025	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	287.18	0.000	4.756
	Beryllium (Be)	MG/KG	0.69	0.002	5.167
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				0.002
684SB026	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	16.30	0.745	42.576
	B(a)P Equiv.	UG/KG	1,922.40	0.000	31.836
	Beryllium (Be)	MG/KG	0.99	0.003	7.413
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total				0.748
684SB027	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	9.90	0.453	25.859
	B(a)P Equiv.	UG/KG	502.47	0.000	8.321
	Beryllium (Be)	MG/KG	0.61	0.002	4.568

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB027	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.454	38.747
684SB028	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	232.11	0.000	3.844
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.000	3.844
684SB029	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.000	0.000
684SB030	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.000	0.000
684SB031	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Beryllium (Be)	MG/KG	ND	0.000	0.000
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			0.000	0.000
684SB032	Aroclor-1254	UG/KG	50.00	0.041	0.873
	Aroclor-1260	UG/KG	60.00	0.000	1.048
	B(a)P Equiv.	UG/KG	170.80	0.000	2.829
	Total			0.041	4.750
684SB033	Aroclor-1254	UG/KG	160.00	0.132	2.795
	Aroclor-1260	UG/KG	71.00	0.000	1.240
	B(a)P Equiv.	UG/KG	259.12	0.000	4.291
	Total			0.132	8.326

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB034	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	195.73	0.000	3.241
	Total			<u>0.000</u>	<u>3.241</u>
684SB035	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	29,871.00	0.000	494.673
	Total			<u>0.000</u>	<u>494.673</u>
684SB036	Antimony (Sb)	MG/KG	ND	0.000	0.000
	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	Arsenic (As)	MG/KG	11.70	0.535	30.560
	B(a)P Equiv.	UG/KG	1,162.20	0.000	19.246
	Beryllium (Be)	MG/KG	0.70	0.002	5.241
	Thallium (Tl)	MG/KG	ND	0.000	0.000
	Total			<u>0.537</u>	<u>55.048</u>
684SB037	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB038	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB039	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB040	B(a)P Equiv.	UG/KG	696.10	0.000	11.528
	Total			<u>0.000</u>	<u>11.528</u>
684SB041	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB042	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
684SB043	B(a)P Equiv.	UG/KG	4,266.70	0.000	70.658
	Total			<u>0.000</u>	<u>70.658</u>

**Risk and Hazard for COC's Identified in Zone H Surface Soil
Site 684**

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
684SB044	B(a)P Equiv.	UG/KG	9,215.20	<u>0.000</u>	<u>152.607</u>
	Total			<u>0.000</u>	<u>152.607</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site G07

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
G07SB001	Aroclor-1260	UG/KG	970.00	0.000	16.944
	B(a)P Equiv.	UG/KG	110.00	0.000	1.822
	Total			<u>0.000</u>	<u>18.765</u>
G07SB002	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	14.00	0.000	0.232
	Total			<u>0.000</u>	<u>0.232</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site G38

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
G38SB001	Aroclor-1260	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
G38SB002	Aroclor-1260	UG/KG	ND	<u>0.000</u>	<u>0.000</u>
	Total			<u>0.000</u>	<u>0.000</u>
G38SB003	Aroclor-1260	UG/KG	1,100.00	<u>0.000</u>	<u>19.214</u>
	B(a)P Equiv.	UG/KG	317.72	<u>0.000</u>	<u>5.262</u>
	Total			<u>0.000</u>	<u>24.476</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site G80

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
G80SB001	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
G80SB002	B(a)P Equiv.	UG/KG	24.69	0.000	0.409
	Total			0.000	0.409
G80SB003	B(a)P Equiv.	UG/KG	179.28	0.000	2.969
	Total			0.000	2.969
G80SB004	B(a)P Equiv.	UG/KG	97.21	0.000	1.610
	Total			0.000	1.610

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB001	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	1,955.80	0.000	32.389
	Dieldrin	UG/KG	300.00	0.099	10.889
	Total			<u>0.099</u>	<u>43.278</u>
GDHSB002	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB003	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB004	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB005	Aroclor-1254	UG/KG	35.00	0.029	0.611
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.029</u>	<u>0.611</u>
GDHSB006	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB007	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	2,820.00	0.000	49.259
	B(a)P Equiv.	UG/KG	251.28	0.000	4.161
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>53.420</u>
GDHSB008	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB009	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total				<u>0.000</u>
GDHSB010	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total				<u>0.000</u>
GDHSB011	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	4.06	0.000	0.067
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total				<u>0.000</u>
GDHSB012	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	565.49	0.000	9.365
	Dieldrin	UG/KG	ND	0.000	0.000
	Total				<u>0.000</u>
GDHSB013	Aroclor-1254	UG/KG	240.00	0.198	4.192
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	6.00	0.002	0.218
	Total			<u>0.200</u>	<u>4.410</u>
GDHSB014	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	110.00	0.000	1.921
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	21.00	0.007	0.762
	Total			<u>0.007</u>	<u>2.684</u>
GDHSB015	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	58.00	0.000	1.013
	B(a)P Equiv.	UG/KG	105.00	0.000	1.739
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>2.752</u>
GDHSB016	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB016	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB017	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	379.91	0.000	6.291
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	6.291
GDHSB018	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB019	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB020	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB021	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	140.15	0.000	2.321
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	2.321
GDHSB022	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB023	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	90.80	0.000	1.504
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	1.504
GDHSB024	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	267.69	0.000	4.433

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB024	Dieldrin	UG/KG	160.00	0.053	5.807
	Total			0.053	10.240
GDHSB025	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,396.00	0.000	39.679
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	151.00	0.000	6.166
	Total			0.000	45.844
GDHSB026	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	1,790.70	0.000	29.655
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	29.655
GDHSB027	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	110.00	0.000	1.921
	B(a)P Equiv.	UG/KG	1,065.90	0.000	17.652
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	19.573
GDHSB028	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	2,006.70	0.000	33.232
	Dieldrin	UG/KG	4.00	0.001	0.145
	Total			0.001	33.377
GDHSB029	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB030	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	58.00	0.000	1.013
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	1.013
GDHSB031	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	100.00	0.000	1.747
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	1.747
GDHSB032	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB032	B(a)P Equiv.	UG/KG	268.28	0.000	4.443
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	4.443
GDHSB033	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			0.000	0.000	
GDHSB034	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			0.000	0.000	
GDHSB035	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			0.000	0.000	
GDHSB036	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			0.000	0.000	
GDHSB037	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			0.000	0.000	
GDHSB038	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	4,000.00	0.000	69.871
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			0.000	69.871	
GDHSB039	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	0.09	0.000	0.001
	Dieldrin	UG/KG	ND	0.000	0.000
Total			0.000	0.001	
GDHSB040	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	91.00	0.000	1.590

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB040	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>1.590</u>
GDHSB041	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB042	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB043	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB044	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB045	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB046	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB047	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB048	Aroclor-1254	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB048	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB049	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB050	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB051	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB052	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB053	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB054	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	82.00	0.000	1.432
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>1.432</u>	
GDHSB055	Aroclor-1254	UG/KG	94.00	0.078	1.642
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.078</u>	<u>1.642</u>	
GDHSB056	Aroclor-1254	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB056	Aroclor-1260	UG/KG	65.00	0.000	1.135
	B(a)P Equiv.	UG/KG	1,257.70	0.000	20.828
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>21.963</u>
GDHSB057	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB058	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB059	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	71.00	0.000	1.240
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>1.240</u>	
GDHSB060	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB061	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB062	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	
GDHSB063	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
Total			<u>0.000</u>	<u>0.000</u>	

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB064	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB065	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB066	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	23.00	0.000	0.402
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.402</u>
GDHSB067	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB068	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB069	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB070	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB071	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	250.00	0.000	4.367
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>4.367</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB072	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB073	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB074	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB075	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	125.00	0.000	2.183
	B(a)P Equiv.	UG/KG	11.65	0.000	0.193
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>2.376</u>
GDHSB076	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB077	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB078	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	63.00	0.000	1.100
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>1.100</u>
GDHSB079	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB080	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	263.43	0.000	4.362
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>4.362</u>
GDHSB081	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	767.56	0.000	12.711
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>12.711</u>
GDHSB082	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB083	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB084	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB085	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB086	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB087	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB087	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB088	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB089	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	100.00	0.000	1.747
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	1.747
GDHSB090	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	46.00	0.000	0.804
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.804
GDHSB091	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB092	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB093	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			0.000	0.000
GDHSB104	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	23.00	0.000	0.402
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Kepone	UG/KG	ND	0.000	0.000
	Total			0.000	0.402
GDHSB105	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000

Risk and Hazard for COC's Identified in Zone H Surface Soil
 Site GDH

Residential Scenario

<u>SITETAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-6)</u>
GDHSB105	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
GDHSB107	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>

**Risk and Hazard for COC's Identified in Zone H Surface Soil
Site SGC**

Residential Scenario

<u>SITE TAG</u>	<u>PARAMETER</u>	<u>UNITS</u>	<u>ANALYTICAL RESULT</u>	<u>HAZARD QUOTIENT</u>	<u>RISK (E-G)</u>
SGCSB001	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB002	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB003	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB004	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB005	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB006	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB007	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>
SGCSB008	Aroclor-1254	UG/KG	ND	0.000	0.000
	Aroclor-1260	UG/KG	ND	0.000	0.000
	B(a)P Equiv.	UG/KG	ND	0.000	0.000
	Dieldrin	UG/KG	ND	0.000	0.000
	Total			<u>0.000</u>	<u>0.000</u>