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DRAFT RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION  
REPORT VOLUME 10 OF 12 APPENDIX D AND E ZONE L CNC CHARLESTON SC  
12/18/1998  
ENSAFE INC.

**DRAFT ZONE L  
RCRA FACILITY INVESTIGATION REPORT  
CHARLESTON NAVAL COMPLEX**

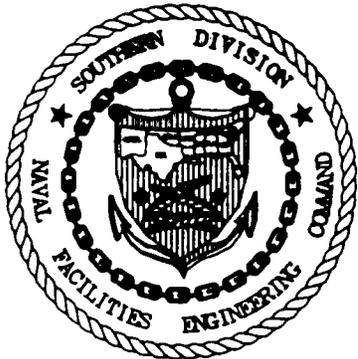


**VOLUME 10 OF 12  
APPENDIX D AND E**

**CTO-029  
CONTRACT NO: N62467-89-D-0318**

**Prepared for:**

**Department of the Navy  
Southern Division  
Naval Facilities Engineering Command  
North Charleston, South Carolina**



**Prepared by:**

**EnSafe Inc.  
5724 Summer Trees Drive  
Memphis, Tennessee 38134  
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**December 18, 1998**

**Appendix D**  
**Data Validation Reports**

# 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 L  
SUBZONE: L-C  
SERVICE ORDER NUMBER: 0268  
CONTRACTED LAB: Southwest Laboratory of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRIX: Water  
TYPES OF ANALYSES: Volatiles Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide  
SDG NUMBER: 30981 (Level III)

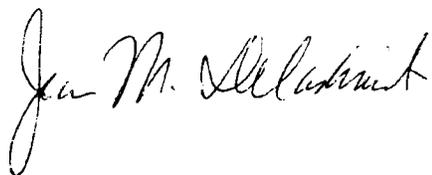
### SAMPLES:

Client	Lab		Volatile	Semi-	Pesticides/	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>	<u>Metals</u>	<u>Cyanide</u>
037GW001C1	30981.01	Water	X	X	X	X	X
037GW002C1	30981.02	Water	X	X	X	X	X
037TW002C1	30981.03	Water	X				

T = TRIP BLANK

DATA REVIEWER(S): 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

Southwest Laboratories of Oklahoma, Inc. - 30981 CLP Organics and Inorganics

SAMPLES: 037GW001C1, 037GW002C1, 037TW002C1

### *VOLATILE 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. No action was required.

#### III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was necessary

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit in the standard analyzed on 9/16/97 at 14:38 on instrument N for the following compounds:

chloroethane	25.6%
acetone	56.7%
2-butanone	32.3%
bromoform	25.7%
2-hexanone	46.9%

All results for these compounds in samples 037GW001C1 and 037GW002C1, which consisted entirely of non-detects, were flagged as estimated (UJ).

#### IV.) Blanks:

There were no detections in the method or trip blanks. No action was taken.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or trip blanks. No action was required.

V.) Surrogate Recoveries:

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

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

MS / MSD samples were not analyzed in this SDG. No action was necessary.

VII.) Laboratory Control Samples (LCS):

Two LCS's were analyzed in this SDG. One LCS Recovery was below the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*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. No action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was necessary.

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate and phenol were detected at 1 ug/L each in method blank SBLK1. Phenol was not detected in the two associated samples. The detections of bis(2-ethylhexyl)phthalate in samples 037GW001C1 and 037GW002C1, which were less than 10X the blank amount, were flagged as undetected (U) with the analytical results below the CRQL being raised to the CRQL.

Tentatively Identified Compounds (TIC's):

Methylpentanol was detected in method blank SBLK1. Since this TIC was not detected in the two associated samples, no action was taken.

V.) Surrogate Recoveries:

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

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

MS / MSD samples were not analyzed in this SDG. No action was required.

VII.) Laboratory Control Samples (LCS):

Two LCS's were analyzed in this SDG. All LCS Recovery criteria were met. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with two qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

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

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 9/20/97 at 12:08 on the secondary column for methoxychlor (25.5%) and endrin ketone (29.6%). The non-detect results for the two compounds in associated samples 037GW001C1 and 037GW002C1 were flagged as estimated (UJ).

IV.) Blanks:

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

V.) Surrogate Recoveries:

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

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

MS / MSD samples were not analyzed in this SDG. No action was taken.

VII.) TCL Compound Identification:

All criteria were met. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisol Cartridge Check:

Florisol Cartridge Check data was not included in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC Cleanup was not required for samples in this SDG. No action was necessary.

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

All CRQL criteria were met. No action was required.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing Calibration criteria were met. 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>Analyte</u>	<u>Max. Conc.</u>	<u>Action Level</u>
PBW	antimony	2.48 ug/L	12.4 ug/L
CCB3	beryllium	0.21 ug/L	1.05 ug/L
PBW	sodium	32.4 ug/L	1.62 ug/L

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

All results greater than the IDL but less than 5X the blank amounts (Action Level, 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 ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
CCB4	aluminum	-11.8 ug/L	59.0 ug/L
PBW	cobalt	-1.14 ug/L	5.70 ug/L

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

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

#### IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	8 ug/L
arsenic	5 ug/L
lead	4 ug/L
selenium	4 ug/L
sodium	27 ug/L
vanadium	2 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

barium	-2 ug/L
cadmium	-1 ug/L
nickel	-1 ug/L
potassium	-628 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution analysis was not performed in this SDG. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike analysis was not performed in this SDG. No action was required.

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# 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 L  
SUBZONE: L-H  
SERVICE ORDER NUMBER: 0266  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 or SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
  
SAMPLE MATRIX: Soil  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide  
  
SDG NUMBER: 30762 (Level III)

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides PCB's	Total Metals	Cyanide
037SB016H1	30762.01	Soil	+	X	X	X	X
037SB016H1RE	30762.01RE	Soil	X				
037SB016H2	30762.07	Soil	X	X	X	X	X
037SB017H1	30762.02	Soil	X	X	X	X	X
037SB017H1RE	30762.02RE	Soil	+				
037SB017H2	30762.04	Soil	+	X	X	X	X
037SB017H2RE	30762.04RE	Soil	X				
037SB018H1	30762.05	Soil	+	X	X	X	X
037SB018H1RE	30762.05RE	Soil	X				
037SB018H2	30762.06	Soil	X	X	X	X	X
037SB018H2RE	30762.06RE	Soil	+				
037TB016H1	30762.07	Soil	X				
037SB018H1MS	30762.05MS	Soil		+			
037SB018H1MSD	30762.05MSD	Soil		+			
037SB018H2MS	30762.06MS	Soil			+		
037SB018H2MSD	30762.06MSD	Soil			+		

+ = non-billable analysis

MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = REANALYSIS,  
T = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Jean M. Delashmit". The signature is written in a cursive style with a large initial "J" and "M".

## 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, Inc. - 30762 CLP Organics & Inorganics

SAMPLES: 037SB016H1, 037SB016H1RE, 037SB016H2, 037SB017H1, 037SB017H1RE,  
037SB017H2, 037SB017H2RE, 037SB018H1, 037SB018H1RE, 037SB018H2,  
037SB018H2RE, 037TB016H1, 037SB018H1MS, 037SB018H1MSD, 037SB018H2MS,  
037SB018H2MSD

### *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 required.

#### III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 8/28/97 on instrument I for the following compounds:

chloroethane	33.0%
methylene chloride	70.1%
acetone	83.2%

All positive results for acetone in the associated samples were flagged as estimated (J). The associated samples were 037SB016H1RE, 037SB018H1RE and 037SB018H2. Since there were no positive results for the other compounds in the associated samples, no further action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 9/02/97 on instrument I for the following compounds:

bromomethane	61.1%
chloroethane	46.9%
carbon disulfide	39.4%
1,2-dichloroethane	30.3%
trichloroethene	32.7%
1,1,2,2-tetrachloroethane	51.3%

Since these compounds were not detected in the associated sample, no action was required.

#### Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 8/30/97 at 08:20 on instrument I for the following compounds:

chloroethane	33.2%
2-hexanone	45.3%
2-chloroethyl vinyl ether	31.2%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB016H2, 037SB016H1RE and 037SB018H1RE.

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride was detected at 6 ug/kg in method blank VBLK1. The positive results for this compound in the associated samples were flagged based on the associated trip blank.

Methylene chloride was detected at 2 ug/kg in method blank VBLK2. The positive results for this compound in the associated samples were flagged based on the associated trip blank.

Methylene chloride was detected at 9 ug/kg in method blank VBLK3. The positive results for this compound in the associated samples were flagged based on the associated trip blank.

##### Trip Blanks:

Methylene chloride was detected at 22 ug/kg in trip blank 037TB016H1. All positive results for this compound in the samples in this SDG 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.

##### Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or trip blanks. No action was required.

#### V.) Surrogate Recoveries:

The Percent Recovery (%R) of toluene-d8 was 127% for sample 037SB017H1, which exceeded the 81-117% QC limits. Since there were no positive results for this sample, no action was required.

The Percent Recovery (%R) of 1,2-dichloroethane-d4 was 124% for sample 037SB017H2RE, which exceeded the 70-121% QC limits. All positive results for this sample were flagged as estimated (J).

The Percent Recovery (%R) of toluene-d8 was 131% for sample 037SB018H1RE, 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):

MS / MSD analyses were not performed in this fraction of the SDG. No action was required.

VII.) Laboratory Control Samples (LCS):

Three LCS's were analyzed in this SDG. Several LCS recoveries were outside their respective QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

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

IX.) Internal Standards Performance (ISTD):

The Percent Recoveries (%R's) were below the 50-200% QC limits for the internal standards in the following samples:

<u>Sample</u>	<u>Internal Standard</u>	<u>%R</u>
037SB017H1	1,4-difluorobenzene	41.8%
	chlorobenzene-d5	30.8%
037SB018H2	1,4-difluorobenzene	47.0%
	chlorobenzene-d5	21.4%
037SB016H1RE	bromochloromethane	46.2%
	1,4-difluorobenzene	40.8%
	chlorobenzene-d5	38.9%
037SB017H2RE	bromochloromethane	40.7%
	1,4-difluorobenzene	32.5%
	chlorobenzene-d5	33.2%
037SB018H1RE	1,4-difluorobenzene	38.3%
	chlorobenzene-d5	28.6%

All results for the compounds quantitated on these internal standards in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analyses of samples 037SB017H1 and 037SB018H2, and the reanalyses of samples 037SB016H1, 037SB017H2 and 037SB018H1 were considered by the validator to be of preferable data quality to their corresponding analysis based on better surrogate and internal standards recoveries. All laboratory data were acceptable with qualifications.

*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 required.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate and diethylphthalate were detected at 52 ug/kg and 68 ug/kg, respectively, in method blank SBLK1. All positive results for bis(2-ethylhexyl)phthalate in all samples in this SDG, which were less than 10X the blank amount, were flagged as undetected (U) with the results less than the CRQL being replaced with the CRQL. Since there were no positive results for diethylphthalate in the associated samples, no further action was required.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method blanks. No action was required.

V.) Surrogate Recoveries:

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

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

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

VII.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was taken.

VIII.) Field Duplicates:

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

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) exceeded the 25% QC limit for the PEM analyzed on 9/11/97 at 20:49 on the secondary column for alpha-BHC (29.0%) and gamma-BHC (26.0%). All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB016H1, 037SB016H2, 037SB017H1, 037SB017H2, 037SB018H1 and 037SB018H2.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Difference (%D) for 4,4'-DDT (33.2%) exceeded the 25% QC limit for the standards analyzed on 9/11/97 at 20:49 on the primary column. All results for this compound in the samples in this SDG, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) for endosulfan sulfate (26.0%) and endrin aldehyde (31.2%) exceeded the 25% QC limit for the standards analyzed on 9/11/97 at 21:19 on the primary column. All positive and non-detect results for these compounds in the SDG samples were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 9/11/97 at 20:49 on the secondary column for the following compounds:

alpha-BHC	31.8%
gamma-BHC	29.3%
4,4-DDT	36.6%
methoxychlor	25.1%

The results for methoxychlor in the samples in this SDG, which consisted entirely of non-detects, were flagged as estimated (UJ). Since the results for the other compounds were previously flagged, so no further action was required.

IV.) Blanks:

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

V.) Surrogate Recoveries:

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

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

The Relative Percent Difference (RPD) for spiked samples 037SB018H2MS and 037SB018H2MSD exceeded the 20% QC limit for endosulfan sulfate (31%). The result for this compound in unspiked sample 037SB018H2 was previously flagged. No further action was required.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Difference (%D) between columns 1 and 2 was 186% for endrin aldehyde in sample 037SB017H2, which exceeded the 70% QC limit. This sample result was flagged as estimated (J).

VIII.) Field Duplicates:

There were no field duplicate samples in this SDG. 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. 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 were met, so no action was taken.

II.) Calibration:

All Initial and Continuing 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:

Blank <u>Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>Action Level</u> <u>mg/kg</u>
PBS	aluminum	4.62 mg/kg	23.1
CCB2	beryllium	1.70 ug/L	1.70
CCB3	chromium	0.90 ug/L	0.90
CCB2	cobalt	1.10 ug/L	1.10
CCB3	iron	18.0 ug/L	18.0
PBS	lead	0.26 mg/kg	1.30
CCB2	manganese	0.80 ug/L	0.80
PBS	mercury	0.03 mg/kg	0.15
PBS	cyanide	0.14 mg/kg	0.70

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

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

There were no analytes having negative results with absolute values greater than the IDL. No action was required.

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	5 ug/L
barium	1 ug/L
beryllium	1 ug/L
chromium	1 ug/L
cobalt	2 ug/L
selenium	7 ug/L
thallium	7 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

arsenic	-7 ug/L
cadmium	-1 ug/L
manganese	-1 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

Serial Dilution Analysis was not performed in this SDG. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike Analysis was not performed in this fraction of the SDG. No action was required.

IX.) Field Duplicates:

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

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.



# HEARTLAND

ENVIRONMENTAL SERVICES, INC.

## Data Validation Report

SDG#: 30849  
Date: October 17, 1997  
Client Name: EnSafe  
Project/Site Name: Charleston - Zone F  
Date Sampled: September 2-8, 1997  
Number of Samples: 21 Aqueous Sample(s) with 0 MS/MSD(s)  
Laboratory: Southwest Laboratory of Oklahoma  
Validation Guidance: National Functional Guidelines for Organic and Inorganic Data, June 1991 and February, 1994, respectively  
QA/QC Level: EPA DQO Level III  
Method(s) Utilized: SW846 Third Edition  
Analytical Fractions: Volatiles, Semivolatiles, Pesticide/PCB's, Metals, Cyanide, Chlorides, Sulfates, Total Dissolved Solids

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

*Craig G. Seayson*  
for Paul B. Humburg, President

*10/27/97*  
Date

SDG# 30849

Samples and Fractions Reviewed

Sample Identifications

Analytical Fractions

ENSAFE ID	MATRIX	VOA	SVOA	P/P	TAL	CN	CHL	SUL	TDS								
607GW009A2	WATER	X	X		X												
607GW04D03	WATER	X	X		X												
607GW05D03	WATER	X	X		X												
607GW06DA2	WATER	X	X		X												
613GW00103	WATER	X	X		X												
613HW00103	WATER	X	X		X												
613TW00103	WATER	X															
620GW003A2	WATER	X	X		X												
620EW003A2	WATER	X	X	X	X												
620FW003A2	WATER	X	X	X	X												
620DW003A2	WATER	X	X	X	X												
620GW004A2	WATER	X	X		X												
620TW004A2	WATER	X															
SMEGW00303	WATER	X	X		X												
SMETW00303	WATER	X															
SMEGW00403	WATER	X	X		X												
SMEGW00503	WATER	X	X		X												
SMETW00503	WATER	X															
SMEEW00503	WATER	X	X	X	X	X	X	X	X								
SMEFW00503	WATER	X	X	X	X	X	X	X	X								
SMEDW00503	WATER	X	X	X	X	X	X	X	X								
Total Billable Samples (Water/Soil)		21	0	17	0	6	0	17	0	3	0	3	0	3	0	3	0

- VOA= SW846 Volatiles
- SVOA= SW846 Semivolatiles
- P/P= SW846 Pesticide/PCB's
- TAL= SW846 Metals
- CN= SW846 Cyanide
- CHL= SW846 Chlorides
- SUL= SW846 Sulfates
- TDS= SW846 Total Dissolved Solids

**DATA ASSESSMENT NARRATIVES**

# DATA ASSESSMENT AND NARRATIVE

## VOLATILE ORGANICS

### General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 Method 8260 with CLP deliverables; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

### SDG # 30849

A validation was performed on the Volatile Data from SDG 30849. The data was evaluated based on the following parameters.

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

\* - All criteria were met for this parameter

### Continuing calibrations

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

**DATA ASSESSMENT AND NARRATIVE  
VOLATILE ANALYSIS**

**PAGE - 2**

**Continuing calibrations (continued)**

**Specific Finding:**

The continuing calibration, N28557, contained compounds with %Ds greater than 25% D but less than 50% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J).

SMEGW00503                      acetone (-30.5)

The continuing calibration, N28557, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

SMEGW00503                      2-hexanone (53.1)

**Method Blanks**

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

Associated Blank	Compound	Concentration	Action Level
SBLK2	methylene chloride	2J	20

Sample ID	Compound	Qualification
SMEGW00303	methylene chloride	CRQL
SMEGW00403		

**QC Blanks**

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

**DATA ASSESSMENT AND NARRATIVE  
VOLATILE ANALYSIS**

**PAGE - 3**

**QC Blanks (continued)**

Associated Blank	Compound	Concentration	Action Level
SMETW00303	methylene chloride	3J	30
	acetone	8J	80
	1,2-dichloroethene (total)	29	145
	trichloroethene	5J	25

Sample ID	Compound	Qualification
SMEGW00303	1,2-dichloroethene (total)	CRQL
SMEGW00403	acetone	CRQL

**Surrogates**

The sample listed below, exhibited surrogate recoveries that exceeded the QA/QC limit. Qualify all positive results for the acid fraction as estimated (J).

SMEGW00503                      1,2-dichloroethane-d<sub>4</sub> (123%)

**Compound Identification/Quantitation**

For sample SMEGW00503, replace the E flagged results with the D flagged results from the diluted sample SMEGW00503DL, and do not use the rest of the diluted results.

**System Performance and Overall Assessment**

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

## **GLOSSARY OF DATA QUALIFIERS**

### **QUALIFICATION CODES**

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

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

K = Result is biased high

L = Result is biased low

### **METHOD BLANK QUALIFICATION CODES**

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

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

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

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

## SUMMARY OF DATA QUALIFICATIONS

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
SMEGW00503	acetone (-30.5)	+	J
SMEGW00503	2-hexanone (53.1)	+/-	J/UJ
SMEGW00303 SMEGW00403	methylene chloride	+	CRQL
SMEGW00303	1,2-dichloroethene (total)	+	CRQL
SMEGW00403	acetone	+	CRQL
SMEGW00503	All results	+	J
SMEGW00503	E flagged results	+	D
SMEGW00503DL	All results except D flagged results	+/-	do not use

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

## DATA ASSESSMENT AND NARRATIVE

### SEMIVOLATILE ORGANICS

#### General

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

#### SDG # 30849

A validation was performed on the Semivolatile Data from SDG 30849. The data was evaluated based on the following parameters.

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

\* - All criteria were met for this parameter

#### Continuing calibrations

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

**DATA ASSESSMENT AND NARRATIVE  
SEMIVOLATILE ANALYSIS**

**PAGE - 2**

**Continuing calibrations (continued)**

**Specific Finding:**

The continuing calibration, M7222, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

620GW003A2	hexachlorocyclopentadiene (80.5)
620GW004A2	
607GW04D03	
607GW05D03	
607GW06DA2	
607GW009A2	
613GW00103	
613HW00103	

The continuing calibration, M7263, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

SMEGW00303	hexachlorocyclopentadiene (66.3)
SMEGW00403	
SMEGW00503	

**Method Blanks**

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

Associated Blank	Compound	Concentration	Action Level
SBLK1	bis(2-ethylhexyl)phthalate	5J	50
SBLK2	phenol	1J	5
	bis(2-ethylhexyl)phthalate	2J	20
SBLK3	bis(2-ethylhexyl)phthalate	1J	10

**DATA ASSESSMENT AND NARRATIVE  
SEMIVOLATILE ANALYSIS**

**PAGE - 3**

**Method Blank (continued)**

Sample ID	Compound	Qualification
620GW003A2	bis(2-ethylhexyl)phthalate	CRQL
620GW004A2		
607GW04D03		
607GW05D03		
607GW06DA2		
SMEGW00303		
SMEGW00403		
SMEGW00503		
607GW04D03		
607GW05D03		
607GW009A2		
613GW00103		
613HW00103		
SMEGW00303		
SMEGW00403		

**QC Blanks**

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

Associated Blank	Compound	Concentration	Action Level
620FW003A2	benzoic acid	5J	25

Sample ID	Compound	Qualification
620GW003A2	benzoic acid	CRQL
620GW004A2		
607GW05D03		
607GW06DA2		
607GW009A2		
613HW00103		

**DATA ASSESSMENT AND NARRATIVE  
SEMIVOLATILE ANALYSIS**

**PAGE - 4**

**Surrogates**

The samples listed below, exhibited surrogate recoveries that were less than 10%. Qualify all positive results for the acid fraction as estimated (J) and reject all non detects (UR).

613GW00103	phenol (1%) 2-fluorophenol (0%) 2,4,6-tribromophenol (0%)
613HW00103	phenol (1%) 2-fluorophenol (1%) 2,4,6-tribromophenol (0%)

**Compound Identification/Quantitation**

Reject all results for the re-analyzed samples 613GW00103RE and 613HW00103RE, in favor of the original sample analysis due to similar non compliant surrogate recoveries.

For sample SMEGW00503, replace the E flagged results with the D flagged results from the diluted sample SMEGW00503DL, and do not use the rest of the diluted results.

**System Performance and Overall Assessment**

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

## **GLOSSARY OF DATA QUALIFIERS**

### **QUALIFICATION CODES**

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

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

K = Result is biased high

L = Result is biased low

### **METHOD BLANK QUALIFICATION CODES**

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

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

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

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

## SUMMARY OF DATA QUALIFICATIONS

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
620GW003A2 620GW004A2 607GW04D03 607GW05D03 607GW06DA2 607GW009A2 613GW00103 613HW00103	hexachlorocyclopentadiene (80.5)	+/-	J/UJ
SMEGW00303 SMEGW00403 SMEGW00503	hexachlorocyclopentadiene (66.3)	+/-	J/UJ
620GW003A2 620GW004A2 607GW04D03 607GW05D03 607GW06DA2 SMEGW00303 SMEGW00403 SMEGW00503	bis(2-ethylhexyl)phthalate	+	CRQL
607GW04D03 607GW05D03 607GW009A2 613GW00103 613HW00103 SMEGW00303 SMEGW00403	phenol	+	CRQL
620GW003A2 620GW004A2 607GW05D03 607GW06DA2 607GW009A2 613HW00103	benzoic acid	+	CRQL

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

## SUMMARY OF DATA QUALIFICATIONS

Page - 2

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>
613GW00103 613HW00103	All results acid fraction	+/-	J/UR
613GW00103RE 613HW00103RE	All results	+/-	do not use
SMEGW00503	E flagged results	+	D
SMEGW00503DL	All results except D flagged results	+/-	do not use

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

## DATA ASSESSMENT NARRATIVE

### PESTICIDE/AROCLORS

#### General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080A; the National Functional Guidelines for Organic Data Validation, February 1994; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

#### SDG # 30849

A validation was performed on the Pesticide/Aroclor Data from SDG 30849. The data was evaluated based on the following parameters:

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

\* - All criteria were met for this parameter.

#### Contractual Non-Compliance

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

#### System Performance and Overall Assessment

QC blanks only were included in this data package. Therefore, the data did not require qualifications.

## **GLOSSARY OF DATA QUALIFIERS**

### **QUALIFICATION CODES**

**U** = Not detected

**J** = Estimated value

**UJ** = Reported quantitation limit is qualified as estimated

**NJ** = Result is considered presumptively present at an estimated concentration

**UR** = Result is rejected and unusable

**D** = Result value is based on dilution analysis

### **METHOD BLANK QUALIFICATION CODES**

**CRQL** = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

**U** = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

**No Action** = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

## SUMMARY OF DATA QUALIFICATIONS

<u>SAMPLE ID</u>	<u>COMPOUND ID</u>	<u>DL</u>	<u>QL</u>
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NO QUALIFICATIONS WERE REQUIRED.

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

# DATA ASSESSMENT NARRATIVE METALS, CYANIDE AND WET CHEMISTRY

## General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Appendix IX Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

## SDG # 30849

A validation was performed on the Metals, Cyanide and wet chemistry Data from SDG 30849. The data was evaluated based on the following parameters.

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

\* - All criteria were met for this parameter.

## Preparation and Field Blanks

The preparation blank exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Aluminum	14.4 ug/l	all water samples below 72.0 ug/l
Barium	0.73 ug/l	no impact
Iron	20.1 ug/l	all water samples below 101. ug/l
Magnesium	50.6 ug/l	no impact
Manganese	1.09 ug/l	all water samples below 5.45 ug/l
Nickel	0.84 ug/l	all water samples below 4.2 ug/l
Cyanide	1.79 ug/l	no impact

The field QC blanks exhibited contamination for the following elements.

<u>Elements</u>	<u>Conc.</u>	<u>Samples affected</u>
Aluminum	14.9 ug/l	all water samples below 74.5 ug/l
Barium	1.3 ug/l	no impact
Calcium	288 ug/l	no impact
Iron	41.0 ug/l	all water samples below 205 ug/l
Lead	59.8 ug/l	all water samples below 300 ug/l
Magnesium	11.2 ug/l	no impact
Manganese	2.3 ug/l	all water samples below 11.5 ug/l
Nickel	1.05 ug/l	no impact
Sodium	2250 ug/l	no impact
Tin	4.9 ug/l	no impact

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U".

### Laboratory Duplicate Results

The RPD for Mercury (28.5 %) was greater than 20%. All positive results are qualified as estimated, "J".

### "B" Qualifier

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

## SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All water samples below 72.0 ug/l	Al.	+	U
All water samples below 101 ug/l	Fe.		
All water samples below 5.45 ug/l	Mn.		
All water samples below 4.2 ug/l	Ni.		
All water samples below 74.5 ug/l	Al.		
All water samples below 205 ug/l	Fe.		
All water samples below 300 ug/l	Pb.		
All water samples below 11.5 ug/l	Mn.		
All water samples	Hg.	+	J
All "B" results	all analytes	B	J

# 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 L  
SUBZONES: L-A, L-G, L-H, L-I  
SERVICE ORDER NUMBER: 0234  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRIX: Water  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides/PCB's, Total Metals, Cyanide  
SDG NUMBER: 29399 (Level III)

### SAMPLES:

#### SUBZONE L-A:

Client	Lab		Volatile	Semi-	Pesticides/	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>	<u>Metals</u>	<u>Cyanide</u>
037SB001A1	29399.07	Water	X	X	X	X	X
037SB001A2	29399.09	Water	X	X	X	X	X
037SB002A1	29399.08	Water	X	X	X	X	X
037TB002A1	29399.10	Water	X				
037SB001A2MS	29399.09MS	Water		+	+		
037SB001A2MSD	29399.09MSD	Water		+	+		

#### SUBZONE L-G:

Client	Lab		Volatile	Semi-	Pesticides/	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>	<u>Metals</u>	<u>Cyanide</u>
037SB001G1	29399.05	Water	X	X	X	X	X
037SB001G2	29399.06	Water	X	X	X	X	X
037SB005G1	29399.03	Water	+	X	X	X	X

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB005G1RE	29399.03RE	Water	X	+			
037SB005G1DL	29399.03DL	Water			+		
037SB005G2	29399.04	Water	X	X	X	X	X

SUBZONE L-H:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB005H1	29417.01	Water	X	X	X	X	X
037SB005H2	29417.02	Water	X	X	X	X	X
037SB015H1	29399.01	Water	X	X	X	X	X
037SB015H1RE	29399-01RE	Water		+			
037SB015H2	29399.02	Water	X	X	X	X	X
037SB015H2RE	29399.02RE	Water	+	+			
037SB020H1	29417.06	Water	X	X	X	X	X
037SB020H1RE	29417.06RE	Water	+				
037CB020H1	29417.07	Water	X	X	X	X	X
037CB020H1RE	29417.07RE	Water	+				
037CB020H1DL	29417.07DL	Water			+		
037TB020H1	29417.08	Water	X				
037SB005H1MS	29417.01MS	Water		+	+		
037SB005H1MSD	29417.01MSD	Water		+	+		

SUBZONE L-I:

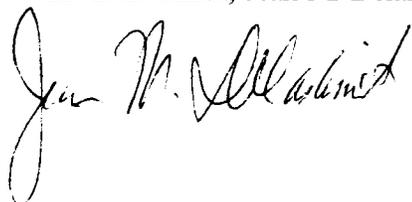
Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB005I1	29417.03	Water	X	X	X	X	X
037SB005I2	29417.04	Water	X	X	X	X	X
037CB005I2	29417.05	Water	X	X	X	X	X

+ = Non-billable analysis

CB = FIELD DUPLICATE, DL = DILUTION, RE = REANALYSIS, MS = MATRIX SPIKE, MSD= MATRIX SPIKE DUPLICATE, TB = TRIP BLANK

DATA REVIEWER(S): 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

Southwest Laboratories of Oklahoma, Inc. - 29399 CLP Organics and Inorganics

SAMPLES: 037SB001A1, 037SB001A2, 037SB002A1, 037TB002A1, 037SB001A2MS, 037SB001A2MSD, 037SB001G1, 037SB001G2, 037SB005G1, 037SB005G1RE, 037SB005G1DL, 037SB005G2, 037SB005H1, 037SB005H2, 037SB015H1, 037SB015H1RE, 037SB015H2, 037SB015H2RE, 037SB020H1, 037SB020H1RE, 037CB020H1, 037CB020H1RE, 037CB020H1DL, 037TB020H1, 037SB005H1MS, 037SB005H1MSD, 037SB005I1, 037SB005I2, 037CB005I2

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 05/21/97 on instrument R:

chloromethane	33.7%
bromomethane	42.5%
chloroethane	43.3%
acetone	60.3%
2-butanone	44.4%
4-methyl-2-pentanone	40.1%
2-hexanone	52.9%

There were no detections, after blank qualifications, of these compounds in the SDG samples. No action was necessary.

##### Continuing Calibration:

The Percent Difference (%D) was 34.6% for 2-chloroethyl vinyl ether for the standard analyzed on 5/23/97 at 07:56 on instrument R. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB001G1, 037SB005H1, 037SB005I2, 037CB005I2, 037SB020H1 and 037CB020H1.

IV.) Blanks:

Method Blanks:

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

Trip Blanks:

Acetone and methylene chloride were detected at 11 ug/L and 19 ug/L, respectively, in trip blank 037TB002A1. Acetone was not detected in the associated samples. The detections of methylene chloride in associated samples 037SB002A1, 037SB001G2, 037SB015H1 and 037SB015H2, which were less than 10X the blank amount, were flagged as undetected (U) with results below the CRQL being raised to the CRQL.

Acetone and methylene chloride were detected at 13 ug/L and 30 ug/L, respectively, in trip blank 037TB020H1. These two compounds were not detected in the associated samples. No action was required.

Tentatively Identified Compounds (TIC):

TIC's were not detected in the method, field and trip blanks. No action was required.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of toluene-d8 (129%) and bromofluorobenzene (73%) in sample 037SB015H2 were outside their respective 81-117% and 74-121% QC limits. All results for this sample, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Surrogate Percent Recoveries (%R's) of toluene-d8 (126%) and bromofluorobenzene (58%) in sample 037SB020H1 were outside their respective 81-117% and 74-121% QC limits. All results for this sample, which consisted entirely of non-detects, were flagged as estimated (UJ).

VI.) Laboratory Control Samples (LCS):

Six LCS's were analyzed by the laboratory. Five LCS Recoveries were outside the QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

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

MS / MSD samples were not analyzed in this fraction of the SDG. No action was necessary.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the two pairs of field duplicate samples (037SB020H1 / 037CB020H1 and 037SB005I2 / 037CB005I2). No action was taken.

IX.) Internal Standards Performance (ISTD):

The Percent Recoveries (%R's) of ISTD chlorobenzene-d5 were below the 50-200% QC limits for the following samples:

<u>Sample</u>	<u>%R</u>
037SB005G1RE	39
037SB015H2	32
037SB020H1	40
037CB020H1	36

All positive and non-detect results for compounds quantitated on this ISTD in the four samples were flagged as estimated (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analysis of sample 037SB020H1 was considered by the validator to be of preferable data quality as compared to the reanalysis because of better internal standards performance. The original analyses of samples 037SB015H2 and 037SB020H1 were considered by the validator to be of preferable data quality as compared to the reanalyses because of better holding times, surrogate recoveries and internal standards performances. The reanalysis of sample 037SB005G1 was considered by the validator to be of preferable data quality as compared to the original analysis because of improved internal standards performance. All laboratory data were acceptable with qualifications.

*SEMIVOLATILE ORGANICS*

I.) Holding Times:

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

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

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

Tentatively Identified Compounds (TIC):

4-Hydroxy-4-methyl-2-pentanone and 4-methyl-3-penten-2-one were detected in the method blanks at sufficient concentrations to eliminate, by applying the 5X Action Limit Rule, the detections of the two TIC's in all associated samples. Data validation action based on blank TIC's was not required. No action was taken.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of terphenyl-d14 were 159% and 164%, respectively, in associated samples 037SB005G1 and 037SB015H1, which exceeded the 18-137% QC limits. Since only one surrogate was outside the QC limits in each sample, no action was required.

VI.) Laboratory Control Samples (LCS):

Four LCS's were analyzed by the laboratory. All LCS Recovery criteria were met. No action was necessary.

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

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

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the two pairs of field duplicate samples (037SB020H1 / 037CB020H1 and 037SB005I2 / 037CB005I2). No action was taken.

IX.) Internal Standards Performance:

The Percent Recovery (%R) of ISTD perylene-d12 was 23% for sample 037SB015H1, which was below the 50-200% QC limits. Since this recovery was less than 25%, the non-detect results for compounds quantitated on this ISTD were rejected (R), and the detection of benzo(g,h,i)perylene in the sample was flagged as estimated (J).

The Percent Recovery (%R) of ISTD perylene-d12 was 31% for sample 037SB015H2, which was below the 50-200% QC limits. All results for compounds quantitated on this ISTD in the sample,

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

X.) TCL Compound Identification:

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

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

All CRQL criteria were met. No action was taken.

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

All TIC criteria were met. No action was necessary.

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analyses of samples 037SB005G1, 037SB015H1 and 037SB015H2 were considered by the validator to be of preferable data quality as compared to the reanalyses because of better holding times, surrogate recoveries and internal standards performances.

Six compounds were rejected in sample 037SB015H1 because of a very low (less than 25%) internal standard recovery. All other laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) were 35.2% for endrin in the PEM4E standard analyzed on the primary column, and 37.0% and 33.0%, respectively, for alpha-BHC and gamma-BHC analyzed on the secondary column at 01:07 on 6/4/97, which exceeded the 25% QC limit. All results for these three compounds in associated samples 037SB005H1, 037SB005H2 and 037SB005I1, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) was 31.4% for endrin in the PEM2I standard analyzed on the primary column at 00:50 on 6/4/97, which exceeded the 25% QC limit. All results for endrin in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB001A2RE, 037SB020H1, 037CB020H1, 037SB005I2 and 037CB005I2.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for the standards analyzed on the secondary column on 5/23/97 exceeded the 20% QC limit for the following compounds:

alpha-BHC	29.5%
gamma-BHC	23.9%
delta-BHC	24.5%
aldrin	21.8%
dieldrin	22.0%
endrin	22.0%

The non-detect results for these six compounds in associated samples 037SB001A1 and 037SB002A1 were rejected because of 0% surrogate recoveries. No further action was taken.

Continuing Calibration:

The Percent Difference (%D) was 40.8% for gamma-chlordane in the standards analyzed on the primary column at 22:55 on 6/4/97, which exceeded the 25% QC limit. The positive result for this compound in sample 037CB020H1DL was flagged as estimated (DJ).

IV.) Blanks:

Methoxychlor was detected at 100 ug/kg in soil method blank BL0519SB. This compound was detected in associated sample 037SB001A2 (not validated). Since the reanalysis of this sample was chosen for validation, no action was necessary.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) were outside the 30-150% QC limits for the following samples:

Sample	TCX, %R		DCB, %R	
	Column 1	Column 2	Column 1	Column 2
037SB001A1	In	0	In	In
037SB002A1	In	0	In	In
037SB020H1	In	In	In	246
037CB020H1	In	In	In	222
037CB020H1DL	In	In	In	328

All positive results for samples 037SB001A1 and 037SB002A1 were flagged as estimated (J), and all non-detect results were rejected (R). All positive results for samples 037SB020H1, 037CB020H1 and 037CB020H1DL were flagged as estimated (J).

VI.) Laboratory Control Sample (LCS):

Six LCS's were analyzed by the laboratory. All LCS Recovery criteria were met. No action was taken.

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

The Percent Recoveries ((%R's) were 163% and 188%, respectively, for endrin in spiked samples 037SB005H1MS and 037SB005H1MSD, which exceeded the 25-138% QC limits. Since all other criteria were met for unspiked sample 037SB005H1, no action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following compounds and associated samples:

<u>Sample</u>	<u>Compound</u>	<u>%D</u>
037SB020H1	4,4'-DDE	74
037CB020H1	alpha-chlordane	81

The associated positive sample results for these compounds were flagged as estimated (J).

IX.) Field Duplicates:

Two pairs of field duplicate samples (037SB020H1 / 037CB020H1 and 037SB005I2 / 037CB005I2) were analyzed by the laboratory. The calculable Relative Percent Differences (RPD's) were:

<u>Compounds</u>	<u>037SB020H1, ug/kg</u>	<u>037CB020H1, ug/kg</u>	<u>RPD</u>
heptachlor epoxide	5.6	6.2	10%
4,4'-DDE	24	39	48%
4,4'-DDD	11	17	43%
4,4'-DDT	9.1	15	59%
alpha-chlordane	8.2	9.4	14%
gamma-chlordane	23	24	4.3%

<u>Compounds</u>	<u>037SB005I2, ug/kg</u>	<u>037CB005I2, ug/kg</u>	<u>RPD</u>
4,4'-DDE	18	29	47%
4,4'-DDD	9.4	15	46%
alpha-chlordane	2.1	1.8	15%
gamma-chlordane	3.6	3.2	12%

Since no RPD exceeded the 60% QC limit for soil samples, no action was taken.

X.) Pesticide Cleanup Check:

Florilil Cartridge Check:

Florilil Check data was not present in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC cleanup data was not present in the data package. No action was taken.

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

The concentrations of 4,4'-DDE, 4,4'-DDD and 4,4'-DDT in sample 037SB005G1 exceeded the standard calibration range. The concentrations of these three compounds in the original analysis were replaced by the validator with the diluted sample (037SB005G1DL) results with appropriate qualifiers. In addition, the concentration of gamma-chlordane in sample 037CB020H1 exceeded the standard calibration range. The concentration of this compound in the original analysis was replaced by the validator with the diluted sample (037CB020H1DL) result with appropriate qualifier.

XII.) Overall Assessment of Data/General:

The reanalysis of sample 037SB001A2 was considered by the validator to be of preferable data quality as compared to the original analysis because of improved surrogate recoveries. Fifty-one non-detect results for samples 037SB001A1 and 037SB002A1 were rejected because of very low (0%) surrogate recoveries. All other laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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 ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>5X Action Level</u>
CCB2	antimony	5.20 ug/L	5.20 mg/kg
CCB4	iron	21.5 ug/L	21.5 mg/kg
CCB3	silver	2.60 ug/L	2.60 mg/kg
PBS	vanadium	1.70 mg/kg	8.50 mg/kg
PBS	cyanide	0.10 mg/kg	0.50 mg/kg

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), after correction for percent moisture, 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 in the continuing calibration blanks (CCB's):

<u>Blank ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
CCB3	barium	-22.4 ug/L	22.4 mg/kg
CCB6	cyanide	-1.80 ug/L	1.80 mg/kg

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

#### IV.) ICP Interference Check Sample Results:

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

The following analytes were present in ICS Solution A at concentrations greater than the IDL:

antimony	10 ug/L
cadmium	2 ug/L
chromium	1 ug/L
cobalt	2 ug/L
selenium	5 ug/L
silver	3 ug/L
thallium	11 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was detected in the sample at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

barium	-1 ug/L
copper	-5 ug/L
nickel	-5 ug/L
potassium	-240 ug/L

Since neither aluminum, calcium, iron nor magnesium was detected at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

V.) ICP Serial Dilution Analysis:

The Serial Dilution Percent Differences (%D's) for chromium (24.8%) and nickel (65.4%) exceeded the 10% QC limit for dilution sample 037SB015H1L. All detections of these two analytes in the SDG samples were flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was taken.

VIII.) Matrix Spike Recoveries (MS):

MS samples were not analyzed in this fraction of the SDG. No action was taken.

IX.) Field Duplicates:

Two pairs of field duplicate samples (037SB020H1 / 037CB020H1 and 037SB005I2 / 037CB005I2) were analyzed by the laboratory. The following Relative Percent Differences (RPD's) were calculable:

<u>Compounds</u>	<u>037SB020H1, mg/kg</u>	<u>037CB020H1, mg/kg</u>	<u>RPD</u>
aluminum	3790	4950	27%
arsenic	1.7	1.7	0%
barium	14.7	15.8	7.2%
calcium	2950	2970	0.7%
chromium	7.3	9.0	21%
copper	12.4	13.8	11%
iron	3440	3820	10%
lead	19.7	21.1	6.9%
magnesium	375	452	19%
manganese	13.7	18.1	28%
zinc	16.6	17.1	6.4%

<u>Compounds</u>	<u>037SB005I2, mg/kg</u>	<u>037CB005I2, mg/kg</u>	<u>RPD</u>
aluminum	2760	5350	35%
arsenic	2.1	2.7	13%
barium	7.8	9.6	21%
calcium	6570	17500	89%
chromium	10.5	14.9	35%
copper	6.7	5.6	18%
iron	3270	4870	39%
lead	8.3	7.6	8.8%
magnesium	528	1090	69%
manganese	25.2	34.0	30%
zinc	23.5	30.3	25%

The RPD's for calcium and magnesium in duplicate samples 037SB005I2 and 037CB005I2 exceeded the 60% QC limit for soil samples. The detections of these two analytes in field duplicate sample pair were flagged as estimated (J). All other RPD's were within the QC limit. No further action was required.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was necessary.

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 qualifications.

# VALIDATA

Chemical Services, Inc.

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(770) 923-8769 (Fax)

## DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe / Allen & Hoshall  
SITE NAME: Charleston Naval Base, Zone L  
SUBZONES: L-C, L-E  
SERVICE ORDER NUMBER: 0235  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide  
SDG NUMBER: 29438 (Level III)

SAMPLES:

SUBZONE L-C:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB001C1	29438.01	Soil	+	X	+	X	X
037SB001C1DL	29438.01DL	Soil			+		
037SB001C1RE	29438.01RE	Soil	X		X		
037SB002C1	29438.02	Soil	X	X	+	X	X
037SB002C1DL	29438.02DL	Soil			+		
037SB002C1RE	29438.02RE	Soil			X		
037SB002C1MS	29438.02MS	Soil		+			
037SB002C1MSD	29438.02MSD	Soil		+			
037SB002C1REMS	29438.02RMS	Soil			+		
037SB002C1REMSD	29438.02RMD	Soil			+		

SUBZONE L-E:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB005E1	29438.05	Soil	X	X	+	X	X
037SB005E1RE	29438.05RE	Soil			X		
037SB008E1	29438.03	Soil	X	X	+	X	X
037SB008E1DL	29438.03DL	Soil			+		
037SB008E1RE	29438.03RE	Soil			X		
037SB008E2	29438.04	Soil	X	X	+	X	X
037SB008E2RE	29438.04RE	Soil			X		
037DB005E1	29438.06	Soil	X	X	+	X	X
037DB005E1RE	29438.06RE	Soil			X		
037EB005E1	29438.07	Soil	X	X	+	X	X
037EB005E1RE	29438.07RE	Soil			X		
037TB005E1	29438.08	Soil	X				

DL = DILUTION, DB = DEIONIZED WATER BLANK, EB = EQUIPMENT RINSATE BLANK,  
 MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = REANALYSIS,  
 TB = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:



## Data Qualifier Definitions

- J - The association 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, Inc. - 29438 CLP Organics and Inorganics

SAMPLES: 037SB001C1, 037SB001C1DL, 037SB001C1RE, 037SB002C1, 037SB002C1DL,  
037SB002C1RE, 037SB005E1, 037SB005E1RE, 037SB008E1, 037SB008E1DL,  
037SB008E1RE, 037SB008E2, 037SB008E2RE, 037DB005E1, 037DB005E1RE,  
037EB005E1, 037EB005E1RE, 037TB005E1, 037SB002C1MS, 037SB002C1MSD,  
037SB002C1REMS, 037SB002C1REMSD

### *VOLATILE 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. 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 5/12/97 on instrument N for the following compounds:

acetone	30.1%
2-butanone	35.5%

Since the associated samples were field blanks, no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards run on 5/21/97 on instrument R for the following compounds:

chloromethane	33.7%
bromomethane	42.5%
chloroethane	43.3%
acetone	60.3%
2-butanone	44.4%
4-methyl-2-pentanone	40.1%
2-hexanone	52.9%
1,1,2,2-tetrachloroethane	25.1%

There were no positive results for these compounds 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 5/21/97 on instrument U for the following compounds:

acetone	78.4%
2-butanone	56.5%
4-methyl-2-pentanone	29.4%
2-hexanone	36.0%

There were no positive results for these compounds in the associated samples. No action was required.

#### Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards run on 5/22/97 at 09:27 on instrument N for acetone (32.8%) and 2-hexanone (28.9%). No action was required since the associated samples were field blanks.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards run on 5/29/97 at 11:19 on instrument U for the following compounds:

chloromethane	31.4%
acetone	42.8%
2-butanone	36.7%

The non-detect results for these compounds in the associated samples were flagged as estimated (UJ). The associated samples were 037SB002C1RE and 037SB008E2.

#### IV.) Blanks:

##### Method Blanks:

1,1,2,2-Tetrachloroethane was detected at 2 ug/L in method blank VBLK3. There were no positive results for this compound in the associated samples. No action was required.

Methylene chloride was detected at 2 ug/L in method blank VBLK4. The positive result for this compound in associated sample 037SB001C1RE, which was less than 10X the blank amount, was flagged as undetected (U), with the analytical result less than the CRQL being raised to the CRQL.

##### Field Blanks:

Chloroform was detected at 4 ug/L in field blanks 037DB005E1 and 037EB005E1. There were no positive results for this compound in the associated samples. No action was required.

##### Trip Blanks:

Methylene chloride was detected at 14 ug/L in trip blank 037TB005E1. The positive result for this compound in associated samples 037SB008E2 and 037SB002C1, which were less than 10X the blank amount, were flagged as undetected (U), with the analytical results less than the CRQL being raised to the CRQL.

Tentatively Identified Compounds (TIC):

There were no TIC's detected in the method, field or trip blanks. No action was required.

V.) Surrogate Recoveries:

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

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

MS / MSD analyses were not performed in this fraction of the SDG. No action was required

VII.) Laboratory Control Samples (LCS):

Four LCS's were analyzed in this SDG. Several LCS Recoveries exceeded the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

There were no field duplicate samples identified in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

The Internal Standards Percent Recoveries (%R's) of 1,4-difluorobenzene (48.4%) and chlorobenzene-d5 (47.2%) in sample 037SB001C1RE were below the 50-200% QC limits. All results for the compounds quantitated on these ISTD's in this sample, which were non-detects, were flagged as estimated (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The reanalysis of sample 037SB001C1 was considered by the validator to be of preferable data quality as compared to the original analysis because of improved surrogate and internal standards performances. All laboratory data were acceptable with qualifications.

## *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. No action was required.

### III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

### IV.) Blanks:

#### Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 1 ug/L in method blank SBLK2. Since the only associated samples were field blanks, no action was necessary.

#### Field Blanks:

Bis(2-ethylhexyl)phthalate was detected at 3 ug/L in deionized water blank 037DB005E1. All associated positive results for this compound were greater than 10X the blank amount. No action was required.

#### Tentatively Identified Compounds (TIC):

There were no TIC's detected in the method or field blanks. No action was required.

### V.) Surrogate Recoveries:

The Percent Recovery (%R) of 2-fluorophenol was 14% for blank 037EB005E1, which was below the 21-100% QC limits. Only one surrogate was outside the QC limits. No action was required.

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

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

### VII.) Laboratory Control Samples (LCS):

Two LCS's were analyzed in this fraction of the SDG. Several LCS Recoveries were outside the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

### VIII.) Field Duplicates:

There were no field duplicate samples in this SDG, so no action was required.

IX.) Internal Standards Performance (ISTD):

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

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable without qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

The nine days between sample date and reextraction date for deionized water blank 037DB005E1RE and equipment rinsate blank 037EB005E1RE exceeded the 7 day QC limit for water samples. Since these samples were field blanks, no action was taken.

II.) Instrument Performance:

The Percent Recovery (%R) of endrin was 30.4% for PEM14B standard analyzed on 6/12/97 on the primary column, which exceeds the 25% QC limit. All positive and non-detect result for this compound in all of the reanalysis samples in this SDG were flagged as estimated (J) and (UJ).

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

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 field blanks. No action was required.

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of decachlorobiphenyl on the secondary column for samples 037SB001C1RE and 037SB008E1RE were 191% and 211%, respectively, which exceeded the 30-150% QC limits. All positive results for these samples were flagged as estimated (J).

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

The Relative Percent Differences (RPD's) exceeded the 20% QC limits for spiked samples 037SB002C1REMS and 037SB002C1REMSD for the following compounds:

<u>Compound</u>	<u>RPD</u>
alpha-BHC	21%
beta-BHC	22%
gamma-BHC	26%
delta-BHC	21%
heptachlor	27%
aldrin	22%
heptachlor epoxide	22%
endosulfan I	23%
dieldrin	49%
endrin	22%
endosulfan II	25%
4,4'-DDD	86%
endosulfan sulfate	26%
methoxychlor	21%
endrin aldehyde	200%
alpha chlordane	21%
gamma chlordane	24%
endrin ketone	37%

The positive and non-detect results for these compounds in associated unspiked sample 037SB002C1RE were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of spiked samples 037SB002C1REMS and 037SB002C1REMSD exceeded their QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
4,4'-DDE	0%	0%	50-117%
4,4'-DDD	53%	21%	57-160%
4,4'-DDT	0%	0%	54-131%
endrin aldehyde	14%	0%	27-160%

There were no associated non-detects. The positive results for these compounds in associated unspiked

sample 037SB002C1RE were flagged as estimated (J).

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between column 1 and column 2 exceeded the 70% QC limit for the following samples:

<u>Sample</u>	<u>Compound</u>	<u>Column %D</u>
037SB001C1RE	heptachlor epoxide	265
	dieldrin	999
	4,4'-DDT	71.9
	endrin aldehyde	82.1
	alpha chlordane	74.4
	gamma chlordane	83.5
037SB002C1RE	dieldrin	352
	4,4'-DDD	284
037SB008E1RE	delta-BHC	999
	4,4'-DDE	304

All results for compounds with %D's greater than 300% were rejected (R). The results for compounds with %D's less than 300% were flagged as estimated (J).

VIII.) Field Duplicates:

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

IX.) Pesticide Cleanup Check:

Florasil Cartridge Check:

All criteria were met. No action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met. No action was necessary.

X.) Overall Assessment of Data/General:

The reanalyses of all samples in this SDG were considered by the validator to be of preferable data quality as compared to the original analyses because of method blank contamination for the original analyses and improved instrument performance and calibration data for the reanalyses.

Four results for compounds with column Percent Differences (%D's) exceeding 300% in samples 037SB001C1RE, 037SB002C1RE and 037SB008E1RE were rejected. All other laboratory data were

acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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:

Blank Type/ID#	Analyte	Max. Conc.	Action Level mg/kg
037EB005E1	antimony	1.90 ug/L	1.90
PBS	cadmium	0.06 mg/kg	0.30
PBS	calcium	2.05 mg/kg	10.3
PBS	lead	0.24 mg/kg	1.20
037EB005E1	magnesium	424 ug/L	424
037EB005E1	manganese	0.35 ug/L	0.35
CCB2	nickel	0.80 ug/L	0.80
037EB005E1	potassium	90.3 ug/L	90.3
PBW	silver	2.36 ug/L	2.36
037EB005E1	sodium	3380 ug/L	3380
PBS	tin	2.42 mg/kg	12.1
CCB1	cyanide	2.60 ug/L	2.60

CCB = Continuing Calibration Blank, EB = Equipment Rinsate Blank,  
PBS = Preparation Blank (Soil), PBW= Preparation Blank (Water)

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

The following analytes had negative results with absolute values greater than the IDL:

Blank ID	Analyte	Neg. Conc.	5X Conc.
PBW	aluminum	-18.8 ug/L	18.8 mg/kg
CCB1	beryllium	-0.40 ug/L	0.40 mg/kg
PBS	cobalt	-0.10 mg/kg	0.50 mg/kg
CCB3	selenium	-3.50 ug/L	3.50 mg/kg

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

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

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

arsenic	5 ug/L
barium	1 ug/L
beryllium	1 ug/L
cobalt	2 ug/L
selenium	3 ug/L
sodium	31 ug/L
thallium	10 ug/L

These analytes should not be present. Additionally, negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

antimony	-5 ug/L
cadmium	-1 ug/L
copper	-6 ug/L
nickel	-4 ug/L
potassium	-200 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

The Percent Differences (%D's) for calcium (13.6%), iron (11.7%), magnesium (10.8%), nickel (11.5%) and zinc (12.7%) in serial dilution sample 037SB001C1L exceeded the 10% QC limit. All positive results for these analytes in the associated soil samples were flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike analysis was not performed in this fraction of the SDG. No action was required.

IX.) Field Duplicates:

There were no field duplicate samples analyzed in this SDG. No action was required.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was taken.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# 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 L  
SUBZONE: L-H  
SERVICE ORDER NUMBER: 0237  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
  
SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides/PCB's, Total Metals, Cyanide  
  
SDG NUMBER: 29593 (Level III)

SAMPLES:

SUBZONE L-H:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB001H1	29593.07	Soil	X	X	X	X	X
37SB001H1DL	29593.07DL	Soil	+				
037SB001H2	29593.08	Soil	X	X	X	X	X
037SB002H1	29593.09	Soil	X	X	X	X	X
037SB002H1DL	29593.09DL	Soil			+		
037SB002H2	29593.10	Soil	X	X	X	X	X
037SB002H2DL	29593.10DL	Soil			+		
037SB003H1	29593.11	Soil	X	X	X	X	X
037SB003H2	29593.12	Soil	X	X	X	X	X
037SB004H1	29593.13	Soil	X	X	X	X	X
037SB004H2	29593.14	Soil	X	X	X	X	X
037SB006H1	29593.01	Soil	X	X	X	X	X
037SB006H2	29593.02	Soil	X	X	X	X	X
037SB007H1	29593.03	Soil	X	X	X	X	X
037SB007H2	29593.04	Soil	X	X	X	X	X

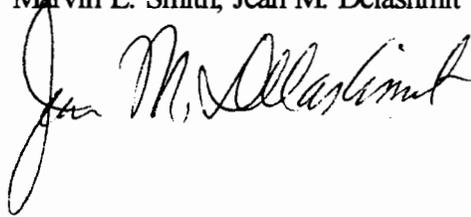
Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB008H1	29593.05	Soil	X	X	X	X	X
037SB008H2	29593.06	Soil	X	X	X	X	X
037DB006H1	29593.16	Water	X	X	X	X	X
037EB006H1	29593.17	Water	X	X	X	X	X
037TB004H1	29593.15	Soil	X				
037TB006H1	29593.18	Water	X				
037SB002H2MS	29593.10MS	Soil	+	+			
037SB002H2MSD	29593.10MSD	Soil	+	+			
037SB006H1MS	29593.01MS	Soil				+	
037SB006H1MSD	29593.01MSD	Soil				+	

+ = Non-billable analysis

DL = DILUTION, DB = DEIONIZED WATER BLANK, EB = EQUIPMENT RINSATE BLANK  
MS = MATRIX SPIKE, MSD= MATRIX SPIKE DUPLICATE, TB = TRIP BLANK

DATA REVIEWER(S): 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

Southwest Laboratories of Oklahoma, Inc. - 29593 CLP Organics and Inorganics

SAMPLES: 037SB001H1, 037SB001H1DL, 037SB001H2, 037SB002H1, 037SB002H1DL,  
037SB002H2, 037SB002H2DL, 037SB003H1, 037SB003H2, 037SB004H1,  
037SB004H2, 037SB006H1, 037SB006H2, 037SB007H1, 037SB007H2,  
037SB008H1, 037SB008H2, 037DB006H1, 037EB006H1, 037TB004H1,  
037TB006H1, 037SB002H2MS, 037SB002H2MSD, 037SB006H1MS,  
037SB006H1MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 35.5% for 2-butanone in the initial calibration analyzed on 5/12/97 on instrument N, which exceeded the 30% QC limit. This compound was not detected in the associated samples. No action was necessary.

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 06/9/97 on instrument I:

bromomethane	82.6%
chloroethane	94.0%
2-hexanone	54.7%
2-chloroethyl vinyl ether	42.0%

There were no detections of these compounds in the associated samples. No action was taken.

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 06/9/97 on instrument U:

acetone	41.6%
2-butanone	42.1%
2-chloroethyl vinyl ether	35.9%

There were no detections of these compounds in the associated samples. No action was required.

#### Continuing Calibration:

The Percent Differences (%D's) were 27.9% and 27.1%, respectively, for bromomethane and 2-butanone in the standard analyzed on 6/9/97 at 11:18 on instrument N, which exceeded the 25% QC limit. The non-detect results for these two compounds in associated sample 037SB003H1 was flagged as estimated (UJ).

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride was detected at 13 ug/kg in soil method blank VBLK5. The detection of this compound in sample 037SB003H1, which was less than 10X the blank amount, was flagged as undetected (U) with the detection limit being raised to the amount of contamination in the sample.

##### Field Blanks:

Chloroform was detected at 5 ug/L and 4 ug/L, respectively, in deionized water blank 037DB006H1 and equipment rinsate blank 037EB006H1. There were no detections of chloroform in the SDG samples. No action was taken.

##### Trip Blanks:

There were no detections in the two SDG trip blanks. No action was required.

##### Tentatively Identified Compounds (TIC):

Cyclotetrasiloxane was detected at 9 ug/kg in method blank SBLK4. This compound was not detected in the associated samples. No action was required.

#### V.) Surrogate Recoveries:

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

#### VI.) Laboratory Control Samples (LCS):

Ten LCS's were analyzed by the laboratory. Twelve LCS Recoveries were outside the QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

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

The Percent Recovery (%R) was 56% for chlorobenzene in spiked sample 037SB002H2MS, which was below the 60-133% QC limits. In addition, the %R was 52% for 1,1-dichloroethene in spiked sample 037SB002H2MSD, which was below the 59-172% QC limits. The non-detect results for these two compounds in unspiked sample 037SB002H2 were flagged as estimated (UJ).

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

IX.) Internal Standards Performance (ISTD):

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

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

The concentration of acetone exceeded the standard calibration range for sample 037SB001H1. The concentration of acetone in the original analysis was replaced by the validator with the diluted sample (037SB001H1DL) result with the appropriate (D) qualifier.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*SEMIVOLATILE ORGANICS*

I.) Holding Times:

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

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was necessary.

#### Continuing Calibration:

The Percent Difference (%D) was 26.4% for 2,4-dinitrophenol in the standard analyzed on 6/10/97 at 09:50 on instrument V, which exceeded the 25% QC limit. Since the only associated samples were LCS's, no action was required.

The Percent Differences (%D's) were 26.5 and 28.5%, respectively, for 2,4-dinitrophenol and hexachlorocyclopentadiene for the standard analyzed on 6/11/97 at 13:03 on instrument V, which exceeded the 25% QC limit. Since the only associated samples were field blanks, no action was necessary.

#### IV.) Blanks:

##### Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 210 ug/kg in soil method blank SBLK1. All positive results for this compound in the SDG samples, which were less than 10X the blank amount, were flagged as undetected (U) with the analytical results less than the CRQL being replaced with the CRQL.

##### Field Blanks:

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

##### Tentatively Identified Compounds (TIC):

Ethylbenzenediol was detected in the method and field blanks at sufficient concentrations to eliminate, by applying the 5X Action Limit Rule, the detections of this TIC in all associated samples. The associated samples were 037SB001H1, 037SB001H2, 037SB002H1, 037SB002H2, 037SB004H1 and 037SB004H2. Since data validation action based on blank TIC's was not required, no action was taken.

#### V.) Surrogate Recoveries:

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

#### VI.) Laboratory Control Samples (LCS):

Four LCS's were analyzed by the laboratory. Two LCS Recoveries exceeded the QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

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

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

#### VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance:

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

X.) TCL Compound Identification:

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

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

All CRQL criteria were met. No action was taken.

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

All TIC criteria were met. No action was necessary.

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) were 29.2% and 32.0% for endrin, respectively, on the primary and secondary column for the PEM14B standard analyzed on 6/14/97 at 04:15, which exceeded the 25% QC limit. The non-detect results for this compound in associated samples 037SB006H1, 037SB006H2, 037SB007H1 and 037SB007H2 were flagged as estimated (UJ).

The Percent Differences (%D's) were 28.9% for 4,4-DDT in the PEM14D standard analyzed on the primary columns, and 27.6% and 33.6%, respectively, for endrin and 4,4'-DDT analyzed on the secondary column at 01:03 on 6/15/97, which exceeded the 25% QC limit. The positive and non-detect results for these two compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 037SB001H1, 037SB002H1, 037SB002H2, 037SB003H2, 037SB004H1, 037SB004H2, 037SB008H1 and 037SB008H2.

The DDT Breakdown was 27.4% on the primary column and 25.7% on the secondary for the PEM14D standard analyzed at 01:03 on 6/15/97, which exceeded the 20% QC limit. The detection of 4,4'-DDT in sample 037SB003H2 was previously flagged based on the %D's for this standard. There were no

other detections of 4,4'-DDT, or of 4,4'-DDD and 4,4'DDE in the associated samples. No further action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) were 22.5% and 21.1%, respectively, for alpha-BHC and 4,4'-DDD in the standards analyzed on the primary column on 6/17/97, which exceeded the 20% QC limit. Since only two compounds exceeded the QC limit with %RSD's less than 30%, no action was required.

Continuing Calibration:

All Continuing Calibration criteria were met. No action was taken.

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Surrogate Percent Recovery (%R) was 204% for decachlorobiphenyl (DCB) in sample 037SB002H1DL on the secondary column, which exceeded the 30-150% QC limits. Heptachlor, heptachlor epoxide, endrin, alpha-chlordane and gamma-chlordane were detected in this sample. Data validation action was not required for dilution analysis.

VI.) Laboratory Control Sample (LCS):

Four LCS's were analyzed by the laboratory. All Recovery criteria were met. No action was taken.

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

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

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following compounds and associated samples:

<u>Sample</u>	<u>Compound</u>	<u>%D</u>
037SB002H1DL	heptachlor epoxide	105
037SB003H2	4,4'-DDT	109

The positive result for 4,4'-DDT in sample 037SB003H2 was flagged as estimated (J).

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil Check data were not present in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC cleanup data were not present in the data package. No action was taken.

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

The concentrations of heptachlor, heptachlor epoxide, endrin, alpha-chlordane and gamma-chlordane in sample 037SB002H1 exceeded the standard calibration range. The concentrations of these five compounds in the original analysis were replaced by the validator with the diluted sample (037SB002H1DL) results with appropriate qualifiers (D) and (DJ). In addition, the concentration of heptachlor, alpha-chlordane and gamma-chlordane in sample 037SB002H2 exceeded the standard calibration range. The concentrations of these three compounds in the original analysis were replaced by the validator with the diluted sample (037SB002H2DL) results with appropriate qualifiers (D).

XII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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 Type/ID#</u>	<u>Analyte</u>	<u>Max Conc.</u>	<u>5X Action Level</u>
CCB10	antimony	3.10 ug/L	3.10 mg/kg
ERB	beryllium	0.25 ug/L	0.25 mg/kg
ICB	cobalt	0.80 ug/L	0.80 mg/kg
ERB	copper	3.90 ug/L	3.90 mg/kg
PBS	lead	0.34 mg/kg	1.70 mg/kg
ICB	iron	21.9 ug/L	21.9 mg/kg
ERB	potassium	81.7 ug/L	81.7 mg/kg
ICB	silver	3.10 ug/L	3.10 mg/kg
DWB	sodium	441 ug/L	441 mg/kg
PBS	tin	1.41 mg/kg	7.05 mg/kg
PBS	cyanide	0.07 mg/kg	0.35 mg/kg

CCB = Continuing Calibration Blank, ICB = Initial Calibration Blank,  
 PBS = Preparation Blank (Soil), DWB = Deionized Water Blank (037DB006H1),  
 ERB = Equipment Rinsate Blank (037EB006H1)

All results greater than the IDL but less than 5X the blank amount (Action Level, mg/kg for soil samples), after correction for percent moisture, for which the contaminated blank was an associated calibration, deionized water, equipment rinsate or preparation 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.</u>
PBW	aluminum	-19.4 ug/L	19.4 mg/kg
CCB2	arsenic	-3.10 ug/L	3.10 mg/kg
CCB12	lead	-1.10 ug/L	1.10 mg/kg
PBW	silver	-1.15 ug/L	1.15 mg/kg

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

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

#### IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	9 ug/L
cadmium	2 ug/L
chromium	1 ug/L
cobalt	2 ug/L
lead	3 ug/L
selenium	4 ug/L

silver	2 ug/L
sodium	60 ug/L
thallium	11 ug/L
vanadium	2 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

arsenic	-4 ug/L
barium	-4 ug/L
copper	-7 ug/L
nickel	-4 ug/L
potassium	-201 ug/L
zinc	-12 ug/L

Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

V.) ICP Serial Dilution Analysis:

The Serial Dilution Percent Differences (%D's) for chromium (31.3%) and nickel (50.6%) exceeded the 10% QC limit for dilution sample 037SB006H1L. All detections of these two analytes in the SDG samples were flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was taken.

VIII.) Matrix Spike Recoveries (MS):

MS samples were not analyzed in this fraction of the SDG. No action was taken.

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was necessary.

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 qualifications.

# 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 L  
SUBZONE: L-H  
SERVICE ORDER NUMBER: 0238  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
  
SAMPLE MATRIX: Soil  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides/PCB's, Total Metals, Cyanide  
  
SDG NUMBER: 29607 (Level III)

SAMPLES:

SUBZONE L-H:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB009H1	29607.01	Soil	X	X	X	X	X
037SB009H1DL	29607.01DL	Soil			+		
037CB009H1	29607.02	Soil	X	X	X	X	X
037SB010H1	29607.03	Soil	X	X	X	X	X
037SB010H2	29607.04	Soil	X	X	X	X	X
037SB011H1	29607.05	Soil	X	X	X	X	X
037SB011H2	29607.06	Soil	X	X	X	X	X
037SB011H2DL	29607.06DL	Soil			+		
037SB012H1	29607.07	Soil	X	X	X	X	X
037SB012H1DL	29607.07DL	Soil			+		
037SB012H2	29607.08	Soil	X	X	X	X	X
037SB012H2DL	29607.08DL	Soil			+		
037SB013H1	29607.09	Soil	X	X	X	X	X
037SB013H1DL	29607.09DL	Soil			+		
037SB013H2	29607.10	Soil	X	X	X	X	X

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB013H2DL	29607.10DL	Soil			+		
037SB014H1	29607.11	Soil	X	X	X	X	X
037SB014H1DL	29607.11DL	Soil			+		
037SB014H2	29607.12	Soil	X	X	X	X	X
037SB014H2DL	29607DL	Soil			+		
037CB014H2	29607.13	Soil	X	X	X	X	X
037CB014H2DL	29607.13DL	Soil			+		
037TB013H2	29607.14	Soil	X				
037SB012H1MS	29607.07MS	Soil	+				
037SB012H1MSD	29607.07MSD	Soil	+				
037SB010H2MS	29607.04MS	Soil		+			
037SB010H2MSD	29607.04MSD	Soil		+			
037SB011H1MS	29607.05MS	Soil			+		
037SB011H1MSD	29607.05MSD	Soil			+		

+ = Non-billable analysis

CB = FIELD DUPLICATE, DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, TB = TRIP BLANK

DATA REVIEWER(S): 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

Southwest Laboratories of Oklahoma, Inc. - 29607 CLP Organics and Inorganics

SAMPLES: 037SB009H1, 037SB009H1DL, 037CB009H1, 037SB010H1, 037SB010H2, 037SB011H1, 037SB011H2, 037SB011H2DL, 037SB012H1, 037SB012H1DL, 037SB012H2, 037SB012H2DL, 037SB013H1, 037SB013H1DL, 037SB013H2, 037SB0013H2DL, 037SB014H1, 037SB014H1DL, 037SB014H2, 037SB014H2DL, 037CB014H2, 037CB014H2DL, 037TB013H2, 037SB012H1MS, 037SB012H1MSD, 037SB010H2MS, 037SB010H2MSD, 037SB011H1MS, 037SB011H1MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 06/9/97 on instrument I:

bromomethane	82.6%
chloroethane	94.0%
2-hexanone	54.7%
2-chloroethyl vinyl ether	42.0%

There were no detections of these compounds in the associated samples. No action was taken.

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 06/9/97 on instrument U:

acetone	41.6%
2-butanone	42.1%
2-chloroethyl vinyl ether	35.9%

The detections of acetone in associated samples 037SB010H2, 037SB014H2 and 037CB014H2 were flagged as estimated (J). Since there were no other positive results for these compounds in the associated samples, no further action was necessary.

Continuing Calibration:

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 06/10/97 at 07:34 on instrument I:

bromomethane	30.2%
acetone	44.9%
2-butanone	45.0%
vinyl acetate	41.5%
4-methyl-2-pentanone	34.3%
2-hexanone	42.5%

All results for these compounds in associated samples 037SB011H1 and 037SB012H1, which consisted entirely of non-detects after blank qualifications, were flagged as estimated (UJ).

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 06/12/97 at 07:34 on instrument U:

bromomethane	27.9%
2-butanone	27.1%
2-chloroethyl vinyl ether	39.4%

The non-detect results for these three compounds in all SDG samples, except 037SB011H1 and 037SB012H1, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Acetone was detected at 1 ug/kg in soil method blank VBLK1. Blank qualifications for acetone were performed using trip blank 037TB013H2. No further action was taken.

Methylene chloride was detected at 13 ug/kg in soil method blank VBLK2. The detections of this compound in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. The associated samples were 037SB009H1, 037CB009H1, 037SB010H1, 037SB010H2, 037SB011H2, 037SB012H2, 037SB013H1, 037SB013H2, 037SB014H1, 037SB014H2 and 037CB014H2.

Trip Blank:

Acetone was detected at 3 ug/kg in trip blank 037TB013H2. The detections of this compound in associated samples 037SB011H1, 037SB012H1 and 037SB012H2, which were less than 10X the blank amount, were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample.

Tentatively Identified Compounds (TIC):

TIC's were not detected in the method or trip blanks. No action was required.

V.) Surrogate Recoveries:

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

VI.) Laboratory Control Samples (LCS):

Four LCS's were analyzed by the laboratory. Two LCS Recoveries exceeded the QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

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

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

VIII.) Field Duplicates:

Two pairs of field duplicate samples (037SB009H1 / 037CB009H1 and 037SB014H2 / 037CB014H2) were analyzed in this SDG. Relative Percent Differences (RPD's) were not calculable for the first pair. The RPD for acetone was 35% in the second field duplicate pair, which was within the 60% QC limit for soil samples. No action was necessary.

IX.) Internal Standards Performance (ISTD):

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

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was taken.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

## *SEMIVOLATILE ORGANICS*

### I.) Holding Times:

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

### II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

### III.) Calibration:

#### Initial Calibration:

All Initial Calibration criteria were met. No action was necessary.

#### Continuing Calibration:

The Percent Difference (%D) was 35.8% for hexachlorocyclopentadiene in the standard analyzed on 6/11/97 at 10:42 on instrument M, which exceeded the 25% QC limit. All SDG sample results for this compound, which consisted entirely of non-detects, were flagged as estimated (UJ).

### IV.) Blanks:

There were no positive detections in soil method blank SBLK1. No action was taken.

#### Tentatively Identified Compounds (TIC):

4-Methyl-3-pentene-2-one and 4-hydroxy-4-methyl-2-pentanone were detected in the method blank at sufficient concentrations to eliminate, by applying the 5X Action Limit Rule, the detections of these two TIC's in all SDG samples. Since data validation action based on blank TIC's was not required, no action was taken.

### V.) Surrogate Recoveries:

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

### VI.) Laboratory Control Samples (LCS):

Two LCS's were analyzed by the laboratory. All LCS Recovery criteria were met. No action was taken.

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

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

VIII.) Field Duplicates:

Two pairs of field duplicate samples (037SB009H1 / 037CB009H1 and 037SB014H2 / 037CB014H2) were analyzed in this SDG. Relative Percent Differences (RPD's) were not calculable in the two sets of field duplicate samples. No action was required.

IX.) Internal Standards Performance:

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

X.) TCL Compound Identification:

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

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

All CRQL criteria were met. No action was taken.

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

All TIC criteria were met. No action was necessary.

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) for 4,4'-DDT were 39.6% and 43.1%, respectively, on the primary and secondary columns for the PEM14G standard analyzed on 6/19/97 at 02:40, which exceeded the 25% QC limit. The positive results for this compound in associated samples 037SB012H2 and 037SB014H1 were flagged as estimated (J). Since the results for 4,4'-DDT in associated samples 037SB012H1, 037SB013H1, 037SB013H2, 037SB014H2 and 037CB014H2 were taken from the dilution samples, no further action was necessary.

The DDT Breakdown was 39.6% on the primary column and 26.6% on the secondary for the PEM14G standard analyzed at 02:40 on 6/19/97, which exceeded the 20% QC limit for DDT

breakdown and the 30% QC limit for combined endrin and DDT breakdown. The detections of 4,4'-DDT in samples 037SB012H2 and 037SB014H1 were previously flagged based on the %D's for this PEM standard. No further action was necessary.

The Percent Differences (%D's) for endrin were 26.4% and 28.0%, respectively, on the primary and secondary columns for the PEM14H standard analyzed on 6/19/97 at 22:56, which exceeded the 25% QC limit. All results for endrin in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB012H1, 037SB012H2, 037SB013H1, 037SB013H2, 037SB014H1, 037SB014H2 and 037CB014H2.

### III.) Calibration:

#### Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 21.6% for alpha-BHC in the standards analyzed on the primary column on 6/11/97, which exceeded the 20% QC limit. Since only one compound exceeded the QC limit with a %RSD less than 30%, no action was required.

The Percent Relative Standard Deviations (%RSD's) were 22.5% and 21.1%, respectively, for alpha-BHC and 4,4'-DDD in the standards analyzed on the primary column on 6/17/97, which exceeded the 20% QC limit. Since only two compounds exceeded the QC limit with %RSD's less than 30%, no action was required.

#### Continuing Calibration:

The Percent Differences (%D's) were 53.1% and 38.1%, respectively, for 4,4'-DDT and methoxychlor in the standards analyzed on the primary column on 6/19/97 at 03:10, which exceeded the 25% QC limit. In addition, the %D's were 52.8% and 28.3%, respectively, for 4,4'-DDT and methoxychlor on the secondary column for these standards. The results for 4,4'-DDT were previously qualified based on the PEM14G standard. All results for methoxychlor in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB012H1, 037SB012H2, 037SB013H1, 037SB013H2, 037SB014H1, 037SB014H2 and 037CB014H2.

The Percent Differences (%D's) were 67.4%, 88.8% and 40.1%, respectively, for 4,4'-DDD, 4,4'-DDT and methoxychlor in the standards analyzed on the primary column on 6/19/97 at 08:07, which exceeded the 25% QC limit. In addition, the %D's were 99.9% each for endrin and 4,4'-DDD on the secondary column for these standards. The detection of 4,4'-DDT in sample 037SB014H2 was flagged as estimated (J). Since no other results from the two associated sample dilutions (037SB012H2DL and 037SB014H2DL) were used, no further action was necessary.

### IV.) Blanks:

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

### V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) for decachlorobiphenyl (DCB) exceeded the 30-150% QC limits in the following samples:

<u>Sample</u>	<u>Column 1, %R</u>	<u>Column 2, %R</u>
037SB010H1		158
037SB013H1	187	161
037SB013H1DL	187	195
037SB014H2	219	175
037SB014H2DL	300	276
037CB014H2	414	293
037CB014H2DL	476	441

All positive results for these samples were flagged as estimated (J).

VI.) Laboratory Control Sample (LCS):

Two LCS's were analyzed by the laboratory. All LCS Recovery criteria were met. No action was taken.

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

The Percent Recoveries (%R's) for spiked sample 037SB011H1MSD were outside the QC limits for the following compounds:

<u>Compound</u>	<u>%R</u>	<u>QC Limits</u>
4,4'-DDE	328	50-117%
4,4'-DDD	239	57-160%
endrin aldehyde	0	27-160%
gamma-chlordane	123	21-118%

The detections endrin aldehyde and gamma-chlordane in unspiked sample 037SB011H1 were flagged as estimated (J). The other two compounds were not detected in this sample. No further action was taken.

The Relative Percent Differences (RPD's) for spiked samples 037SB011H1 exceeded the 20% QC limit for the following compounds:

<u>Compound</u>	<u>RPD</u>
4,4'-DDE	128%
4,4'-DDD	65%
endrin aldehyde	200%
gamma-chlordane	64%
endosulfan II	24%

Endrin aldehyde was previously flagged based on the result from spiked sample 037SB011H1MSD. The positive and non-detect results for the other four compounds in unspiked sample 037SB011H1 were flagged as estimated (J) and (UJ).

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following

compounds and associated samples:

<u>Sample</u>	<u>Compound</u>	<u>%D</u>
037SB009H1	4,4'-DDE	139
	endosulfan II	863
037SB09H1DL	4,4'-DDT	94
	endrin aldehyde	83
037CB009H1	dieldrin	866
	4,4'-DDE	192
	endosulfan II	536
	4,4'-DDT	129
	gamma-chlordane	1060
037SB010H1	dieldrin	224
	4,4'-DDT	111
	endrin aldehyde	97
037SB011H1	endosulfan II	215
	4,4'DDT	112
	endrin aldehyde	77
	gamma-chlordane	134
037SB011H2	endosulfan II	1120
037SB011H2DL	4,4'-DDT	97
037SB012H1	dieldrin	3050
	endosulfan II	518
037SB012H1DL	4,4'-DDT	104
	endrin aldehyde	108
037SB012H2	endrin aldehyde	121
	gamma-chlordane	1100
037SB013H1	4,4'-DDE	886
037SB013H1DL	4,4'-DDD	9160
037SB013H2	4,4'-DDT	137
	endosulfan II	124
	gamma-chlordane	354
037SB013H2DL	endrin aldehyde	144
037SB014H1	4,4'-DDT	98
037SB014H2	heptachlor epoxide	335
	4,4'-DDE	1100
	gamma-chlordane	3670
037SB014H2DL	endosulfan II	1010
	4,4'-DDT	86
	endrin aldehyde	73
037CB014H2	heptachlor	89
	4,4'-DDE	877
	gamma-chlordane	3670
037CB014H2DL	heptachlor epoxide	233
	endosulfan II	1210
	4,4'-DDT	149

All results for compounds with %D's greater than 300% were rejected (R). The results for compounds

with %D's less than 300% were flagged as estimated (J). Where possible, rejected data for the original analyses were replaced with the data from the dilution analyses, even though detection limits for those compounds were higher.

IX.) Field Duplicates:

Two pairs of field duplicate samples (037SB009H1 / 037CB009H1 and 037SB014H2 / 037CB014H2) were analyzed in this SDG. The following Relative Percent Differences were calculable:

<u>Compound</u>	<u>037SB009H1</u>	<u>037CB009H1</u>	<u>RPD</u>
4,4'-DDE	13 ug/kg	8.8 ug/kg	39%
4,4'-DDT	68 ug/kg	36 ug/kg	62%
endrin aldehyde	59 ug/kg	41 ug/kg	36%
aroclor 1260	1400 ug/kg	1000 ug/kg	33%

The RPD for 4,4'DDT exceeded the 60% QC limit for soil samples. The detections of this compound in the two samples were flagged as estimated (J).

<u>Compound</u>	<u>037SB014H2</u>	<u>037CB014H2</u>	<u>RPD</u>
heptachlor	3.6 ug/kg	14 ug/kg	118%
4,4'-DDT	1500 ug/kg	2400 ug/kg	46%
endrin aldehyde	1300 ug/kg	2800 ug/kg	73%
aroclor 1260	30000 ug/kg	64000 ug/kg	72%

The RPD's for heptachlor, endrin aldehyde and arochlor 1260 exceeded the 60% QC limit for soil samples. The detections of these three compounds in the two samples were flagged as estimated (J).

X.) Pesticide Cleanup Check:

Florisol Cartridge Check:

Florisol Check data were not present in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC cleanup data were not present in the data package. No action was taken.

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

No compounds exceeded the standard calibration range in samples 037SB012H2 and 037SB014H1. The concentrations of heptachlor epoxide, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT, endosulfan II, endrin aldehyde, gamma-chlorodane and arochlor 1260 exceeded the standard calibration range in the following samples:

<u>Sample</u>	<u>Heptachlor epoxide</u>	<u>4,4'-DDD</u>	<u>4,4'-DDT</u>	<u>4,4'-DDE</u>	<u>Endo-sulfan II</u>	<u>Endrin aldehyde</u>	<u>Gamma-chlordane</u>	<u>Aroclor 1260</u>
037SB009H1			X			X		
037SB011H2			X			X		X
037SB012H1			X			X	X	X
037SB013H1		X	X			X		X
037SB013H2		X		X		X		
037SB014H2			X		X	X		X
037CB014H2	X		X		X	X		X

Dilution analysis results for 4,4'-DDD in sample 037SB013H1 and endosulfan II in samples 037SB014H2 and 037CB014H2 were rejected due to high PIS Percent Differences. Original analysis results for these three data points were flagged as estimated (J) and the dilution results were not used. The concentrations of the other compounds in the original analyses were replaced by the validator with the associated diluted sample results with appropriate qualifiers.

XII.) Overall Assessment of Data/General:

Eighteen analyses were rejected because of high PIS Percent Differences (%D's) exceeding 300%. After combining the dilution analysis data with the original analysis data to yield one set of usable data, no resulting "Report A" data were rejected. All other laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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 Type/ID#</u>	<u>Analyte</u>	<u>Max Conc.</u>	<u>5X Action Level</u>
PBS	aluminum	4.23 mg/kg	21.2 mg/kg
CCB3	antimony	3.50 ug/L	3.50 mg/kg
PBS	calcium	12.7 mg/kg	63.5 mg/kg
PBS	lead	0.23 mg/kg	1.15 mg/kg
PBS	selenium	0.33 mg/kg	1.65 mg/kg
PBS	tin	1.85 mg/kg	9.25 mg/kg
PBS	cyanide	0.05 mg/kg	0.25 mg/kg

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), after correction for percent moisture, for which the contaminated blank was an associated calibration or preparation blank were flagged as undetected (U).

IV.) ICP Interference Check Sample Results:

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

The following analytes were present in ICS Solution A at concentrations greater than the IDL:

antimony	8 ug/L
cadmium	2 ug/L
chromium	1 ug/L
cobalt	2 ug/L
lead	3 ug/L
manganese	1 ug/L
selenium	8 ug/L
thallium	7 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

barium	-1 ug/L
copper	-6 ug/L
nickel	-4 ug/L
potassium	-196 ug/L
zinc	-10 ug/L

Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution Analysis criteria were met. No action was necessary.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was taken.

VIII.) Matrix Spike Recoveries (MS):

MS samples were not analyzed in this fraction of the SDG. No action was taken.

IX.) Field Duplicates:

Two pairs of field duplicate samples (037SB009H1 / 037CB009H1 and 037SB014H2 / 037CB014H2) were analyzed in this SDG. The following Relative Percent Differences were calculable:

<u>Compound</u>	<u>037SB009H1</u>	<u>037CB009H1</u>	<u>RPD</u>
aluminum	6580 mg/kg	4940 mg/kg	28%
barium	15.9 mg/kg	12.7 mg/kg	22%
calcium	44800 mg/kg	76900 mg/kg	53%
chromium	11.4 mg/kg	7.6 mg/kg	40%
copper	8.4 mg/kg	7.9 mg/kg	6.1%
iron	6380 mg/kg	3910 mg/kg	48%
lead	12.0 mg/kg	11.1 mg/kg	7.8%
magnesium	985 mg/kg	1030 mg/kg	7.2%
manganese	70.0 mg/kg	72.4 mg/kg	2.4%
vanadium	13.6 mg/kg	7.5 mg/kg	58%
zinc	22.4 mg/kg	23.4 mg/kg	4.4%

<u>Compound</u>	<u>037SB014H2</u>	<u>037CB014H2</u>	<u>RPD</u>
aluminum	9350 mg/kg	10300 mg/kg	9.7%
arsenic	3.6 mg/kg	3.5 mg/kg	2.8%
barium	21.9 mg/kg	21.2 mg/kg	3.2%
calcium	22500 mg/kg	18600 mg/kg	19%
chromium	15.6 mg/kg	15.7 mg/kg	0.6%
copper	13.0 mg/kg	12.6 mg/kg	3.1%
iron	6740 mg/kg	7470 mg/kg	10%
lead	12.2 mg/kg	21.3 mg/kg	50%
magnesium	852 mg/kg	883 mg/kg	3.6%
manganese	53.8 mg/kg	55.6 mg/kg	3.3%
nickel	8.1 mg/kg	9.0 mg/kg	11%
sodium	491 mg/kg	381 mg/kg	25%
vanadium	17.6 mg/kg	18.3 mg/kg	3.9%
zinc	21.0 mg/kg	26.2 mg/kg	22%

Since all RPD's were within the 60% QC limit for soil samples, no action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was necessary.

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 qualifications.



# 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 L  
SUBZONES: L-E and L-I  
SERVICE ORDER NUMBER: 0239  
CONTRACTED LAB: Southwest Laboratory of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatiles Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide

SDG NUMBER: 29634

SAMPLES:

SUBZONE L-E:

Client	Lab		Volatile	Semi-	Pesticides/	Total	
Sample #	Sample #	Matrix	Organics	volatiles	PCB's	Metals	Cyanide
037SB002E1	29634.09	Soil	X	X	X	X	X
037SB003E1	29634.10	Soil	X	X	X	X	X
037SB004E1	29634.11	Soil	X	X	X	X	X
037SB004E1DL	29634.11DL	Soil			+		
037SB005E1	29634.12	Soil	X	X	X	X	X
037SB005E1DL	29634.12DL	Soil			+		
037SB006E1	29634.13	Soil	X	X	X	X	X
039SB006E1DL	29634.13DL	Soil			+		
037SB007E1	29634.14	Soil	X	X	X	X	X
037SB008E1	29634.01	Soil	X	X	X	X	X
037SB008E2	29634.02	Soil	X	X	X	X	X
037SB010E1	29634.03	Soil	X	X	X	X	X
039SB010E1DL	29634.03DL	Soil			+		
037SB010E2	29634.04	Soil	X	X	X	X	X
037SB010E2DL	29634.04DL	Soil			+		

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB011E1	29634.05	Soil	X	X	X	X	X
037SB011E1DL	29634.05DL	Soil			+		
037CB011E1	29634.06	Soil	X	X	X	X	X
037CB011E1DL	29634.06DL	Soil			+		
037SB011E2	29634.07	Soil	X	X	X	X	X
037SB011E2DL	29634.07DL	Soil			+		
037SB012E1	29634.08	Soil	X	X	X	X	X
037SB012E1DL	29634.08DL	Soil			+		
037DB008E1	29634.20	Water	X	X	X	X	X
037EB008E1	29634.21	Water	X	X	X	X	X
037TB007E1	29634.15	Soil	X				
037TB008E1	29634.22	Water	X				
037SB002E1MS	29634.09MS	Soil	+				
037SB002E1MSD	29634.09MSD	Soil	+				
037SB011E2MS	29634.07MS	Soil	+				
037SB011E2MSD	29634.07MSD	Soil	+				
037SB003E1MS	29634.10MS	Soil		+			
037SB003E1MSD	29634.10MSD	Soil		+			
037EB008E1MS	29634.21MS	Water		+	+		
037EB008E1MSD	29634.21MSD	Water		+	+		
037SB004E1MS	29634.11MS	Soil			+		
037SB004E1MSD	29634.11MSD	Soil			+		

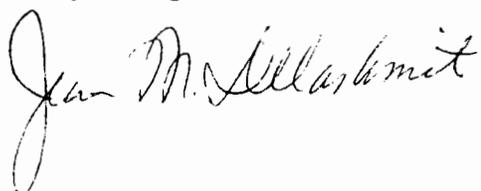
SUBZONE L-I:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB006I1	29634.16	Soil	X	X	X	X	X
037SB006I1DL	29634.16DL	Soil			+		
037SB008I1	29634.17	Soil	X	X	X	X	X
037SB008I1DL	29634.17DL	Soil			+		
037SB008I2	29634.18	Soil	X	X	X	X	X
037SB008I2DL	29634.18DL	Soil			+		
037TB008I2	29634.19	Soil	X				

C = FIELD DUPLICATE, DL = DILUTION, DB = DEIONIZED WATER BLANK,  
 EB = EQUIPMENT RINSATE BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE  
 DUPLICATE, TB = TRIP BLANK

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

Southwest Laboratories of Oklahoma, Inc. - 29634 CLP Organics and Inorganics

SAMPLES: 037SB002E1, 037SB003E1, 037SB004E1, 037SB004E1DL, 037SB005E1, 037SB005E1DL, 037SB006E1, 037SB006E1DL, 037SB007E1, 037SB008E1, 037SB008E2, 037SB010E1, 037SB010E1DL, 037SB010E2, 037SB010E2DL, 037SB011E1, 037SB011E1DL, 037CB011E1, 037CB011E1DL, 037SB011E2, 037SB011E2DL, 037SB012E1, 037SB012E1DL, 037SB006I1, 037SB006I1DL, 037SB008I1, 037SB008I1DL, 037SB008I2, 037SB008I2DL, 037DB008E1, 037EB008E1, 037TB007E1, 037TB008E1, 037TB008I2, 037SB002E1MS, 037SB002E1MSD, 037SB011E2MS, 037SB011E2MSD, 037SB003E1MS, 037SB003E1MSD, 037SB004E1MS, 037SB004E1MSD, 037EB008E1MS, 037EB008E1MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 6/9/97 on instrument I for the following compounds:

chloromethane	30.3%
bromomethane	82.6%
chloroethane	94.0%
2-hexanone	54.7%
2-chloroethyl vinyl ether	42.0%

Since these compounds were not detected in the associated samples, no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 5/21/97 on instrument R for the following compounds:

chloromethane	33.7%
bromomethane	42.5%

chloroethane	43.3%
acetone	60.3%
2-butanone	44.4%
4-methyl-2-pentanone	40.1%
2-hexanone	52.9%
1,1,2,2-tetrachloroethane	25.1%

The detection of acetone in associated sample 037SB005E1 was determined to be blank contamination. The other compounds were not detected in the associated samples. No action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 6/9/97 on instrument U for the following compounds:

chloromethane	30.6%
acetone	41.6%
2-butanone	42.1%
2-chloroethyl vinyl ether	35.9%

There were no positive results for these compounds in the associated samples. No action was taken.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/16/97 at 09:37 on instrument I for the following compounds:

acetone	58.8%
2-butanone	51.4%
vinyl acetate	25.5%
4-methyl-2-pentanone	42.7%
2-hexanone	49.7%

No action was required, since the associated samples were trip blanks.

The Relative Response Factor (RRF) was 0.047 for 2-chloroethyl vinyl ether in the standard analyzed on 6/17/97 at 09:25 on instrument I, which was below the 0.050 QC limit. The non-detect result for this compound in associated sample 037SB010E1 was rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/17/97 at 09:25 on instrument I for the following compounds:

methylene chloride	25.8%
acetone	51.1%
2-butanone	41.2%
vinyl acetate	47.3%
4-methyl-2-pentanone	32.6%
2-hexanone	38.7%
2-chloroethyl vinyl ether	50.5%

The result for 2-chloroethyl vinyl ether in the associated sample was previously rejected. The positive and non-detect results for the other compounds in associated sample 037SB010E1 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/13/97 at 12:42 on instrument R for the following compounds:

vinyl acetate	40.9%
dibromochloromethane	26.9%
trans-1,3-dichloropropene	25.3%
bromoform	37.2%
4-methyl-2-pentanone	45.2%
2-hexanone	48.6%
1,1,2,2-tetrachloroethane	26.7%

Since the associated samples were field blanks, no action was taken.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/16/97 at 11:38 on instrument R for the following compounds:

vinyl acetate	38.6%
2-butanone	27.8%
4-methyl-2-pentanone	33.4%
2-hexanone	35.6%

Since the associated samples were field blanks, no action was taken.

The Percent Difference (%D) exceeded the 25% QC limit for the standard analyzed on 6/11/97 at 10:21 on instrument U for 2-butanone (28.7%). The results for his compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB008E1, 037SB008E2, 037SB010E2, 037SB011E1, 037CB011E1, 037SB011E2 and 037SB012E1.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/12/97 at 08:34 on instrument U for the following compounds:

bromomethane	27.9%
acetone	25.4%
2-butanone	27.1%
2-chloroethyl vinyl ether	39.4%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB002E1, 037SB003E1, 037SB004E1, 037SB006E1 and 037SB007E1.

The Percent Difference (%D) exceeded the 25% QC limit for the standard analyzed on 6/14/97 at 09:29 on instrument U for 2-chloroethyl vinyl ether (47.5%). The results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB006I1, 037SB008I1 and 037SB008I2.

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride was detected at 2 ug/kg in method blank VBLK2. All positive results for this compound in the associated samples, less than 10X the blank amount, were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 037SB008E1, 037SB008E2, 037SB010E2, 037SB011E1, 037CB011E1, 037SB011E2 and 037SB012E1.

Methylene chloride was detected at 13 ug/kg in method blank VBLK2. All positive results for this compound in the associated samples, less than 10X the blank amount, was flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 037SB002E1, 037SB003E1, 037SB004E1, 037SB006E1 and 037SB007E1.

Acetone was detected at 2 ug/kg in method blank VBLK5. Since the associated sample was a trip blank, no action was required.

Methylene chloride was detected at 2 ug/L in method blank VBLK6. Since the associated samples were field blanks, no action was required.

Methylene chloride and acetone were detected at 2 ug/kg and 3 ug/kg, respectively, in method blank VBLK7. There were no positive results for these compounds in the associated samples less than 10X the blank results. No action was taken no action was taken.

Methylene chloride was detected at 5 ug/kg in method blank VBLK8. The positive result for this compound in associated sample 037SB005E1, 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.

##### Field Blanks:

Methylene chloride, acetone and chloroform were detected at 15 ug/L, 6 ug/L and 5 ug/L, respectively, in deionized water blank 037DB008E1. There were no positive results for chloroform in the associated samples. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. Results for acetone in all SDG samples less than 10X the blank result were flagged as undetected (U) with the CRQL being raised to the level of blank contamination.

Chloroform and methylene chloride were detected at 5 ug/L and 2 ug/L, respectively, in equipment rinsate blank 037EB008E1. There were no positive results for chloroform in the associated samples. No action was required. The results for methylene chloride in the associated samples were previously flagged based on the method blanks. No further action was required.

##### Trip Blanks:

Methylene chloride was detected at 7 ug/kg in trip blank 037TB007E1. The results for this compound in the associated samples were previously flagged based on the method blanks. No further action was required.

Methylene chloride and acetone were detected at 3 ug/L and 9 ug/L, respectively, in trip blank

037TB008E1. The results for these compounds in the associated samples were previously flagged based on the method and deionized water blanks. No further action was required.

Methylene chloride and acetone were detected at 9 ug/L and 10 ug/L, respectively, in trip blank 037TB008I1. The results for these compounds in the associated samples were previously flagged based on the method and deionized water blanks. No further action was required.

#### Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method, field or trip blanks. No action was required.

#### V.) Surrogate Recoveries:

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

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

The Relative Percent Difference (RPD) for 1,1-dichloroethene was 23% for spiked samples 037SB002E1MS and 037SB002E1MSD, which exceeded the 22% QC limit. The non-detect result for this compound in associated unspiked sample 037SB002E1 was flagged as estimated (UJ).

#### VII.) Laboratory Control Samples (LCS):

Eight LCS's were analyzed for this SDG. Several LCS Recoveries exceeded the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

#### VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples in this SDG. No action was required.

#### IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

#### X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The non-detect result for 2-chloroethyl vinyl ether in sample 037SB010E1 was rejected because of a low RRF in the continuing calibration. All other laboratory data were acceptable with qualifications.

*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. No action was required.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/17/97 at 17:59 on instrument P for the following compounds:

4-nitroaniline	28.6%
3,3'-dichlorobenzidine	42.1%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB008I2, 037SB008I1, 037SB006E1, 037SB005E1, 037SB008E1 and 037SB008E2.

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/19/97 at 13:16 on instrument P for the following compounds:

hexachlorocyclopentadiene	31.2%
4-nitroaniline	26.5%
3,3'-dichlorobenzidine	41.4%

The results for these compounds in associated sample 037SB012E1, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/20/97 at

10:21 on instrument P for the following compounds:

hexachlorocyclopentadiene	25.7%
4-nitroaniline	38.1%
3,3'-dichlorobenzidine	43.0%

The results for these compounds in associated samples 037SB007E1 and 037SB006I1, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 5 ug/L in method blank SBLK1. Since the only associated samples were field blanks, no action was necessary.

Field Blanks:

Bis(2-ethylhexyl)phthalate was detected at 2 ug/L in equipment rinsate blank 037EB008E1. There were no positive results for this compound in the associated samples less than 10X the blank amount. No action was required.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or field blanks. No action was required.

V.) Surrogate Recoveries:

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

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

The Relative Percent Differences (RPD's) for spiked samples 037EB008E1MS and 037EB008E1MSD exceeded their QC limits for the following compounds:

<u>Compound</u>	<u>RPD</u>	<u>QC Limit</u>
phenol	50%	42%
2-chlorophenol	64%	40%
4-chloro-3-methylphenol	46%	42%

Since the associated unspiked sample was an equipment rinsate blank, no action was required.

The Percent Recoveries (%R's) of 4-nitrophenol were below the 10-80% QC limits for spiked samples 037EB008E1MS (2%) and 037EB008E1MSD (3%). Since the %R's were less than 10%, the non-detect result for 4-nitrophenol was rejected in the associated unspiked equipment rinsate blank.

The Percent Recoveries (%R's) were below their QC limits for spiked samples 037SB003E1MS and 037SB003E1MSD for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
n-nitroso-di-n-propylamine	37%	34%	41-126%
1,2,4-trichlorobenzene	37%	35%	38-107%

The non-detect results for these compounds in associated unspiked sample 037SB003E1 were flagged as estimated (UJ).

VII.) Laboratory Control Samples (LCS):

Two LCS's were analyzed for this SDG. Several LCS Recoveries were outside the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

One set of field duplicate samples (037SB011E1 / 037CB011E1) was analyzed by the laboratory. There was no calculable Relative Percent Differences (RPD's) since all positive results for these two samples were below the CRQL. No action was required.

IX.) Internal Standards Performance (ISTD):

The Percent Recovery (%R) of perylene-d12 was 48.9% for sample 037SB003E1, which was below the 50-200% QC limit. All positive and non-detect results for the compounds quantitated on this ISTD were flagged as estimated (J) and (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The non-detect result for 4-nitrophenol in equipment rinsate blank 037EB008E1 was rejected because of very low recoveries (less than 10%) in the MS / MSD's. All other laboratory data were acceptable with qualifications.

*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:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) exceeded the 20% QC limit for the standards analyzed on 6/11/97 on the primary column for alpha-BHC (21.6%). Since only one %RSD exceeded the QC limit, and was less than 30%, no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 20% QC limit for the standards analyzed on 6/11/97 on the primary column for alpha-BHC (23.9%) and gamma-BHC (21.2%). Since only two %RSD's exceeded the QC limit, and were less than 30%, no action was required.

Continuing Calibration:

The Percent Difference (%D) exceeded the 25% QC limit for the standard analyzed on 6/20/97 at 20:31 on the primary column for 4,4'-DDT (36.1%). All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 037SB010E1, 037SB010E2, 037SB011E1, 037CB011E1, 037SB011E2, 037SB012E1, 037SB002E1, 037SB003E1, 037SB004E1, 037SB006I1, 037SB008I1 and 037SB008I2.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 6/20/97 at 21:01 on the primary column for the following compounds:

endosulfan I	26.0%
endosulfan sulfate	25.5%
endrin ketone	26.1%
endrin aldehyde	28.9%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 037SB010E1, 037SB010E2, 037SB011E1, 037CB011E1, 037SB011E2, 037SB012E1, 037SB002E1, 037SB003E1, 037SB004E1, 037SB006I1, 037SB008I1 and 037SB008I2.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 6/21/97 at 07:32 on the primary column for 4,4'-DDT (51.7%) and methoxychlor (33.7%). The positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 037SB004E1, 037SB006I1, 037SB008I1 and 037SB008I2.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 6/20/97 at 20:31 on the secondary column for 4,4'-DDT (41.1%) and methoxychlor (31.7%). The positive and non-detect results for these compounds in the associated samples were previously flagged as estimated. No further action was required.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 6/21/97 at 07:32 on the secondary column for 4,4'-DDT (51.0%) and methoxychlor (39.7%). The positive and non-detect results for these compounds in the associated samples were previously flagged as estimated. No further action was required.

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of decachlorobiphenyl on the secondary column for samples 037SB006E1, 037SB007E1 and 037SB005E1 were 215%, 182% and 173%, respectively, which exceeded the 30-150% QC limits. All positive results for these samples were flagged as estimated (J).

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

The Relative Percent Differences (RPD's) for methoxychlor (28%) exceeded the 20% QC limit for spiked samples 037SB004E1MS and 037SB004E1MSD. The non-detect result for this compound in associated unspiked sample 037SB004E1 was flagged as estimated (UJ).

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following samples:

<u>Sample</u>	<u>Compound</u>	<u>Column, %D</u>
037SB003E1	endrin	137%
	4,4'-DDT	75%
	endrin aldehyde	237%
037SB005E1	dieldrin	756% *
	endrin	107%
	4,4'-DDD	999% *
037SB006E1	4,4'-DDT	137%
	endrin	187%
	4,4'-DDT	244%
037SB007E1	dieldrin	196%
	endrin	171%
	4,4'-DDT	301%
037SB007E1	aroclor-1254	111%
037SB008E1	endrin	119%
	4,4'-DDD	148%

<u>Sample</u>	<u>Compound</u>	<u>Column, %D</u>
037SB008E2	4,4'-DDD	348%
	4,4'-DDT	194%
037SB010E1	heptachlor epoxide	583% *
	dieldrin	260%
	4,4'-DDD	158%
	4,4'-DDT	220%
037SB010E1DL	dieldrin	413%
	4,4'-DDE	100%
037SB010E2	delta-BHC	999% *
	heptachlor	128%
	endosulfan I	999% *
037SB010E2DL	heptachlor epoxide	127%
037SB011E1	heptachlor epoxide	143%
	endosulfan I	999% *
	dieldrin	189%
	4,4'-DDE	219%
	endosulfan II	85%
	4,4'-DDT	165%
037SB011E1DL	heptachlor epoxide	89%
037CB011E1	heptachlor epoxide	83%
	endosulfan I	999% *
	dieldrin	336% *
	4,4'-DDE	362% *
037CB011E1DL	endrin	81%
037SB006I1	gamma-chlordane	83%
037SB008I1	endrin ketone	271%
037SB008I2DL	4,4'-DDE	79%

The results for all compounds with %D's greater than 300% were rejected (R). When possible, dilution analysis results were transferred by the validator to the original data sets to replace rejected data points (marked with \*), even though the quantitation limits were greater. The results for the other compounds (greater than 70%, but less than 300%) were flagged as estimated (J).

#### VIII.) Field Duplicates:

One set of field duplicate samples was analyzed by the laboratory for this SDG. The following Relative Percent Differences (RPD's) were calculable:

<u>Compound</u>	<u>037SB011E1, ug/kg</u>	<u>037CB011E1, ug/kg</u>	<u>RPD</u>
heptachlor	83	57	59%
heptachlor epoxide	37	57	42%
endrin	190	150	24%
alpha chlordane	850	930	9.0%
gamma chlordane	1100	1200	8.7%
endosulfan II	10	11	10%
endrin aldehyde	5.8	4.5	25%

Since all of the RPD's were within the 60% QC limit for soil samples, no action was required.

IX.) Pesticide Cleanup Check:

Florasil Cartridge Check:

All criteria were met. No action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met. No action was necessary.

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

The concentrations of heptachlor epoxide, heptachlor, endosulfan I, endrin, alpha-chlordane and / or gamma-chlordane exceeded the standard calibration range in samples 037SB005E1, 037SB006E1, 037SB010E1, 037SB010E2, 037SB011E1, 037CB011E1, 037SB011E2, 037SB012E1 and 037SB008I2. The concentrations of the compounds in the original analyses were replaced by the validator with the associated diluted sample results with appropriate qualifiers.

XI.) Overall Assessment of Data/General:

The results for the compounds with column Percent Differences (%D's) exceeding 300% were rejected (R). After transfer of data from the dilution analyses to the primary data sets only two "Report A" data points required rejection. All other laboratory data were acceptable with qualification.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing Calibration criteria were met. 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#	Analyte	Max. Conc.	Action Level mg/kg
CCB4	antimony	2.90 ug/L	2.90
CCB1	arsenic	3.20 ug/L	3.20
037EB008E1	beryllium	0.27 ug/L	0.27
037DB008E1	nickel	0.87 ug/L	0.87

Blank Type/ID#	Analyte	Max. Conc.	Action Level mg/kg
037DB008E1	silver	1.20 ug/L	1.20
CCB2	sodium	88.7 ug/L	88.7
PBS	tin	1.64 mg/kg	8.20
PBS	cyanide	0.17 mg/kg	0.85

CCB = Continuing Calibration Blank, DB = Deionized Rinsate Blank,  
EB = Equipment Rinsate Blank, PBS = Preparation Blank (Soil)

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

Aluminum had a negative result with an absolute value greater than the IDL in the soil preparation blank. All associated sample results were greater than 5X the absolute value of the negative blank result (7.75 mg/kg). No action was required.

#### IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	7 ug/L
cadmium	2 ug/L
copper	2 ug/L
manganese	1 ug/L
selenium	4 ug/L
thallium	8 ug/L
vanadium	2 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

barium	-1 ug/L
chromium	-1 ug/L
copper	-7 ug/L
nickel	-5 ug/L
potassium	-200 ug/L
tin	-2 ug/L
zinc	-14 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration

comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed for this fraction of the SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike Analysis was not performed for this fraction of the SDG. No action was required.

IX.) Field Duplicates:

One set of field duplicate samples was analyzed by the laboratory in this SDG. The following Relative Percent Differences (RPD's) were calculable:

<u>Compound</u>	<u>037SB011E1, ug/kg</u>	<u>037CB011E1, ug/kg</u>	<u>RPD</u>
aluminum	4760	5530	15%
antimony	24.5	18.9	26%
arsenic	6.1	5.5	10%
barium	41.1	37.3	9.4%
calcium	19900	7840	87%
chromium	25.2	21.9	14%
copper	85.8	72.4	17%
iron	8710	6480	29%
lead	96.5	92.4	4.3%
magnesium	580	415	33%
manganese	49.4	47.1	4.8%
mercury	3.0	3.6	18%
vanadium	10	9.1	9.4%
zinc	217	220	1.4%

The RPD for calcium exceeded the 60% QC limit for soil samples. The calcium results for these two samples were flagged as estimated (J). All other RPD's were within the QC limit. No further action was required.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

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## DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe / Allen & Hoshall  
SITE NAME: Charleston Naval Base, Zone L  
SUBZONE: L-G  
SERVICE ORDER NUMBER: 0240  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRIX: Soil  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides/PCB's, Total Metals, Cyanide  
SDG NUMBER: 29676 (Level III)

SAMPLES:

SUBZONE L-G:

Client	Lab		Volatile	Semi-	Pesticides/	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>	<u>Metals</u>	<u>Cyanide</u>
037SB006G1	29676.01	Soil	X	X	X	X	X
037SB006G1DL	29676.01DL	Soil			+		
037SB006G2	29676.02	Soil	X	X	X	X	X
037SB007G1	29676.03	Soil	X	X	X	X	X
037SB007G2	29676.04	Soil	X	X	X	X	X
037SB098G1	29676.05	Soil	X	X	X	X	X
037SB008G1RE	29676.05RE	Soil	+				
037SB008G2	29676.06	Soil	X	X	X	X	X
037SB009G1	29676.07	Soil	X	X	X	X	X
037SB010G1	29676.08	Soil	X	X	X	X	X
037SB010G2	29676.09	Soil	X	X	X	X	X
037SB011G1	29676.10	Soil	X	X	X	X	X
037SB011G2	29676.11	Soil	X	X	X	X	X
037SB012G1	29676.12	Soil	X	X	X	X	X
037CB012G1	29676.13	Soil	X	X	X	X	X
037SB013G1	29676.14	Soil	X	X	X	X	X

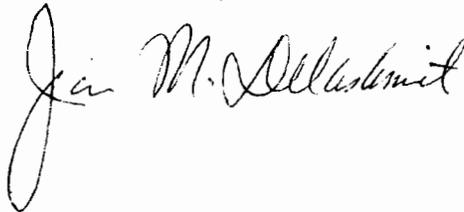
Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB013G1RE	29676.14RE	Soil	+				
037SB013G1DL	29676.14DL	Soil			+		
037SB014G1	29676.15	Soil	X	X	X	X	X
037SB014G1DL	29676.15DL	Soil			+		
037TB014G1	29676.16	Soil	X				
037SB008G2MS	29676.06MS	Soil	+				
037SB008G2MSD	29676.06MSD	Soil	+				
037SB014G1MS	29676.15MS	Soil	+				
037SB014G1MSD	29676.15MSD	Soil	+				
037SB012G1MS	29676.12MS	Soil		+			
037SB012G1MSD	29676.12MSD	Soil		+			
037CB012G1MS	29676.13MS	Soil			+		
037CB012G1MSD	29679.13MSD	Soil			+		

+ = Non-billable analysis

CB = FIELD DUPLICATE, DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = REANALYSIS, TB = TRIP BLANK

DATA REVIEWER(S): 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

Southwest Laboratories of Oklahoma, Inc. - 29676 CLP Organics and Inorganics

SAMPLES: 037SB006G1, 037SB006G1DL, 037SB006G2, 037SB007G1, 037SB007G2,  
037SB008G1, 037SB008G1RE, 037SB008G2, 037SB009G1, 037SB010G1,  
037SB010G2, 037SB011G1, 037SB011G2, 037SB012G1, 037CB012G1,  
037SB013G1, 037SB013G1RE, 037SB0013G1DL, 037SB014G1, 037TB014G1,  
037SB008G2MS, 037SB008G2MSD, 037SB014G1MS, 037SB014G1MSD,  
037SB012G1MS, 037SB012G1MSD, 037CB012G1MS, 037CB012G1MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 5/21/97 on instrument R:

chloromethane	33.7%
bromomethane	42.5%
chloroethane	43.3%
acetone	60.3%
2-butanone	44.4%
2-hexanone	52.9%
4-methyl-2-pentanone	40.1%

There were no detections of these compounds in the associated samples after blank qualifications. No action was taken.

##### Continuing Calibration:

The Percent Difference (%D) was 30.9% for chloroethane in the standard analyzed on 6/23/97 at 06:41, 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 associated samples were 037SB006G1, 037SB006G2, 037SB007G1, 037SB010G1, 037SB010G2, 037SB012G1 and 037SB013G1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 6/24/97 at 07:36 on instrument R:

chloroethane	27.0%
vinyl acetate	42.6%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB011G1, 037SB011G2, 037CB012G1 and 037SB014G1.

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride was detected at 5 ug/kg and 6 ug/kg, respectively, in soil method blanks VBLK1 and VBLK4. Since the trip blank was used for blank qualifications, no action was necessary.

Chloroform was detected at 1 ug/kg in soil method blank VBLK3. This compound was not detected in the associated samples. No action was required.

##### Trip Blank:

Acetone, methylene chloride and chloroform were detected at 25 ug/kg, 13 ug/kg and 1 ug/kg, respectively, in soil trip blank 037TB014G1. The detections of these compounds in all SDG samples, which were less than 10X the blank amounts, were flagged as undetected (U) with the detection limit being raised to the either the CRQL or the amount of contamination in the sample. Chloroform was not detected in any SDG sample. No further action was necessary.

##### Tentatively Identified Compounds (TIC):

TIC's were not detected in the method or trip blanks. No action was required.

#### V.) Surrogate Recoveries:

The Surrogate Recovery (%R) was 131% for toluene-d8 in sample 037SB008G1, which exceeded the 81-117% QC limits. Since there were no positive results for this sample, no action was taken.

#### VI.) Laboratory Control Samples (LCS):

Eight LCS's were analyzed by the laboratory. Nine LCS Recoveries were below the QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

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

The Relative Percent Difference (RPD) was 22% for chlorobenzene in spiked samples 037SB008G2MS and 037SB008G2MSD, which exceeded the 21% QC limit. The non-detect result for chlorobenzene in unspiked sample 037SB006G2 was flagged as estimated (UJ).

VIII.) Field Duplicates:

One pair of field duplicate samples (037SB012G1 / 037CB012G1) was analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was necessary.

IX.) Internal Standards Performance (ISTD):

The Percent Recoveries (%R's) of ISTD's bromochloromethane (48%), 1,4-difluorobenzene (40%) and chlorobenzene-d5 (36%) in sample 037SB008G1 were below the 50-200% QC limits. All results for this sample, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Recoveries (%R's) of ISTD's 1,4-difluorobenzene (48%) and chlorobenzene-d5 (42%) in sample 037SB013G1 were below the 50-200% QC limits. All results in this sample for the compounds quantitated on these two ISTD's, which consisted entirely of non-detects, were flagged as estimated (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was taken.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analyses of samples 037SB008G1 and 037SB013G1 were considered by the validator to be of preferable data quality as compared to the reanalyses because of better holding times, surrogate and internal standards performances. All laboratory data were acceptable with qualifications.

*SEMIVOLATILE ORGANICS*

I.) Holding Times:

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

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was necessary.

Continuing Calibration:

The Percent Differences (%D's) were 28.6% and 42.1%, respectively, for 4-nitroaniline and 3,3'-dichlorobenzidine in the standard analyzed on 6/17/97 at 17:59 on instrument P, which exceeded the 25% QC limit. The non-detect results for these two compounds in the associated samples were flagged as estimated (UJ). The associated samples were 037SB010G1, 037CB012G1, 037SB013G1 and 037SB014G1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 6/18/97 at 12:57 on instrument P:

n-nitroso-di-n-propylamine	26.0%
hexachlorocyclopentadiene	30.3%
4-nitroaniline	29.8%
3,3'-dichlorobenzidine	42.4%
benzo(k)fluoranthene	30.3%

The only samples associated with this calibration were the MS / MSD samples. No action was taken.

IV.) Blanks:

There were no target compounds detected in two soil method blanks. No action was taken.

Tentatively Identified Compounds (TIC):

4-Hydroxy-4-methyl-2-pentanone and trimethyltridecatrienenitrile were detected in the method blanks at sufficient concentrations to eliminate, by applying the 5X Action Limit Rule, the detections of these two TIC's in all SDG samples. Since data validation action based on blank TIC's was not required, no action was taken.

V.) Surrogate Recoveries:

The Surrogate Percent Recovery (%R) was 27% for 2-fluorobiphenyl in sample 037SB010G1, which was below the 30-115% QC limits. Since only one surrogate was outside the QC limits in the base/neutral fraction, no action was required.

VI.) Laboratory Control Samples (LCS):

Two LCS's were analyzed by the laboratory. All Recovery criteria were met. No action was taken.

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

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

VIII.) Field Duplicates:

One pair of field duplicate samples (037SB012G1 / 037CB012G1) was analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was required.

IX.) Internal Standards Performance:

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

X.) TCL Compound Identification:

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

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

All CRQL criteria were met. No action was taken.

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

All TIC criteria were met. No action was necessary.

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Difference (%D) was 32.8% for endrin on the secondary column for the PEM2Q standard analyzed on 6/23/97 at 13:27, which exceeded the 25% QC limit. The non-detect results for endrin in associated samples 037SB006G1, 037SB006G2 and 037SB007G1 were flagged as estimated (UJ).

The Percent Difference (%D) was 27.8% for endrin on the primary column for the PEM14J standard analyzed on 6/25/97 at 08:06, which exceeded the 25% QC limit. The non-detect result for this compound in associated sample 037SB009G1 was flagged as estimated (UJ).

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) were 23.9% and 21.2%, respectively, for alpha-BHC and gamma-BHC in the standards analyzed on the primary column on 6/29/97, which exceeded the 20% QC limit. Since only two compounds exceeded the QC limit with %RSD's less than 30%, no action was required.

Continuing Calibration:

The Percent Difference (%D) was 49.4% for 4,4'-DDE in the standard analyzed on the primary column on 6/21/97 at 13:57, which exceeded the 25% QC limit. The positive result for this compound in associated sample 037SB013G1DL was flagged as estimated (J).

The Percent Difference (%D) was 33.7% for 4,4'-DDE in the standard analyzed on the primary column on 6/23/97 at 13:02, which exceeded the 25% QC limit. The positive result for this compound in associated sample 037SB014G1DL was flagged as estimated (J).

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of decachlorobiphenyl (DCB) exceeded the 30-150% QC limits in the following samples:

Sample	%Recovery		%Recovery	
	<u>Column 1</u>	<u>Column 2</u>	<u>Column 1</u>	<u>Column 2</u>
037SB007G2			162	
037SB008G1			153	
037SB010G1				171
037SB010G2	34	0	138	26
037SB011G1			166	
037SB011G2			193	
037CB012G1			154	
037SB013G1			132	
037SB014G1			153	

All positive results for these samples were flagged as estimated (J). All non-detect results in sample 037SB010G2 were rejected (R) because of a 0% recovery. This sample was not reanalyzed.

VI.) Laboratory Control Sample (LCS):

Two LCS's were analyzed by the laboratory. All Recovery criteria were met. No action was taken.

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

The Percent Recoveries (%R's) for spiked samples 037CB012G1MS and 037CB012G1MSD were below the QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
4,4'-DDD	50	52	57-160%
4,4'-DDT	52		54-131%

The non-detect results for these two compounds in unspiked sample 037CB012G1 were flagged as estimated (UJ).

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following compounds and associated samples:

<u>Sample</u>	<u>Compound</u>	<u>%D</u>
037SB006G1	4,4'-DDD	475
037SB006G2	4,4'-DDE	75
	4,4'-DDT	100
037SB007G1	4,4'-DDD	207
	alpha-chlordane	267
037SB009G1	aroclor 1260	136
037SB013G1DL	4,4'-DDD	153

Since the %D for 4,4'-DDD in sample 037SB006G1 was greater than 300%, that result was rejected (R). The non-detect dilution analysis result for this compound was transferred by the validator to replace this rejected data point. The results for compounds with %D's below 300% were flagged as estimated (J).

IX.) Field Duplicates:

One pair of field duplicate samples (037SB012G1 / 037CB012G1) was analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was necessary.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil Check data were not present in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC cleanup data were not present in the data package. No action was taken.

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

The concentrations of 4,4'-DDE and 4,4'-DDT exceeded the standard calibration range in sample 037SB006G1. In addition, the concentrations of 4,4'-DDE exceeded the standard calibration range in samples 037SB013G1 and 037SB014G1. The concentrations of the compounds in the original analyses were replaced by the validator with the associated diluted sample results with appropriate qualifiers.

XII.) Overall Assessment of Data/General:

The 27 non-detect results in sample 037SB010G2 were rejected because of a very low (0%) TCX surrogate recovery. The detection of 4,4'-DDD in sample 037SB006G1 was rejected because the PIS Percent Differences exceeded 300%. This sample result was replaced by the validator with the corresponding dilution sample result with appropriate qualifiers. All other laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

III.) Blanks:

The following soil preparation blank (PBS) 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>5X Action Level</u>
PBS	aluminum	6.45 mg/kg	32.3 mg/kg
PBS	copper	0.78 mg/kg	3.90 mg/kg
PBS	lead	0.22 mg/kg	1.10 mg/kg
PBS	nickel	0.18 mg/kg	0.90 mg/kg
PBS	tin	1.74 mg/kg	8.70 mg/kg
PBS	zinc	2.66 mg/kg	13.3 mg/kg
PBS	cyanide	0.06 mg/kg	0.30 mg/kg

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

The following analytes had negative results with absolute values greater than the IDL in the soil preparation blank (PBS):

<u>Blank ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
PBS	cobalt	-0.08 mg/kg	0.40 mg/kg
PBS	silver	-0.17 mg/kg	0.85 mg/kg

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

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	6 ug/L
cadmium	2 ug/L
cobalt	1 ug/L

These analytes should not be present. Additionally, negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

copper	-7 ug/L
nickel	-5 ug/L
potassium	-172 ug/L
thallium	-5 ug/L
zinc	-12 ug/L

Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution Analysis criteria were met. No action was necessary.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this SDG. No action was necessary.

VIII.) Matrix Spike Recoveries (MS):

MS samples were not analyzed in this fraction of the SDG. No action was taken.

IX.) Field Duplicates:

One pair of field duplicate samples (037SB012G1 / 037CB012G1) was analyzed in this SDG. The

following Relative Percent Differences were calculable:

<u>Compound</u>	<u>037SB012G1</u>	<u>037CB012G1</u>	<u>RPD</u>
aluminum	2850 mg/kg	2670 mg/kg	6.5%
arsenic	3.1 mg/kg	3.1 mg/kg	0%
barium	9.7 mg/kg	7.8 mg/kg	22%
chromium	4.0 mg/kg	4.2 mg/kg	4.9%
iron	1840 mg/kg	1980 mg/kg	7.3%
lead	2.9 mg/kg	12.7 mg/kg	7.1%
magnesium	192 mg/kg	183 mg/kg	4.8%
manganese	5.5 mg/kg	5.6 mg/kg	1.8%
vanadium	5.4 mg/kg	5.4 mg/kg	0%

Since all RPD's were within the 60% QC limit for soil samples, no action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was necessary.

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 qualifications.

# 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 L  
SUBZONES: L-A, L-G and L-I  
SERVICE ORDER NUMBER: 0241  
CONTRACTED LAB: Southwest Laboratories, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 or SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Soil  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide

SDG NUMBER: 29659

### SAMPLES:

#### SUBZONE L-A:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB003A1	29659.11	Soil	X	X	X	X	X
037SB003A1RE	29659.11RE	Soil		+			
037SB004A1	29659.12	Soil	X	X	X	X	X
037SB004A1RE	29659.12RE	Soil		+			
037SB005A1	29659.13	Soil	X	X	X	X	X
037SB005A1RE	29659.13RE	Soil		+			
037TB005A1	29659.14	Soil	X				

#### SUBZONE L-G:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB002G1	29659.01	Soil	X	X	X	X	X
037SB002G2	29659.02	Soil	X	X	X	X	X
037CB002G2	29659.03	Soil	X	X	X	X	X

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB003G1	29659.04	Soil	X	X	X	X	X
037SB004G1	29659.05	Soil	X	X	X	X	X
037SB004G1DL	29659.05DL	Soil		+			
037SB004G2	29659.06	Soil	X	X	X	X	X
037TB004G2	29659.07	Soil	X				
037CB002G2MS	29659.03MS	Soil		+			
037CB002G2MSD	29659.03MSD	Soil		+			

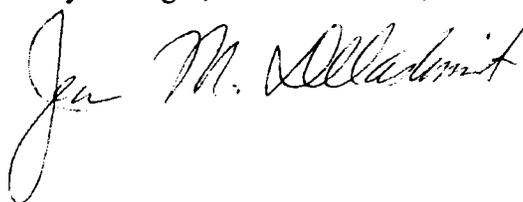
SUBZONE L-I:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037SB002I1	29659.08	Soil	X	X	X	X	X
037SB004I1	29659.09	Soil	X	X	X	X	X
037SB004I1RE	29659.09RE	Soil		+			
037TB004I1	29659.10	Soil	X				
037SB002I1MS	29659.08MS	Soil			+		
037SB002I1MSD	29659.08MSD	Soil			+		
037SB004I1MS	29659.09MS	Soil	+				
037SB004I1MSD	29659.09MSD	Soil	+				

C = FIELD DUPLICATE, DL = DILUTION, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = REANALYSIS, TB = TRIP BLANK

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

Southwest Laboratories of Oklahoma, Inc. - 29659 CLP Organics and Inorganics

SAMPLES: 037SB003A1, 037SB003A1RE, 037SB004A1, 037SB004A1RE, 037SB005A1, 037SB005A1RE, 037TB005A1, 037SB002G1, 037SB002G2, 037CB002G2, 037SB003G1, 037SB004G1, 037SB004G1DL, 037SB004G2, 037TB004G2, 037SB002I1, 037SB004I1, 037SB004I1RE, 037TB004I1, 037CB002G2MS, 037CB002G2MSD, 037SB002I1MS, 037SB002I1MSD, 037SB004I1MS, 037SB004I1MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 6/9/97 on instrument I for the following compounds:

chloromethane	30.3%
bromomethane	82.6%
chloroethane	94.0%
2-hexanone	54.7%
2-chloroethyl vinyl ether	42.0%

Since there were no positive results for these compounds in the associated samples, no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 5/21/97 on instrument R for the following compounds:

chloromethane	33.7%
bromomethane	42.5%
chloroethane	43.3%
acetone	60.3%

2-butanone	44.4%
4-methyl-2-pentanone	40.1%
2-hexanone	52.9%
1,1,2,2-tetrachloroethane	25.1%

There were no positive results for these compounds in the associated samples. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/18/97 at 09:27 on instrument I for the following compounds:

acetone	57.0%
2-butanone	52.0%
4-methyl-2-pentanone	44.5%
2-hexanone	52.5%

The results for these compounds in the associated samples, which consisted entirely of non-detects after blank qualifications, were flagged as estimated (UJ). The associated samples were 037SB002G2, 037CB002G2, 037SB003G1, 037SB004G2 and 037SB004I1.

The Percent Difference (%D) exceeded the 25% QC limit for the standard analyzed on 6/23/97 at 06:41 on instrument R for chloroethane (30.9%). The results for this compound in associated samples 037SB003A1, 037SB004A1 and 037SB005A1, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Methylene chloride and acetone were both detected at 3 ug/kg in method blank VBLK1. All positive results for these compounds in the associated samples, less than 10X the blank amount, were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 037SB002G2, 037CB002G2, 037SB003G1, 037SB004G2 and 037SB004I1.

Methylene chloride was detected at 5 ug/kg in method blank VBLK2. All positive results for this compound in the associated samples, less than 10X the blank amount, were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 037SB002G1, 037SB004G1 and 037SB002I1.

Trip Blanks:

Methylene chloride and acetone were detected at 10 ug/kg and 17 ug/kg in trip blank 037TB005A1. All positive results for these compounds in the associated samples, less than 10X the blank amount, were flagged as undetected (U) with the detection limits being raised to the level of contamination in each sample. The associated samples were 037SB003A1, 037SB004A1 and 037SB005A1.

Methylene chloride and acetone were detected at 3 ug/kg and 2 ug/kg, respectively, in trip

blank 037TB004I1. The results for these compounds in the associated samples were previously flagged based on the method blanks. No further action was required.

Methylene chloride and acetone were detected at 3 ug/kg and 3 ug/kg, respectively, in trip blank 037TB004G2. The results for these compounds in the associated samples were previously flagged based on the method blanks. No further action was required.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or trip blanks. No action was required.

V.) Surrogate Recoveries:

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

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

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

VII.) Laboratory Control Samples (LCS):

Three LCS's were analyzed for this SDG. Several LCS Recoveries exceeded the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples identified in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was action was taken.

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

All CRQL criteria were met. No action was taken no action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*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. No action was taken no action was required.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 6/16/97 at 09:33 on instrument V for the following compounds:

2,4-dinitrophenol	40.6%
4,6-dinitro-2-methylphenol	29.5%

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

IV.) Blanks:

Method Blanks:

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

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method blanks. No action was required.

V.) Surrogate Recoveries:

The Percent Recovery (%R) of terphenyl-d14 was 154% for sample 037SB004A1, which exceeded the 18-137% QC limits. Since only one surrogate exceeded the QC limits for this sample, no action was required.

The Percent Recovery (%R) of terphenyl-d14 was 152% for sample 037SB004I1, which exceeded the 18-137% QC limits. Since only one surrogate exceeded the QC limits for this sample, no action was required.

The Percent Recovery (%R) of terphenyl-d14 was 319% for sample 037SB004G1, which exceeded the 18-137% QC limits. Since only one surrogate exceeded the QC limits for this sample, no action was required.

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

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

VII.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was taken.

VIII.) Field Duplicates:

One set of field duplicate samples was analyzed by the laboratory in this SDG. The calculable Relative Percent Differences (RPD's) were:

<u>Compound</u>	<u>037SB002G2, ug/kg</u>	<u>037CB002G2, ug/kg</u>	<u>RPD</u>
phenanthrene	410	120	109%
fluoranthene	580	230	86%
pyrene	630	220	96%

The results for these three compounds in these two samples were flagged as estimated (J) because the RPD's exceeded the 60% QC limit for soil samples.

IX.) Internal Standards Performance (ISTD):

The Percent Recovery (%R) of perylene-d12 was 30.5% for sample 037SB003A1, which was below the 50-200% QC limits. All positive and non-detects results for the compounds quantitated on this ISTD were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) of perylene-d12 was 22.9% for sample 037SB004A1, which was below the 50-200% QC limits. All positive results for the compounds quantitated on this ISTD were flagged as estimated (J) and all non-detects were rejected (R) since the %R was less than 25%.

The Percent Recovery (%R) of perylene-d12 was 38.3% for sample 037SB005A1, which was below the 50-200% QC limits. All positive and non-detect results for the compounds quantitated on this ISTD were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of chrysene-d12 (31.3%) and perylene-d12 (41.9%) in sample 037SB004G1 were below the 50-200% QC limits. All positive and non-detect results for the compounds quantitated on these ISTD's were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of chrysene-d12 (42.7%) and perylene-d12 (14.5%) in sample

037SB004G1DL were below the 50-200% QC limits. All positive results for the compounds quantitated on these ISTD's were flagged as estimated (J).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

The concentrations of phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(k)fluoranthene and benzo(a)pyrene exceeded the standard calibration range in sample 037SB004G1. The concentrations of the compounds in the original analyses were replaced by the validator with the associated diluted sample results with appropriate qualifiers.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analyses of samples 037SB003A1, 037SB004A1, 037SB005A1 and 037SB004I1 were considered by the validator to be of preferable data quality to the reanalyses based on internal standards performances. Five non-detect results for sample 037SB004A1 were rejected because of a very low ISTD %R (less than 25%). All other laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Difference (%D) exceeded the 25% QC limit for the PEM analyzed on 6/23/97 at 14:54 on the primary column for endrin (44.8%). All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB003A1, 037SB004A1, 037SB005A1 and 037SB004I1.

The Percent Difference (%D) exceeded the 25% QC limit for the PEM analyzed on 6/23/97 at 14:54 on the secondary column for endrin (32.2%). All results for this compound in the associated samples were previously flagged. No further action was required.

The Percent Difference (%D) exceeded the 25% QC limit for the PEM analyzed on 7/02/97 at 07:34 on

the primary column for endrin (25.2%). All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037SB002G1, 037SB002G2, 037CB002G2, 037SB003G1, 037SB004G1, 037SB004G2 and 037SB002I1.

The Percent Difference (%D) exceeded the 25% QC limit for the PEM analyzed on 7/02/97 at 07:34 on the secondary column for endrin (34.0%). All results for this compound in the associated samples were previously flagged. No further action was required.

### III.) Calibration:

#### Initial Calibration:

The Percent Relative Standard Deviation (%RSD) exceeded the 20% QC limit for the standards analyzed on 7/01/97 on the primary column for alpha-BHC (23.3%). Since only one %RSD exceeded the QC limit, and was less than 30%, no action was required.

#### Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 6/23/97 at 15:24 on the primary column for the following compounds:

4,4'-DDD	28.3%
4,4'-DDT	52.7%
methoxychlor	49.7%

All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 037SB003A1, 037SB004A1, 037SB005A1 and 037SB004I1.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 6/24/97 at 02:27 on the secondary column for 4,4'-DDT (49.0%) and methoxychlor (31.4%). The associated sample results for these compounds were previously flagged as estimated. No further action was required.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 6/24/97 at 02:27 on the secondary column for the following compounds:

gamma-BHC	25.3%
heptachlor	31.7%
4,4'-DDD	63.5%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 037SB003A1, 037SB004A1, 037SB005A1 and 037SB004I1.

### IV.) Blanks:

#### Method Blanks:

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

V.) Surrogate Recoveries:

The Percent Recovery (%R) of decachlorobiphenyl on the primary column for sample 037SB003A1 was 151%, which exceeded the 30-150% QC limits. All positive results for this sample were flagged as estimated (J).

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

The Relative Percent Difference (RPD) exceeded the 20% QC limits for spiked samples 037SB002I1MS and 037SB002I1MSD for alpha-chlordane (47%). The non-detect result for this compound in unspiked sample 037SB002I1 was flagged as estimated (UJ).

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between column 1 and column 2 exceeded the 70% QC limit for the following samples:

<u>Sample</u>	<u>Compound</u>	<u>Col., %D</u>
037SB004G1	dieldrin	999%
	alpha-chlordane	163%
037SB002I1	4,4'-DDT	75%

The result for dieldrin in sample 037SB004G1 was rejected (R) because the %D exceeded 300%. The results for the other compounds were flagged as estimated (J).

VIII.) Field Duplicates:

One set of field duplicate samples was analyzed by the laboratory in this SDG. The calculable Relative Percent Differences (RPD's) were:

<u>Compound</u>	<u>037SB002G2, ug/kg</u>	<u>037CB002G2, ug/kg</u>	<u>RPD</u>
heptachlor epoxide	2.9	1.9	42%
4,4'-DDE	7.4	3.4	74%

Since the RPD for 4,4'-DDE exceeded the 60% QC limit for soil samples, the positive results for this compound in these two samples were flagged as estimated (J).

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria were met. No action was taken no action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met. No action was necessary.

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

All CRQL criteria were met. No action was taken.

XI.) Overall Assessment of Data/General:

The positive result for dieldrin in sample 037SB004G1 was rejected because the PIS %D exceeded 300%. All other laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing Calibration criteria were met. 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>Analyte</u>	<u>Max. Conc.</u>	<u>Action Level mg/kg</u>
CCB3	selenium	2.80 ug/L	2.80
PBS	tin	1.49 mg/kg	7.45

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

All sample results greater than the IDL but less than 5X the blank amounts (Action Level, mg/kg for soil 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 Type/ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
PBS	aluminum	-1.73 mg/kg	8.65 mg/kg
PBS	cobalt	-0.10 mg/kg	0.50 mg/kg
ICB	cyanide	-1.10 ug/L	1.10 mg/kg

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 associated non-detects were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	5 ug/L
barium	1 ug/L
cadmium	2 ug/L
cobalt	1 ug/L
lead	3 ug/L
manganese	1 ug/L
selenium	4 ug/L
silver	2 ug/L
vanadium	2 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

copper	-8 ug/L
nickel	-5 ug/L
potassium	-145 ug/L
zinc	-13 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

The Percent Difference for potassium was 12.5% for serial dilution sample 037SB002G1L, which exceeded the 10% QC limit. All positive results for this analyte in the soil samples in this SDG were flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed for this fraction of the SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike Analysis was not performed for this fraction of the SDG. No action was required.

IX.) Field Duplicates:

One set of field duplicate samples was analyzed by the laboratory in this SDG. The calculable Relative Percent Differences (RPD's) were:

<u>Compound</u>	<u>037SB002G2, ug/kg</u>	<u>037CB002G2, ug/kg</u>	<u>RPD</u>
aluminum	9510	8300	14%
arsenic	8.3	8.9	6.9%
barium	36.4	41.4	13%
calcium	3320	4120	22%
chromium	16.4	12.3	28%
copper	10.6	9.3	13%
iron	11600	9570	19%
lead	18.5	22.7	20%
magnesium	1100	967	13%
manganese	181	189	4.3%
potassium	567	468	19%
sodium	200	227	13%
vanadium	23.2	19.3	18%
zinc	36.9	38.5	4.2%

All RPD's were within the 60% QC limit for soil samples. No action was required.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# 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 L  
SUBZONE: L-F  
SERVICE ORDER NUMBER: 0246  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides/PCB's, Chlorinated Herbicides, Total Metals, Cyanide  
SDG NUMBER: 29888 (Level III)

### SAMPLES:

#### SUBZONE L-F:

Client	Lab		Volatile	Semi-	Pesticides/
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>
504SB001F1	29925.01	Soil	+	X	X
504SB001F1RE	29925.01RE	Soil	X		
504SB001F1DL	29925.01DL	Soil			+
504SB002F1	29888.01	Soil	X	X	X
504SB003F1	29925.02	Soil	X	X	X
504SB003F1DL	29925.02DL	Soil	+		
504SB004F1	29925.03	Soil	X	X	X
504SB005F1	29925.04	Soil	X	X	X
504SB005F2	29925.05	Soil	X	X	X
504SB006F1	29933.01	Soil	X	X	X
504SB006F2	29933.02	Soil	X	X	X
504CB006F2	29933.03	Soil	X	X	X
504SB007F1	29933.04	Soil	X	X	X
504SB007F2	29933.05	Soil	X	X	X
504SB008F1	29933.13	Soil	X	X	X
504SB008F1RE	29933.13RE	Soil	+		

Client	Lab		Volatile	Semi-	Pesticides/
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>
504SB008F2	29933.14	Soil	X	X	X
504SB009F1	29933.06	Soil	X	X	X
504SB009F1DL	29333.06DL	Soil			+
504SB009F2	29933.07	Soil	X	X	X
504SB010F1	29933.08	Soil	X	X	X
504SB010F2	29933.09	Soil	X	X	X
504SB011F1	29933.10	Soil	X	X	X
504SB011F2	29933.11	Soil	X	X	X
504TB002F1	29888.04	Soil	X		
504TB005F2	29925.06	Soil	X		
504TB006F2	29933.12	Soil	X		
504TW002F1	29888.05	Water	X		
504DW002F1	29888.02	Water	X	X	X
504EW002F1	29888.03	Water	X	X	X
504SB008F2MS	29933.14MS	Soil	+	+	
504SB008F2MSD	29933.14MSD	Soil	+	+	
504SB008F1MS	29933.13MS	Soil			+
504SB008F1MSD	29933.13MSD	Soil			+

Client	Lab		Chlorinated	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Herbicides</u>	<u>Metals</u>	<u>Cyanide</u>
504SB001F1	29925.01	Soil	X	X	X
504SB002F1	29888.01	Soil	X	X	X
504SB003F1	29925.02	Soil	X	X	X
504SB004F1	29925.03	Soil	X	X	X
504SB005F1	29925.04	Soil	X	X	X
504SB005F2	29925.05	Soil	X	X	X
504SB006F1	29933.01	Soil	X	X	X
504SB006F2	29933.02	Soil	X	X	X
504CB006F2	29933.03	Soil	X	X	X
504SB007F1	29933.04	Soil	X	X	X
504SB007F2	29933.05	Soil	X	X	X
504SB008F1	29933.13	Soil	X	X	X
504SB008F2	29933.14	Soil	X	X	X
504SB009F1	29933.06	Soil	X	X	X
504SB009F2	29933.07	Soil	X	X	X
504SB010F1	29933.08	Soil	X	X	X
504SB010F2	29933.09	Soil	X	X	X
504SB011F1	29933.10	Soil	X	X	X
504SB011F2	29933.11	Soil	X	X	X
504DW002F1	29888.02	Water	X	X	X
504EW002F1	29888.03	Water	X	X	X
504SB005F2MS	29925.05MS	Soil	+		
504SB005F2MSD	29925.05MSD	Soil	+		
504SB011F1MS	29933.10MS	Soil	+		
504SB011F1MSD	29933.10MSD	Soil	+		

+ = Non-billable analysis

CB = FIELD DUPLICATE, DW = DEIONIZED WATER BLANK, DL = DILUTION,  
EW = EQUIPMENT RINSATE BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE  
DUPLICATE, RE = REANALYSIS, T = TRIP BLANK

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Jean M. Delashmit". The signature is written in a cursive style with a large initial "J" and "M".

## 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, Inc. - 29888 CLP Organics and Inorganics

SAMPLES: 504SB001F1, 504SB001F1RE, 504SB001F1DL, 504SB002F1, 504SB003F1, 504SB003F1DL, 504SB004F1, 504SB005F1, 504SB005F2, 504SB006F1, 504SB006F2, 504SB007F1, 504SB007F2, 504SB008F1, 504SB008F1RE, 504SB008F2, 504SB009F1, 504SB009F1DL, 504SB009F2, 504SB010F1, 504SB010F2, 504SB011F1, 504SB011F2, 504TB002F1, 504TB005F2, 504TB006F2, 504STW002F1, 504DW002F1, 504EW002F1, 504SB008F2MS, 504SB008F2MSD, 504SB008F1MS, 504SB008F1MSD, 504SB005F2MS, 504SB005F2MSD, 504SB011F1MS, 504SB011F1MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 5/21/97 on instrument R:

chloromethane	33.7%
bromomethane	42.5%
chloroethane	43.3%
acetone	60.3%
2-butanone	44.4%
2-hexanone	52.9%
4-methyl-2-pentanone	40.1%

The detections of acetone in samples 504SB003F1DL, 504SB005F2, 504SB007F2, 504SB008F1 and 504SB010F2 were flagged as estimated (J). There were no other detections of these compounds in the associated samples after blank qualifications. No further action was taken.

Continuing Calibration:

The Relative Response Factor (RRF) was 0.036 for 2-chloroethyl vinyl ether in the standard analyzed on

7/9/97 at 09:44, which was below the 0.050 QC limit. The non-detect results for this compound in the associated samples were rejected (R). The associated samples were 504SB002F1, 504SB003F1, 504SB004F1, 504SB006F1, 504SB006F2 and 504CB006F2.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/9/97 at 09:44 on instrument R:

1,2-dichloroethane	27.8%
vinyl acetate	39.7%
trans-1,3-dichloropropene	29.5%
2-chloroethyl vinyl ether	79.8%

The non-detect results for 2-chloroethyl vinyl ether were previously rejected because of a low RRF in this calibration. All results for the three other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB002F1, 504SB003F1, 504SB004F1, 504SB006F1, 504SB006F2 and 504CB006F2.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/10/97 at 12:34 on instrument R:

chloromethane	31.2%
chloroethane	29.3%
2-butanone	28.8%
2-chloroethyl vinyl ether	67.4%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB005F1, 504SB005F2, 504SB007F2, 504SB008F1, 504SB009F1, 504SB009F2 and 504SB010F2.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/11/97 at 14:05 on instrument R:

chloromethane	27.1%
2-chloroethyl vinyl ether	56.2%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB001F1RE, 504SB008F2 and 504SB011F1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/14/97 at 14:40 on instrument R:

chloromethane	27.8%
chloroethane	31.1%
acetone	27.3%
2-butanone	28.9%
vinyl acetate	32.9%
4-methyl-2-pentanone	27.9%
2-chloroethyl vinyl ether	33.1%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB007F1, 504SB010F1 and 504SB011F2.

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride, acetone and chloroform were detected at 6 ug/kg, 6 ug/kg and 2 ug/kg, respectively, in soil method blanks VBLK2. Since the trip blank was used for blank qualifications of these compounds, no action was necessary.

Chloroform was detected at 2 ug/kg each in soil method blanks VBLK3 and VBLK4. Since the trip blanks were used for blank qualifications of this compound, no action was required.

Methylene chloride, chloroform and trichloroethene were detected at 5 ug/kg, 2 ug/kg and 1 ug/kg, respectively, in soil method blanks VBLK5. The detections of trichloroethene in associated samples 504SB007F1, 504SB010F1 and 504SB011F2, which were less than 5X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL. The trip blank was used for blank qualifications of methylene chloride and chloroform. No further action was necessary.

##### Field Blanks:

Chloroform was detected at 6 ug/L and 7 ug/L, respectively, in deionized water blank 504DW002F1 and equipment rinsate blank 504EW002F1. Since the trip blanks were used for blank qualifications of this compound, no action was required.

##### Trip Blanks:

Acetone, methylene chloride and chloroform were detected at 7 ug/kg, 10 ug/kg and 2 ug/kg, respectively, in soil trip blank 504TB002F1. The detections of acetone and methylene chloride in sample 504SB002F1, which were less than 10X the blank amounts, were flagged as undetected (U) with the detection limit being raised to the amount of contamination in the sample. Chloroform was not detected in this sample. No further action was taken.

Acetone, methylene chloride and chloroform were detected at 12 ug/kg, 14 ug/kg and 2 ug/kg, respectively, in soil trip blank 504TB005F2. The detections of acetone and methylene chloride in the associated samples, which were less than 10X the blank amounts, and chloroform which were less than 5X the blank amount, were flagged as undetected (U) with the detection limit being raised to the amount of contamination in the sample. The associated samples were 504SB001F1RE, 504SB003F1, 504SB004F1, 504SB005F1 and 504SB005F2.

Acetone, methylene chloride and chloroform were detected at 12 ug/kg, 14 ug/kg and 2 ug/kg, respectively, in soil trip blank 504TB006F2. The detections of acetone and methylene chloride in the associated samples, which were less than 10X the blank amounts, and chloroform which were less than 5X the blank amount, were flagged as undetected (U) with the detection limit being raised to the amount of contamination in the sample. The associated samples were 504SB006F1, 504SB006F2, 504CB006F2, 504SB007F1, 504SB007F2, 504SB008F1, 504SB008F2, 504SB009F1, 504SB009F2, 504SB010F1, 504SB010F2, 504SB011F1 and 504SB011F2.

Tentatively Identified Compounds (TIC):

Ether was detected in trip blank 504TB006F2 at a sufficient concentration to eliminate, by applying the 5X Action Limit Rule, its detections in associated samples 504SB007F2, 504SB008F1, 504SB009F1, 504SB009F2 and 504SB010F2. Since data validation action based on blank TIC's was not required, no action was taken.

V.) Surrogate Recoveries:

The Surrogate Recovery (%R) was 52% for bromofluorobenzene in sample 504SB001F1RE, which was below the 74-121% QC limits. All positive and non-detect results for this sample were flagged as estimated (J) and (UJ).

VI.) Laboratory Control Samples (LCS):

Ten LCS's were analyzed by the laboratory. Four LCS Recoveries were outside the QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

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

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

VIII.) Field Duplicates:

One pair of field duplicate samples (504SB006F2 / 504CB006F2) was analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

The concentration of acetone exceeded the standard calibration range in sample 504SB003F1. The concentration of acetone in the original analysis was replaced by the validator with the associated diluted sample result with appropriate qualifiers.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

#### XIV.) Overall Assessment of Data/General:

The original analysis of sample 504SB008F1 was considered by the validator to be of preferable data quality as compared to the reanalysis because of its better holding time and surrogate recoveries. The reanalysis of sample 504SB001F1 was considered by the validator to be of preferable data quality as compared to the original analysis because of improved surrogate and internal standards recoveries.

The non-detect results for 2-chloroethyl vinyl ether were rejected in six samples because of low RRF's in the associated continuing calibration. All other laboratory data were acceptable with qualifications.

#### *SEMIVOLATILE ORGANICS*

##### I.) Holding Times:

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

##### II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

##### III.) Calibration:

###### Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 48.0% for 4-chloroaniline in the standards analyzed on 7/17/97 on instrument M, which exceeded the 30% QC limit. There were no detections of this compound in the associated samples. No action was required.

The Percent Relative Standard Deviation (%RSD) was 58.9% for 4-chloroaniline in the standards analyzed on 7/14/97 on instrument S, which exceeded the 30% QC limit. There were no detections of this compound in the associated samples. No action was required.

###### Continuing Calibration:

The Percent Difference (%D) was 34.4% for benzyl alcohol in the standard analyzed on 7/14/97 at 10:17 on instrument P, which exceeded the 25% QC limit. The non-detect results for this compound in the associated samples were flagged as estimated (UJ). The associated samples were 504SB006F2, 504CB006F2, 504SB007F2, 504SB009F2 and 504SB010F1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/18/97 at 20:13 on instrument M:

2,2'-oxybis(1-chloropropane)	29.7%
4-chloroaniline	37.5%
2,4-dinitrophenol	28.2%

The non-detect results for these compounds in associated samples 504SB007F1 and 504SB009F1 were

flagged as estimated (UJ).

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/18/97 at 14:32 on instrument T:

hexachlorocyclopentadiene	42.9%
2,4-dinitrophenol	35.9%
4,6-dinitro-2-methylphenol	26.5%
indeno(1,2,3-cd)pyrene	43.8%
dibenz(a,h)anthracene	30.8%
benzo(g,h,i)perylene	55.8%

Since the only associated samples were field blanks, no action was required.

#### IV.) Blanks:

##### Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 3 ug/L in water method blank SBLK4. Since the only associated samples were field blanks, no action was required.

##### Field Blanks:

Bis(2-ethylhexyl)phthalate was detected at 2 ug/L each in deionized water blank 504DW002F1 and equipment rinsate blank 504EW002F1. Since all detections of this compound in the associated samples were greater than 10X the blank amounts, no action was taken.

#### Tentatively Identified Compounds (TIC):

4-Hydroxy-4-methyl-2-pentanone, 3-pentene-2-ol, ethyl benzenediol, dimethylethyl furan and methylbicyclo[ ]octane were detected in the method blanks at sufficient concentrations to eliminate, by applying the 5X Action Limit Rule, the detections of these TIC's in all associated SDG samples. Since data validation action based on blank TIC's was not required, no action was taken.

#### V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of 2-fluorophenol were 122% and 137%, respectively, in samples 504SB001F1 and 504SB005F1, which exceeded the 25-121% QC limits. Since only one surrogate was outside the QC limits in the acid fraction in each sample, no action was required.

#### VI.) Laboratory Control Samples (LCS):

Six LCS's were analyzed by the laboratory. Nine LCS recoveries were outside the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

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

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

VIII.) Field Duplicates:

One pair of field duplicate samples (504SB006F2 / 504CB006F2) was analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was necessary.

IX.) Internal Standards Performance:

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

X.) TCL Compound Identification:

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

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

All CRQL criteria were met. No action was taken.

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

All TIC criteria were met. No action was necessary.

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) were 40.0% and 26.0% for endrin, respectively, on the primary and secondary columns for the PEM15C standard analyzed on 7/22/97 at 17:03, which exceeded the 25% QC limit. The non-detect result for endrin in sample 504SB009F2 as flagged as estimated (UJ).

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 25.7% for heptachlor epoxide in the standards analyzed on the primary column on 7/15/97, which exceeded the 20% QC limit. Since only one

compound exceeded the QC limit with a %RSD less than 30%, no action was required.

The Percent Relative Standard Deviation (%RSD) was 22.1% for alpha-BHC in the standards analyzed on the primary column on 7/21/97 on instrument HP02A, which exceeded the 20% QC limit. Since only one compound exceeded the QC limit with a %RSD less than 30%, no action was required.

The Percent Relative Standard Deviation (%RSD) was 56.0% for 4,4-DDD in the standards analyzed on the primary column on 7/21/97 on instrument HP04A, which exceeded the 20% QC limit. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504CB006F2, 504SB007F1, 504SB007F2, 504SB008F1, 504SB009F1, 504SB010F1, 504SB010F2, 504SB011F1 and 504SB011F2.

Continuing Calibration:

All Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

Method Blanks:

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

Field Blanks:

There were no positive detections in the deionized water and equipment rinsate blanks. No action was necessary.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of decachlorobiphenyl (DCB) were outside the 30-150% QC limits in the following samples:

Sample	%Recovery	
	Column 1	Column 2
504SB001F1	0	1
504SB002F1		158
504SB003F1	0	0
504SB004F1		173
504SB007F1	151	207
504SB011F1		204

All positive results for samples 504SB001F1 and 504SB003F1 were flagged as estimated (J) and all non-detects were rejected (R). All positive results for the other four samples were flagged as estimated (J).

VI.) Laboratory Control Sample (LCS):

Six LCS's were analyzed by the laboratory. Eleven LCS recoveries were below the QC limits. Data validation based on LCS criteria was not required. No action was taken.

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

The Percent Recoveries (%R's) for spiked sample 504SB08F1MS exceeded the QC limits for the following compounds:

<u>Compound</u>	<u>MS. %R</u>	<u>QC Limits</u>
delta-BHC	129	23-104%
aldrin	120	22-119%
heptachlor epoxide	127	20-119%
4,4'-DDE	157	50-117%
dieldrin	143	20-123%
endrin	162	25-138%
endosulfan sulfate	136	22-126%
4,4'-DDT	174	54-131%
methoxychlor	166	26-140%
endrin ketone	148	23-147%

The positive result for 4,4'-DDE in unspiked sample 504SB008F1 was flagged as estimated (J). The other compounds were not detected in this sample. No further action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following compounds and associated samples:

<u>Sample</u>	<u>Compound</u>	<u>%D</u>
504SB001F1	endrin ketone	1540
504SB003F1	4,4'-DDD	107
504SB004F1	endrin ketone	82
	gamma-chlordane	105
504SB007F1	4,4'-DDD	90
	methoxychlor	72
504SB009F1	gamma-chlordane	119
504SB009F2	gamma-chlordane	174

Since the %D for endrin ketone in sample 504SB001F1 was greater than 300%, that result was rejected (R). The results for compounds with %D's below 300% were flagged as estimated (J).

IX.) Field Duplicates:

One pair of field duplicate samples (504SB006F2 / 504CB006F2) was analyzed in this SDG. The Relative Percent Differences (RPD's) for 4,4'-DDE (147%) and 4,4'-DDT (141%) exceeded the 60% QC limit for soil samples. The detections of these two compounds in the two samples were flagged as estimated (J).

X.) Pesticide Cleanup Check:

Florisol Cartridge Check:

Florisol Check data were not present in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC cleanup data were not present in the data package. No action was taken.

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

The concentrations of 4,4'-DDE exceeded the standard calibration range in samples 504SB001F1 and 504SB009F1. The concentrations of this compound in the original analyses of both samples were replaced by the validator with the associated diluted sample results with appropriate qualifiers.

XII.) Overall Assessment of Data/General:

The 49 non-detect results in samples 504SB001F1 and 504SB003F1 were rejected because of very low (less than 10%) DCB surrogate recoveries. The detection of endrin ketone in sample 504SB001F1 was rejected because the PIS Percent Difference exceeded 300%. All other laboratory data were acceptable with qualifications.

*CHLORINATED HERBICIDES*

I.) Holding Times:

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

II.) Instrument Performance:

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

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) were 64.2% for MCPPE on the primary column and 29.2% and 24.1%, respectively, for MCPPE and MCPA on the secondary column in the standards analyzed on 7/10/97, which exceeded the 20% QC limit. The non-detect results for MCPPE and MCPA in the associated samples were flagged as estimated (UJ). The associated samples were 504SB001F1, 504SB002F1, 504SB003F1, 504SB004F1, 504SB005F1 and 504SB005F2.

The Percent Relative Standard Deviation (%RSD) was 22.9% for MCPPE on the primary column in the standards analyzed on 7/17/97, which exceeded the 20% QC limit. Since only one compound exceeded the 20% QC limit with a %RSD less than 30%, no action was required.

The Percent Relative Standard Deviation (%RSD) was 23.0% for dalapon on the primary column in the standards analyzed on 7/24/97, which exceeded the 20% QC limit. Since only one compound exceeded the 20% QC limit with a %RSD less than 30%, no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 7/24/97 at 08:49 on the primary and secondary columns for the following compounds:

<u>Compound</u>	<u>Primary Column</u>	<u>Secondary Column</u>
dicamba	25.5%	32.0%
MCPP		33.1%
dichloroprop	25.9%	27.4%
2,4-D		26.6%
2,4,5-TP	25.5%	

The non-detect results for these compounds in associated samples 504SB006F1, 504SB006F2, 504CB006F2 and 504SB011F1 were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

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

Field Blanks:

There were no detections in the deionized water or equipment rinsate blanks. No action was taken.

V.) Surrogate Recoveries:

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

VI.) Laboratory Control Sample (LCS):

Six LCS's were analyzed by the laboratory. Sixteen LCS recoveries were outside the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

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

The Percent Recoveries (%R's) for spiked samples 504SB005F2MS and 504SB005F2MSD were below the QC limits for the following compound:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
dalapon	23	19	24-126%

The non-detect result for dalapon in unspiked sample 504SB005F2 was flagged as estimated (UJ).

The Percent Recoveries (%R's) for spiked samples 504SB011F1MS and 504SB011F1MSD were below the QC limits for the following compounds:

<u>Compound</u>	<u>MS. %R</u>	<u>MSD. %R</u>	<u>QC Limits</u>
2,4-D	21	36	43-121%
2,4,5-T	24	36	45-113%
dalapon	23		24-126%
dicamba	12	21	41-152%
dichloroprop	33		48-126%
MCCP	34		40-114%

The Relative Percent Differences (RPDs) for spiked samples 504SB011F1MS and 504SB011F1MSD exceeded the QC limits for the following compounds:

<u>Compound</u>	<u>RPD</u>	<u>QC Limits</u>
2,4-D	50	49%
dalapon	106	82%
dicamba	59	48%
dichloroprop	48	46%
MCCP	49	29%

The non-detect results for these compounds in unspiked sample 504SB011F1 were previously qualified based on the MS / MSD results. No further action was taken.

VIII.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

X.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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 Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>5X Action Level</u>
ERB	aluminum	14.7 ug/L	14.7 mg/kg
PBW	arsenic	2.82 ug/L	2.82 mg/kg
DWB	beryllium	0.56 ug/L	0.56 mg/kg
DWB	calcium	237 ug/L	237 mg/kg
ERB	cobalt	1.40 ug/L	1.40 mg/kg
ERB	lead	1.90 ug/L	1.90 mg/kg
DWB	mercury	0.16 ug/L	0.16 mg/kg
CCB4	potassium	105 ug/L	105 mg/kg
CCB2	selenium	3.50 ug/L	3.50 mg/kg
DWB	sodium	67.9 ug/L	67.9 mg/kg
PBS	tin	1.45 mg/kg	7.25 mg/kg
PBS	cyanide	0.08 mg/kg	0.40 mg/kg

CCB = Continuing Calibration Blank, DWB = Deionized Water Blank,  
 ERB = Equipment Rinsate Blank, PBS = Preparation Blank (Soil),  
 PBW = Preparation Blank (Water)

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

The following analytes had negative results with absolute values greater than the IDL in the continuing calibration blank (CCB):

<u>Blank ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
CCB3	iron	-73.9 ug/L	73.9 mg/kg
CCB3	cyanide	-2.90 ug/L	2.90 mg/kg

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

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	8 ug/L
cobalt	1 ug/L
thallium	13 ug/L

These analytes should not be present. Additionally, negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

barium	-2 ug/L
chromium	-1 ug/L
manganese	-3 ug/L
potassium	-143 ug/L
selenium	-3 ug/L

Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution Analysis criteria were met. No action was necessary.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was necessary.

VIII.) Matrix Spike Recoveries (MS):

MS samples were not analyzed in this fraction of the SDG. No action was taken.

IX.) Field Duplicates:

One set of field duplicate samples was analyzed in this SDG. The calculable Relative Percent Differences were:

<u>Compound</u>	<u>504SB006F2</u>	<u>504CB006F2</u>	<u>RPD</u>
aluminum	22800 mg/kg	23600 mg/kg	3.4%
arsenic	25.8 mg/kg	28.0 mg/kg	8.2%
barium	40.6 mg/kg	41.1 mg/kg	1.2%
beryllium	1.2 mg/kg	1.2 mg/kg	0%
calcium	5310 mg/kg	5570 mg/kg	4.8%
chromium	34.8 mg/kg	34.4 mg/kg	1.2%
cobalt	7.1 mg/kg	6.8 mg/kg	4.3%
copper	28.8 mg/kg	25.3 mg/kg	13%
iron	30200 mg/kg	34600 mg/kg	14%
lead	52.4 mg/kg	47.9 mg/kg	9.0%
magnesium	3110 mg/kg	3140 mg/kg	1.0%
manganese	513 mg/kg	517 mg/kg	0.8%
mercury	0.42 mg/kg	0.34 mg/kg	21%
nickel	12.1 mg/kg	12.3 mg/kg	1.6%

<u>Compound</u>	<u>504SB006F2</u>	<u>504CB006F2</u>	<u>RPD</u>
potassium	1380 mg/kg	1440 mg/kg	4.3%
thallium	1.9 mg/kg	2.4mg/kg	23%
vanadium	58.1 mg/kg	62.0 mg/kg	6.5%
zinc	114 mg/kg	115 mg/kg	0.9%

Since all RPD's were within the 60% QC limit for soil samples, no action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was necessary.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.



# 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 L  
SUBZONE: L-E  
SERVICE ORDER NUMBER: 0247  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 or SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
  
SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides / PCB's, Chlorinated Herbicides, Total Metals, Cyanide  
  
SDG NUMBER: 29996

### SAMPLES:

#### SUBZONE L-E:

Client	Lab		Volatile	Semi-	Pesticides/
Sample #	Sample #	Matrix	Organics	volatiles	PCB's
504SB001E1	29996.04	Soil	X	X	X
504CB001E1	2996.05	Soil	X	X	X
504SB002E1	29996.06	Soil	X	X	X
504SB002E1RE	29996.06RE	Soil		+	
504SB002E2	29996.07	Soil	X	X	X
504SB002E2RE	29996.07RE	Soil		+	
504SB002E2DL	29996.07DL	Soil			+
504SB003E1	29996.08	Soil	X	X	X
504SB003E1RE	29996.08RE	Soil		+	
504SB003E2	29996.09	Soil	X	X	X
504SB003E2RE	29996.09RE	Soil		+	
504SB004E1	30048.01	Soil	X	X	X
504SB004E2	30048.02	Soil	X	X	X
504SB005E1	30048.03	Soil	X	X	X
504SB005E2	30048.04	Soil	X	X	X

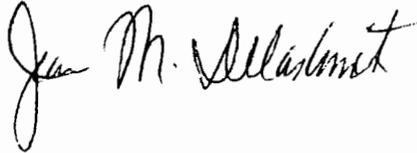
Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's
504CB005E2	30048.05	Soil	X	X	X
504SB006E1	30048.06	Soil	X	X	X
504CB006E1	30048.07	Soil	X	X	X
504SB006E2	30048.08	Soil	X	X	X
504SB007E1	30048.09	Soil	X	X	X
504SB007E2	30048.10	Soil	X	X	X
504DB001E1	29996.01	Water	X	X	X
504EB001E1	29996.02	Water	X	X	X
504TB001E1	29996.10	Soil	X		
504TB002E1	29996.03	Water	X		
504TB005E2	30048.11	Soil	X		
504DB001E1MS	29996.01MS	Water	+	+	
504DB001E1MSD	29996.01MSD	Water	+	+	
504EB001E1MS	29996.02MS	Water			+
504EB001E1MSD	29996.02MSD	Water			+
504SB002E2MS	29996.07MS	Soil	+		
504SB002E2MSD	29996.07MSD	Soil	+		
504SB004E1MS	30048.01MS	Soil			+
504SB004E1MSD	30048.01MSD	Soil			+
504SB007E2MS	30048.10MS	Soil		+	
504SB007E2MSD	30048.10MSD	Soil		+	

Client Sample #	Lab Sample #	Matrix	Herbicides	Total Metals	Cyanide
504SB001E1	29996.04	Soil	X	X	X
504CB001E1	2996.05	Soil	X	X	X
504SB002E1	29996.06	Soil	X	X	X
504SB002E2	29996.07	Soil	X	X	X
504SB003E1	29996.08	Soil	X	X	X
504SB003E2	29996.09	Soil	X	X	X
504SB004E1	30048.01	Soil	X	X	X
504SB004E2	30048.02	Soil	X	X	X
504SB005E1	30048.03	Soil	X	X	X
504SB005E2	30048.04	Soil	X	X	X
504CB005E2	30048.05	Soil	X	X	X
504SB006E1	30048.06	Soil	X	X	X
504CB006E1	30048.07	Soil	X	X	X
504SB006E2	30048.08	Soil	X	X	X
504SB007E1	30048.09	Soil	X	X	X
504SB007E2	30048.10	Soil	X	X	X
504DB001E1	29996.01	Water	X	X	X
504EB001E1	29996.02	Water	X	X	X
504EB001E1MS	29996.02MS	Water	+		
504EB001E1MSD	29996.02MSD	Water	+		
504SB003E2MS	29996.09MS	Soil	+		
504SB003E2MSD	29996.09MSD	Soil	+		
504SB007E2MS	30048.10MS	Soil	+		
504SB007E2MSD	30048.10MSD	Soil	+		

C = FIELD DUPLICATE, DB = DEIONIZED WATER BLANK, DL = DILUTION,  
EB = EQUIPMENT RINSATE BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE  
DUPLICATE, RE = REANALYSIS, T = TRIP BLANK

DATA REVIEWER(S): Amy L. Hogan, Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Jean M. Delashmit". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke extending to the right.

## 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, Inc. - 29996 CLP Organics and Inorganics

SAMPLES: 504SB001E1, 504CB001E1, 504SB002E1, 504SB002E1RE, 504SB002E2, 504SB002E2RE, 504SB002E2DL, 504SB003E1, 504SB003E1RE, 504SB003E2, 504SB003E2RE, 504SB004E1, 504SB004E2, 504SB005E1, 504SB005E2, 504CB005E2, 504SB006E1, 504CB006E1, 504SB006E2, 504SB007E1, 504SB007E2, 504DB001E1, 504EB001E1, 504TB001E1, 504TB002E1, 504TB005E2, 504DB001E1MS, 504DB001E1MSD, 504EB001E1MS, 504EB001E1MSD, 504SB002E2MS, 504SB002E2MSD, 504SB003E2MS, 504SB003E2MSD, 504SB004E1MS, 504SB004E1MSD, 504SB007E2MS, 504SB007E2MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 6/9/97 on instrument I for the following compounds:

chloromethane	30.3%
bromomethane	82.6%
chloroethane	94.0%
2-hexanone	54.7%
2-chloroethyl vinyl ether	42.0%

Since there were no positive results for these compounds in the associated samples, no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 5/21/97 on instrument R for the following compounds:

chloromethane	33.7%
bromomethane	42.5%

chloroethane	43.3%
acetone	60.3%
2-butanone	44.4%
4-methyl-2-pentanone	40.1%
2-hexanone	52.9%

There were no positive results for these compounds in the associated samples. No action was required.

The Percent Relative Standard Deviation (%RSD) exceeded the 30% QC limit for the standards analyzed on 6/12/97 on instrument N for acetone (33.1%). Since the associated samples were field and trip blanks, no action was required.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 7/17/97 on instrument R for the following compounds:

bromomethane	32.2%
chloroethane	40.3%
acetone	34.4%
2-hexanone	45.5%

There were no positive results for these compounds in the associated samples. No action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/11/97 at 10:54 on instrument I for the following compounds:

chloromethane	27.3%
acetone	60.1%
carbon disulfide	26.8%
2-butanone	55.7%
carbon tetrachloride	33.5%
vinyl acetate	34.1%
4-methyl-2-pentanone	64.6%
2-hexanone	38.4%
tetrachloroethane	35.7%

The positive results for acetone, carbon disulfide and 2-butanone in associated sample 504SB001E1 were flagged as estimated (J). The results for the other compounds in associated sample 504SB001E1, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factor (RRF) for 2-chloroethyl vinyl ether was 0.034 for the standard analyzed on 7/12/97 at 10:33 on instrument I, which was below the 0.050 QC limit. The non-detect results for this compound in associated samples 504CB001E1, 504SB002E1, 504SB002E2 and 504SB003E1 were rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/12/97 at 10:33 on instrument I for the following compounds:

chloromethane	44.9%
bromomethane	79.3%
chloroethane	62.1%
methylene chloride	76.3%
2-butanone	37.9%
1,1,1-trichloroethane	39.1%
carbon tetrachloride	54.6%
vinyl acetate	68.7%
trichloroethene	35.4%
dibromochloromethane	37.3%
bromoform	55.6%
tetrachloroethene	85.9%
2-chloroethyl vinyl ether	64.2%

The results for 2-chloroethyl vinyl ether in the associated samples were previously rejected. The positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504CB001E1, 504SB002E1, 504SB002E2 and 504SB003E1.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/10/97 at 12:46 on instrument N for the following compounds:

vinyl acetate	26.0%
4-methyl-2-pentanone	30.0%
2-hexanone	28.1%
1,1,2,2-tetrachloroethane	27.5%
tetrachloroethene	85.9%
2-chloroethyl vinyl ether	32.2%

Since the associated samples were field and trip blanks, no action was required.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/16/97 at 08:57 on instrument R for the following compounds:

chloroethane	38.3%
acetone	34.9%
2-butanone	33.4%
2-hexanone	30.5%

The positive results for acetone and 2-butanone in the associated samples were flagged as estimated (J). The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB003E2, 504SB004E1, 504SB004E2, 504SB005E1, 504SB005E2, 504CB005E2 and 504SB006E1.

IV.) Blanks:

Method Blanks:

Chloroform was detected at 1 ug/L in method blank VBLK1. Since the associated samples were field

and trip blanks, no action was required.

Methylene chloride and chloroform were detected at 25 ug/kg and 2 ug/kg, respectively, in method blank VBLK2. The positive result for methylene chloride in associated sample 504SB004E1, which was less than 10X the blank amount, was flagged as undetected (U) with the result less than the CRQL being raised to the CRQL. The positive result for chloroform in the associated sample, which was less than 5X the blank amount, was flagged as undetected (U) with the result less than the CRQL being raised to the CRQL.

Methylene chloride and chloroform were detected at 14 ug/kg and 2 ug/kg, respectively, in method blank VBLK3. All positive results for methylene chloride in the associated samples, less than 10X the blank amount, were flagged as undetected (U) with results less than the CRQL being raised to the CRQL. All positive results for chloroform in the associated samples, less than 5X the blank amount, were flagged as undetected (U) with results less than the CRQL being raised to the CRQL. The associated samples were 504CB001E1, 504SB002E1, 504SB002E2 and 504SB003E1.

Chloroform was detected at 2 ug/kg in method blank VBLK4. All positive results for this compound in the associated samples, less than 5X the blank amount, were flagged as undetected (U) with results less than the CRQL being raised to the CRQL. The associated samples were 504SB003E2, 504SB004E1, 504SB004E2, 504SB005E1, 504SB005E2, 504CB005E2 and 504SB006E1.

Chloroform was detected at 2 ug/kg in method blank VBLK5. All positive results for this compound in the associated samples, less than 5X the blank amount, were flagged as undetected (U) with results less than the CRQL being raised to the CRQL. The associated samples were 504CB006E1, 504SB006E2, 507SB007E1 and 504SB007E2.

#### Field Blanks:

Chloroform and bromodichloromethane were detected at 6 ug/L and 1 ug/L, respectively, in both field blanks 504DB001E1 and 504EB001E1. All positive results for chloroform were previously flagged. There were no positive results for the other compound in the associated samples, so no further action was required.

#### Trip Blanks:

Methylene chloride, chloroform and acetone were detected at 37 ug/kg, 2 ug/kg and 9 ug/kg, respectively, in trip blank 504TB005E2. All positive results for methylene chloride and acetone in the associated samples, less than 10X the blank amount, were flagged as undetected (U) with the detection limits being raised to the level of contamination in each sample. The results for chloroform were previously flagged. The associated samples were 504SB004E1, 504SB004E2, 504SB005E1, 504SB005E2, 504CB005E2, 504SB006E1, 504CB006E1, 504SB006E2, 504SB007E1 and 504SB007E2.

Methylene chloride and chloroform were detected at 13 ug/kg and 2 ug/kg, respectively, in trip blank 504TB001E1. All positive results for methylene chloride in the associated samples, less than 10X the blank amount, were flagged as undetected (U) with the detection limits being raised to the level of contamination in each sample. The results for chloroform were previously flagged. The associated samples were 504SB001E1, 504CB001E1, 504SB002E1, 504SB002E2, 504SB003E1 and 504SB003E2.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method, field or trip blanks. No action was required.

V.) Surrogate Recoveries:

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

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

The Relative Percent Differences (RPD's) for 1,1-dichloroethene (47%) and trichloroethene (26%) in spiked samples 504SB002E2MS and 504SB002E2MSD exceeded their respective 22% and 24% QC limits. The non-detect results for these compounds in unspiked sample 504SB002E2 were flagged as estimated (UJ).

The Percent Recovery (%R) of 1,1-dichloroethene was 183% for spiked sample 504SB002E2MSD, which exceeded the 59-172% QC limits. The result for this compound in the associated sample was previously flagged. No further action was required.

VII.) Laboratory Control Samples (LCS):

Five LCS's were analyzed for this SDG. Several LCS Recoveries exceeded the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples 504SB001E1 and 504CB001E1 were analyzed by the laboratory. The Relative Percent Difference (RPD) for acetone was 51%, which was within the 60% QC limit for soil samples. No action was required.

There were no calculable Relative Percent Differences (RPD's) for field duplicate samples 504SB005E2 and 504CB005E2. No action was required.

There were no calculable Relative Percent Differences (RPD's) for field duplicate samples 504SB006E1 and 504CB006E1. No action was required.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The non-detect results for 2-chloroethyl vinyl ether in samples 504CB001E1, 504SB002E1, 504SB002E2 and 504SB003E1 were rejected because of a low Relative Response Factor in the continuing calibration. All other laboratory data were acceptable with qualifications.

*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. No action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for 4-chloroaniline (32.7%) exceeded the 30% QC limit for the standards analyzed on 7/18/97 on instrument M. There were no positive results for this compound in the associated samples. No action was required.

The Percent Relative Standard Deviation (%RSD) for n-nitrosodimethylamine (45.0%) exceeded the 30% QC limit for the standards analyzed on 7/16/97 on instrument S. Since the associated samples were field blanks, no action was required.

Continuing Calibration:

The Percent Difference (%D) for 4-chloroaniline (45.5%) exceeded the 25% QC limit for the standards analyzed on 7/20/97 at 19:21 on instrument M. The results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB004E1, 504SB004E2, 504SB005E1, 504SB005E2, 504SB006E1, 504CB006E1, 504SB007E1 and 504SB007E2.

The Percent Difference (%D) for 4-chloroaniline (31.0%) exceeded the 25% QC limit for the standards analyzed on 7/23/97 at 13:47 on instrument M. Since the associated samples were method blanks, no action was required.

The Percent Differences (%D's) for 2,4-dinitrophenol (25.4%) and 4-nitrophenol (25.6%) exceeded the 25% QC limit for the standards analyzed on 7/14/97 at 10:03 on instrument V. The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (U). The associated samples were 504SB001E1, 504CB001E1, 504SB002E1, 504SB002E2, 504SB003E1 and 504SB003E2.

IV.) Blanks:

Method Blanks:

Butylbenzylphthalate was detected at 41 ug/L in method blank SBLK1. Since the associated samples were field blanks, no action was required.

Phenol and bis(2-ethylhexyl)phthalate were detected at 3 ug/kg and 2 ug/kg, respectively, in method blank SBLK2. There were no positive results for phenol in the associated samples, so no action was required. All positive results for the other compound in the associated samples less than 10X the blank amount were flagged as undetected (U), with the results less than the CRQL being raised to the CRQL. The associated samples were 504SB001E1, 504CB001E1, 504SB002E1, 504SB002E2, 504SB003E1 and 504SB003E2.

Field Blanks:

Benzoic acid and bis(2-ethylhexyl)phthalate were detected at 3 ug/L and 9 ug/L, respectively, in deionized water blank 504DB001E1. All positive results for bis(2-ethylhexyl)phthalate in the samples in this SDG less than 10X the blank amount were flagged as undetected (U), with the results less than the CRQL being raised to the CRQL. There were no positive results for benzoic acid in the associated samples. No further action was required.

Di-n-butylphthalate was detected at 1 ug/L in equipment rinsate blank 504EB001E1. There were no positive results for this compound in the associated samples. No action was required.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or field blanks. No action was required.

V.) Surrogate Recoveries:

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

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

The Relative Percent Difference (RPD) for 4-nitrophenol in spiked samples 504DB001E1MS and 504DB001E1MSD was 137%, which exceeded the 50% QC limit. Since the associated sample was a field blank, no action was required.

The Percent Recovery (%R) of 4-nitrophenol was 6% for spiked sample 504DB001E1MSD, which was below the 10-80% QC limits. Since the associated sample was a field blank, no action was required.

VII.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was taken.

VIII.) Field Duplicates:

Three sets of field duplicate samples were analyzed by the laboratory in this SDG. The calculable Relative Percent Differences (RPD's) were:

<u>Compound</u>	<u>504SB001E1, ug/kg</u>	<u>504CB001E1, ug/kg</u>	<u>RPD</u>
phenanthrene	880	790	10.8
fluoranthene	1600	1400	13.3
pyrene	1400	1300	7.4
benzo(a)anthracene	690	630	9.0
chrysene	680	610	10.8
benzo(b)fluoranthene	490	430	13.0
benzo(k)fluoranthene	680	560	19.4
benzo(a)pyrene	660	570	14.6

Since no RPD's exceeded the 60% QC limit for soil samples, no action was required.

There were no calculable RPD's for field duplicate samples 504SB005E2 and 504CB005E2. No action was required.

There were no calculable RPD's for field duplicate samples 504SB006E1 and 504CB006E1. No action was required.

IX.) Internal Standards Performance (ISTD):

The Percent Recovery (%R) of perylene-d12 was 42.1% for sample 504SB002E1, which was below the 50-200% QC limit. All positive and non-detect results for the compounds quantitated on this ISTD were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of chrysene-d12 (30.0%) and perylene-d12 (32.6%) for sample 504SB002E2 were below the 50-200% QC limit. All positive and non-detect results for the compounds quantitated on these two ISTD's were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of chrysene-d12 (23.9%) and perylene-d12 (27.8%) for sample 504SB003E1 were below the 50-200% QC limit. All positive and non-detect results for the compounds quantitated on these two ISTD's were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) of chrysene-d12 (32.9%) and perylene-d12 (34.1%) for sample 504SB003E2 were below the 50-200% QC limit. All positive and non-detect results for the compounds quantitated on these two ISTD's were flagged as estimated (J) and (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analyses of samples 504SB002E1, 504SB002E2, 504SB003E1 and 504SB003E2 were considered by the validator to be of preferable data quality to the reanalyses because of better internal standards performances and surrogate recoveries. All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Difference (%D) for methoxychlor (25.6%) exceeded the 25% QC limit for the PEM analyzed on 7/25/97 at 21:26 on the primary column. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB004E1, 504SB005E1, 504SB005E2, 504SB006E1, 504CB006E1, 504SB006E2 and 504SB007E1.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for alpha-BHC (22.1%) exceeded the 20% QC limit for the standards analyzed on 7/15/97 on the primary column. Since only one %RSD exceeded the QC limit and was less than 30%, no action was required.

The Percent Relative Standard Deviation (%RSD) for aldrin (25.6%) exceeded the 20% QC limit for the standards analyzed on 7/21/97 on the primary column. Since only one %RSD exceeded the QC limit, and was less than 30%, no action was required.

Continuing Calibration:

The Percent Difference (%D) for 4,4'-DDT (32.8%) exceeded the 25% QC limit for the standards analyzed on 7/22/97 at 16:24 on the primary column. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB001E1, 504CB001E1, 504SB002E1, 504SB002E2, 504SB003E1 and 504SB003E2.

The Percent Difference (%D) for 4,4'-DDT (32.9%) exceeded the 25% QC limit for the standards analyzed on 7/22/97 at 16:24 on the secondary column. The results for this compound in the associated samples were previously flagged. No further action was required.

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 two field blanks. No action was required.

V.) Surrogate Recoveries:

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

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

The Percent Recoveries (%R's) for spiked samples 504EB001E1MS and 504EB001E1MSD were below their respective QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
endosulfan I	38	34	46-134%
4,4'-DDE	69	65	70-122%

Since the associated unspiked sample was an equipment rinsate blank, no action was taken.

The Relative Percent Differences in spiked samples 504SB004E1MS and 504SB004E1MSD exceeded the 20% QC limit for the following compounds:

alpha-BHC	80%
beta-BHC	71%
gamma-BHC	73%
delta-BHC	83%
aldrin	65%
heptachlor epoxide	63%
endosulfan I	76%
4,4'-DDE	65%
dieldrin	70%

endrin	61%
endosulfan II	70%
4,4'-DDD	61%
endosulfan sulfate	64%
4,4'-DDT	54%
endrin aldehyde	70%
methoxychlor	59%
alpha-chlordane	130%
endrin ketone	56%

The results for these compounds in unspiked sample 504SB004E1, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Recoveries (%R's) for spiked samples 504SB004E1MS and 504SB004E1MSD were below their respective QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
endosulfan I	9	20	24-121%
4,4'-DDE	31	0	50-117%
endosulfan II	11	23	24-142%
4,4'-DDD	33	0	57-160%
4,4'-DDT	28	49	54-131%
endrin aldehyde	25		27-160%
alpha chlordane	12		21-119%

The non-detect results for endosulfan I, 4,4'-DDE and 4,4'-DDD in sample 504SB004E1 were rejected since the %R's were less than 10%. The results for the other compounds in the associated samples were previously flagged. No further action was necessary.

#### VII.) TCL Compound Identification:

##### Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between column 1 and column 2 exceeded the 70% QC limit for the following samples:

<u>Sample</u>	<u>Compound</u>	<u>Column %D</u>
504SB001E1	dieldrin	253%
	4,4'-DDT	73%
504CB001E1	heptachlor epoxide	106%
504SB002E2	heptachlor epoxide	691%
504SB003E2	gamma-BHC	281%
	heptachlor	220%
	aldrin	352%
	4,4'-DDE	98%
	4,4'-DDT	142%
504SB005E1	gamma-chlordane	135%

The result for aldrin in sample 504SB003E2 was rejected (R) since the %D was greater than 300%. The result for heptachlor epoxide in sample 504SB002E2 was replaced during validation with the dilution analysis quantitation limit. The results for the other compounds were flagged as estimated (J) in the associated samples.

VIII.) Field Duplicates:

Three sets of field duplicate samples were analyzed by the laboratory in this SDG. The calculable Relative Percent Differences (RPD's) were:

<u>Compound</u>	<u>504SB001E1, ug/kg</u>	<u>504CB001E1, ug/kg</u>	<u>RPD</u>
4,4'-DDE	15	24	46%
4,4'-DDD	23	30	26%
4,4'-DDT	22	24	8.7%
gamma-chlordane	6.7	8.8	27%

Since all of the RPD's were within the 60% QC limit for soil samples, no action was required.

There were no calculable Relative Percent Differences (RPD's) for the two other sets of field duplicate samples in this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria were met. No action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met. No action was necessary.

X.) Overall Assessment of Data/General:

Results for four compounds in sample 504SB002E2 exceeded the linear calibration range. Dilution analysis results for these compounds were transferred by the validator to the original data set with appropriate qualifiers. Also, the non-detect quantitation limit from this dilution analysis was transferred to replace the rejected results for heptachlor epoxide in this sample. The result for aldrin in sample 504SB003E2 was rejected (R) due to a column Percent Difference exceeding 300%. Results for three compounds in sample 504SB004E1 were rejected due to very low matrix spike recoveries. All other laboratory data were acceptable with qualifications.

*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:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) for MCP (22.9%) exceeded the 20% QC limit for the standards analyzed on 7/16/97 on the primary column. The associated sample results for MCP, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Relative Standard Deviation (%RSD) for dalapon (22.0%) exceeded the 20% QC limit for the standards analyzed on 7/24/97 on the primary column. The associated sample results for dalapon, which consisted entirely of non-detects, were flagged as estimated (UJ).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/17/97 at 08:31 on the secondary column for MCP (132%) and MCA (54.8%). The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB002E1, 504SB002E2, 504SB003E1 and 504SB003E2.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/17/97 at 16:10 on the primary column for the following compounds:

dicamba	27.4%
MCP	57.3%
dichloroprop	37.3%
2,4-D	39.3%
2,4,5-TP	38.4%
2,4,5-T	29.3%
2,4-DB	32.6%

The results for MCP in the associated samples were previously flagged. The results for the other compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB002E1, 504SB002E2, 504SB003E1 and 504SB003E2.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/17/97 at 16:10 on the secondary column for the following compounds:

dicamba	35.7%
MCP	37.4%
MCA	26.5%
dichloroprop	33.2%
2,4-D	55.0%
2,4,5-TP	37.1%
2,4,5-T	30.7%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were previously flagged. No further action was required.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/24/97 at 14:52 on the secondary column for the following compounds:

MCP	41.4%
MCPA	31.8%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504CB006E1, 504SB006E2, 504SB007E1 and 504SB007E2.

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Percent Recovery (%R) of 2,4-dichlorophenylacetic acid (DCAA) was 104% for sample 504SB003E1, which exceeded the 18-94% QC limits. Since there were no positive results for this sample, no action was required.

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

The Percent Recoveries (%R's) for spiked samples 504SB003E2MS and 504SB003E2MSD were outside their respective QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
dalapon	21		24-126%
MCP	138	157	40-114%

The non-detect result for dalapon in unspiked sample 504SB003E2 was flagged as estimated (UJ). Since MCP was not detected in this sample, no further action was necessary.

The Percent Recoveries (%R's) for spiked samples 504SB007E2MS and 504SB007E2MSD were below their respective QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
2,4-D	12	10	43-121%
2,4,5-TP	22	16	47-141%
2,4,5-T	16	12	45-173%
dicamba	10	9	41-152%
dichloroprop	19	18	48-126%
MCP	32	18	40-114%

The results for these compounds in unspiked sample 504SB007E2, which consisted entirely of non-detects, were flagged as estimated (UJ).

VII.) TCL Compound Identification (HIS):

All HIS criteria were met. No action was required.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the three sets of field duplicate samples identified in this SDG. No action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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:

Blank Type/ID#	Analyte	Max. Conc.	Action Level mg/kg
PBW	antimony	3.07 ug/L	3.07
504DB001E1	arsenic	3.60 ug/L	3.60
504EB001E1	beryllium	0.85 ug/L	0.85
504EB001E1	chromium	1.40 ug/L	1.40
504EB001E1	copper	3.80 ug/L	3.80
PBW	iron	40.1 ug/L	40.1
504EB001E1	manganese	0.71 ug/L	0.71
504EB001E1	nickel	1.50 ug/L	1.50
CCB3	silver	1.10 ug/L	1.10
504EB001E1	sodium	177 ug/L	177
PBW	thallium	9.77 ug/L	9.77

CCB = Continuing Calibration Blank, DB = Deionized Water Blank, EB = Equipment Rinsate Blank, PBW = Preparation Blank (Water)

All results greater than the IDL but less than 5X the blank amounts (Action Level, mg/kg for soil samples) for which the contaminated blank was an associated calibration, preparation, deionized water or

equipment rinsate 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.</u>
CCB4	aluminum	-25.5 ug/L	25.5 mg/kg
PBW	lead	-2.16 ug/L	2.16 mg/kg
CCB1	cyanide	-3.60 ug/L	3.60 mg/kg

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

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

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	3 ug/L
arsenic	4 ug/L
beryllium	1 ug/L
cadmium	2 ug/L
cobalt	3 ug/L
copper	2 ug/L
lead	4 ug/L
manganese	1 ug/L
nickel	1 ug/L
silver	1 ug/L
sodium	157 ug/L
thallium	13 ug/L
vanadium	2 ug/L

These analytes should not be present. Additionally, negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

potassium	-73 ug/L
selenium	-2 ug/L
zinc	-2 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike Analysis was not performed in this fraction of the SDG. No action was required.

IX.) Field Duplicates:

Three sets of field duplicate samples were analyzed by the laboratory in this SDG. The calculable Relative Percent Differences (RPD's) were:

<u>Compound</u>	<u>504SB001E1, ug/kg</u>	<u>504CB001E1, ug/kg</u>	<u>RPD</u>
aluminum	6520	6090	6.8%
barium	16.3	14.7	10%
calcium	2930	3310	12%
chromium	32.3	16.5	65%
copper	13.6	10	31%
iron	13800	9150	41%
lead	30.3	31	2.3%
magnesium	357	408	13%
manganese	107	50.9	77%
potassium	323	334	3.3%
sodium	201	202	0.4%
vanadium	18.2	18.1	0.5%
zinc	102	52.1	65%

<u>Compound</u>	<u>504SB005E2, ug/kg</u>	<u>504CB005E2, ug/kg</u>	<u>RPD</u>
aluminum	20700	16500	23%
arsenic	24	17.9	29%
barium	35.3	27.5	25%
calcium	10200	6550	44%
chromium	38.9	31.0	23%
copper	25	21.6	15%
iron	26200	21600	19%
lead	49.1	41.4	17%
magnesium	3960	3090	26%
manganese	297	237	23%
potassium	2300	1730	28%
sodium	2010	1580	24%
vanadium	58.4	47.2	22%
zinc	109	91.4	18%

<u>Compound</u>	<u>504SB006E1, ug/kg</u>	<u>504CB006E1, ug/kg</u>	<u>RPD</u>
aluminum	7500	6200	19%
barium	18.0	18.3	3.7%
calcium	7480	12200	485%
copper	5.2	11.8	78%
iron	3430	3790	9.9%
lead	15	14.3	4.8%
manganese	26.2	34.0	26%
potassium	234	233	0.4%
sodium	223	330	39%
vanadium	7.1	7.2	1.4%
zinc	18.8	23.5	22%

The results for chromium, manganese and zinc in samples in 504SB001E1 and 504CB001E1, and for copper in samples 504SB006E1 and 504CB006E1 were flagged as estimated (J) since their Relative Percent Differences (RPD's) exceeded the 60% QC limit for soil samples.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# VALIDATA

Chemical Services, Inc.

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## DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe / Allen & Hoshall  
SITE NAME: Charleston Naval Base, Zone L  
SUBZONES: L-B and L-C  
SERVICE ORDER NUMBER: 0249  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides/PCB's, Chlorinated Herbicides, Total Metals, Cyanide

SDG NUMBER: 30098 (Level III)

SAMPLES:

SUBZONE L-B:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's
504SB006B1	30119.02	Soil	X	X	X
504SB006B1DL	30119.02DL	Soil			+
504SB006B2	30119.01	Soil	X	X	X
504SB007B1	30119.04	Soil	X	X	X
504SB007B2	30119.03	Soil	X	X	X
504SB008B1	30119.06	Soil	X	X	X
504SB008B1DL	30119.06DL	Soil			+
504SB008B2	30119.05	Soil	X	X	X

Client Sample #	Lab Sample #	Matrix	Chlorinated Herbicides	Total Metals	Cyanide
504SB006B1	30119.02	Soil	X	X	X
504SB006B2	30119.01	Soil	X	X	X
504SB007B1	30119.04	Soil	X	X	X
504SB007B2	30119.03	Soil	X	X	X
504SB008B1	30119.06	Soil	X	X	X
504SB008B2	30119.05	Soil	X	X	X

SUBZONE L-C:

Client	Lab		Volatile	Semi-	Pesticides/
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>
504SB004C1	30119.10	Soil	X	X	X
504SB004C2	30119.09	Soil	X	X	X
504SB005C1	30119.08	Soil	X	X	X
504SB006C1	30119.12	Soil	X	X	X
504CB006C1	30119.11	Soil	X	X	X
504SB007C1	30119.07	Soil	X	X	X
504SB008C1	30098.04	Soil	X	X	X
504SB010C1	30098.05	Soil	X	X	X
504SB010C2	30098.06	Soil	X	X	X
504SB011C1	30098.02	Soil	X	X	X
504SB012C1	30098.03	Soil	X	X	X
504SB013C1	30098.01	Soil	X	X	X
504DB010C2	30098.08	Water	X	X	X
504EB010C2	30098.09	Water	X	X	X
504TB006C1	30119.13	Soil	X		
504TB010C2	30098.07	Soil	X		
504TB10AC2	30098.10	Water	X		
504SB013C1MS	30098.10MS	Soil	+		
504SB013C1MSD	30098.10MSD	Soil	+		
504SB006C1MS	30119.12MS	Soil		+	+
504SB006C1MSD	30119.12MSD	Soil		+	+
504SB010C2MS	30098.06MS	Soil		+	+
504SB010C2MSD	30098.06MSD	Soil		+	+

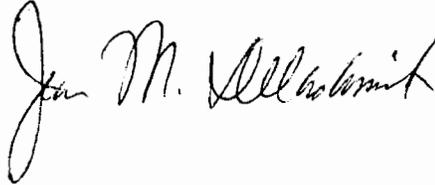
Client	Lab		Chlorinated	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Herbicides</u>	<u>Metals</u>	<u>Cyanide</u>
504SB004C1	30119.10	Soil	X	X	X
504SB004C2	30119.09	Soil	X	X	X
504SB005C1	30119.08	Soil	X	X	X
504SB006C1	30119.12	Soil	X	X	X
504CB006C1	30119.11	Soil	X	X	X
504SB007C1	30119.07	Soil	X	X	X
504SB008C1	30098.04	Soil	X	X	X
504SB010C1	30098.05	Soil	X	X	X
504SB010C2	30098.06	Soil	X	X	X
504SB011C1	30098.02	Soil	X	X	X
504SB012C1	30098.03	Soil	X	X	X
504SB013C1	30098.01	Soil	X	X	X
504DB010C2	30098.08	Water	X	X	X
504EB010C2	30098.09	Water	X	X	X
504EB010C2MS	30098.09MS	Water	+		
504EB010C2MSD	30098.09MSD	Water	+		
504SB013C1MS	30098.01MS	Soil	+		
504SB013C1MSD	30098.01MSD	Soil	+		

+ = Non-billable analysis

CB = FIELD DUPLICATE, DB = DEIONIZED WATER BLANK, DL = DILUTION,  
EB = EQUIPMENT RINSATE BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE  
DUPLICATE, TB = TRIP BLANK

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:

A handwritten signature in black ink, appearing to read "Jean M. Delashmit". The signature is written in a cursive style with a large initial "J" and "M".

## 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, Inc. - 29888 CLP Organics and Inorganics

SAMPLES: 504SB006B1, 504SB006B1DL, 504SB006B2, 504SB007B1, 504SB007B2,  
504SB008B1, 504SB008B1DL, 504SB008B2, 504SB004C1, 504SB004C2,  
504SB005C1, 504SB006C1, 504CB006C1, 504SB007C1, 504SB008C1, 504SB010C1,  
504SB010C2, 504SB011C1, 504SB012C1, 504SB013C1, 504DB010C2, 504EB010C2,  
504TB006C1, 504TB010C2, 504TB10AC2, 504SB013C1MS, 504SB013C1MSD,  
504SB006C1MS, 504SB006C1MSD, 504SB010C2MS, 504SB010C2MSD,  
504EB010C2MS, 504EB010C2MSD

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 33.1% for acetone in the standards analyzed on 6/12/97 on instrument N, which exceeded the 30% QC limit. Since the only associated samples were field blanks, no action was necessary.

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 7/17/97 on instrument R:

bromomethane	32.2%
chloroethane	40.3%
acetone	43.4%
2-hexanone	45.5%

The detections of acetone in the associated samples were flagged as estimated (J). The associated samples were 504SB004C2, 504SB0006C1, 504SB012C1 and 504SB013C1. There were no other positive detections of these compounds in the associated samples. No further action was required.

Continuing Calibration:

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/21/97 at 13:52 on instrument R:

2-hexanone	43.5%
1,1,2,2-tetrachloroethane	26.0%
2-chloroethyl vinyl ether	38.7%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB006B1, 504SB006B2, 504SB007B1, 504SB007B2, 504SB010C1, 504SB010C2 and 504CB013C1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/22/97 at 09:26 on instrument R:

bromomethane	29.3%
chloroethane	45.7%
vinyl acetate	30.6%
2-hexanone	55.8%
4-methyl-2-pentanone	30.6%
2-chloroethyl vinyl ether	26.6%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB008B1, 504SB008B2, 504SB004C2, 504SB005C1, 504SB006C1, 504SB007C1, 504SB008C1, 504SB011C1 and 504SB012C1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/23/97 at 09:56 on instrument R:

chloromethane	26.1%
vinyl acetate	41.5%
2-hexanone	47.6%

All results for these compounds in associated samples 504CB006C1 and 504SB004C1, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Method Blanks:

Chloroform was detected at 2 ug/L in water method blank VBLK1. Since the only associated samples were one trip and two field blanks, no action was taken.

Acetone and chloroform were detected at 7 ug/kg and 3 ug/kg, respectively, in soil method blank VBLK2. The detections of acetone in samples 504SB010C1 and 504SB010C2, which were less than 10X the blank amount, were flagged as undetected (U) with the analytical results being raised to the level of contamination in each sample. Since the trip and deionized water blanks were used for the

blank qualifications of these two compounds in the other associated samples, no further action was necessary.

Methylene chloride was detected at 16 ug/kg in soil method blank VBLK3. The detections of methylene chloride in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL. The associated samples were 504SB008B1, 504SB008B2, 504SB004C2, 504SB005C1, 504SB006C1, 504SB007C1, 504SB008C1, 504SB011C1 and 504SB012C1.

Methylene chloride was detected at 2 ug/kg in soil method blank VBLK4. The detections of methylene chloride in associated samples 504SB004C1 and 504CB006C1, which were less than 10X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL.

#### Field Blanks:

Chloroform was detected at 8 ug/L and 6 ug/L, respectively, in deionized water blank 504DB010C2 and equipment rinsate blank 504EB010C2. All detections of chloroform in the SDG samples, which were less than 5X the blank amounts, were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL. In addition, bromodichloromethane was detected at 2 ug/kg in the deionized water blank. Since there were no detections of this compound in the associated samples, no further action was taken.

#### Trip Blanks:

Methylene chloride and acetone were detected at 6 ug/kg and 7 ug/kg, respectively, in soil trip blank 504TB006C1. All detections of acetone and methylene chloride in the associated samples not previously qualified using method blank VBLK3, which were less than 10X the blank amounts, were flagged as undetected (U) with the detection limit being raised to the amount of contamination in each sample. The associated samples were 504SB006B1, 504SB006B2, 504SB007B1, 504SB007B2, 504SB008B1, 504SB008B2, 504SB004C1, 504SB004C2, 504SB005C1, 504SB006C1, 504CB006C1 and 504SB007C1.

Methylene chloride was detected at 14 ug/kg in soil trip blank 504TB010C2. The detections of this compound in the associated samples, which were less than 10X the blank amount were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL. The associated samples were 504SB010C1, 504SB010C2 and 504SB013C1.

#### Tentatively Identified Compounds (TIC):

TIC's were not detected in the SDG samples. No action was required.

#### V.) Surrogate Recoveries:

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

#### VI.) Laboratory Control Samples (LCS):

Eight LCS's were analyzed by the laboratory. All Recovery criteria were met. No action was taken.

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

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

VIII.) Field Duplicates:

One pair of field duplicate samples (504SB006C1 / 504CB006C1) was analyzed by the laboratory. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*SEMIVOLATILE ORGANICS*

I.) Holding Times:

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

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

### III.) Calibration:

#### Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 32.7% for 4-chloroaniline in the standards analyzed on 7/18/97 on instrument M, which exceeded the 30% QC limit. There were no detections of this compound in the SDG samples. No action was required.

#### Continuing Calibration:

The Percent Difference (%D) was 38.9% for 4-chloroaniline in the standard analyzed on 7/22/97 at 14:05 on instrument M, which exceeded the 25% QC limit. The non-detect results for this compound in the associated samples were flagged as estimated (UJ). The associated samples were 504SB008C1, 504CB010C1, 504SB011C1, 504SB012C1 and 504SB013C1.

The Percent Difference (%D) was 31.0% for 4-chloroaniline in the standard analyzed on 7/24/97 at 10:18 on instrument M, which exceeded the 25% QC limit. The non-detect results for this compound in the associated samples were flagged as estimated (UJ). The associated samples were 504SB006B1, 504CB006B2, 504SB007B1, 504SB007B2, 504SB008B1, 504SB008B2, 405SB004C1, 504SB004C2, 504SB005C1, 504SB006C1, 504CB006C1 and 504SB007C1.

### IV.) Blanks:

#### Method Blanks:

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

#### Field Blanks:

Phenol was detected at 13 ug/L and 2 ug/L, respectively, in deionized water blank 504DB010C2 and equipment rinsate blank 504EB010C2. In addition, benzoic acid (3 ug/L) and 2,4,6-trichlorophenol (1 ug/L) were detected in the deionized blank. Since there were no detections of these compounds in the SDG samples, no action was taken.

#### Tentatively Identified Compounds (TIC's):

4-Hydroxy-4-methyl-2-pentanone, 3-pentene-2-ol, ethyl benzenediol, 2-butoxy ethanol and dimethylethyl furan and were detected in the method and field blanks at sufficient concentrations to eliminate, by applying the 5X Action Limit Rule, the detections of these TIC's in all associated SDG samples. Since data validation action based on blank TIC's was not required, no action was taken.

### V.) Surrogate Recoveries:

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

### VI.) Laboratory Control Samples (LCS):

Six LCS's were analyzed by the laboratory. Three LCS recoveries exceeded the QC limits. Data

validation action based on LCS criteria was not required. No action was taken.

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

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

VIII.) Field Duplicates:

One pair of field duplicate samples (504SB006C1 / 504CB006C1) was analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was necessary.

IX.) Internal Standards Performance:

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

X.) TCL Compound Identification:

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

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

All CRQL criteria were met. No action was taken.

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

All TIC criteria were met. No action was necessary.

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) for endrin were 29.3% on the primary and 28.2% on secondary columns for the PEM14Z standard analyzed on 7/27/97 at 18:33, which exceeded the 25% QC limit. The non-detect results for endrin in the associated samples were flagged as estimated (UJ). The associated samples were 504SB008C1, 504SB010C1, 504SB010C2, 504SB011C1, 504SB012C1 and 504SB013C1.

The Percent Difference (%D) was 27.0% for endrin on the secondary column for the PEM15E standard analyzed on 7/24/97 at 20:40, which exceeded the 25% QC limit. The non-detect results for endrin in the associated samples were flagged as estimated (UJ). The associated samples were 504SB006B2, 504SB004C1, 504SB007B1 and 504SB007B2.

The Percent Difference (%D) was 28.8% for endrin on the secondary column for the PEM15L standard analyzed on 7/31/97 at 14:48, which exceeded the 25% QC limit. All positive and non-detect results for endrin in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB008B1, 504SB008B2, 504SB004C2, 504SB005C1, 504SB006C1, 504CB006C1 and 504SB007C1.

### III.) Calibration:

#### Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 23.3% for endrin in the standards analyzed on the primary column on 7/30/97, which exceeded the 20% QC limit. Since only one compound exceeded the QC limit with a %RSD less than 30%, no action was required.

#### Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/31/97 at 15:08 on the primary column for the following compounds:

aldrin	39.1%
heptachlor epoxide	34.1%
4,4'-DDE	36.6%
endosulfan II	41.5%
endosulfan sulfate	39.2%
endrin ketone	36.4%
endrin aldehyde	55.3%
alpha-chlordane	31.2%
gamma-chlordane	29.4%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB006B1, 504SB008B1, 504SB008B2, 504SB004C2, 504SB005C1, 504SB006C1, 504CB006C1 and 504SB007C1.

The Percent Difference (%D) was 38.7% for aroclor-1254 in the standards analyzed on the primary column on 7/31/97 at 16:11, 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 associated samples were 504SB006B1, 504SB008B1, 504SB008B2, 504SB004C2, 504SB005C1, 504SB006C1, 504CB006C1 and 504SB007C1.

### IV.) Blanks:

There were no positive detections in the method, deionized water or equipment rinsate blank. No action was necessary.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of decachlorobiphenyl (DCB) exceeded the 30-150% QC limits in the following samples:

<u>Sample</u>	<u>Column 1 %R</u>	<u>Column 2 %R</u>
504SB006B1	-	307
504SB006B1DL	-	302

All positive results for these samples were flagged as estimated (J).

VI.) Laboratory Control Sample (LCS):

Six LCS's were analyzed by the laboratory. Eleven LCS recoveries were below the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

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

The Relative Percent Differences (RPD's) for heptachlor epoxide (25%), endrin (69%) and alpha-chlordane (44%) exceeded the 20% QC limit for spiked samples 504SB006C1MS and 504SB006C1MSD. The non-detect results for these three compounds in unspiked sample 504SB006C1 were flagged as estimated (UJ).

The Percent Recovery (%R) was 121% for heptachlor epoxide in spiked sample 504SB006C1MS, which exceeded the 20-119% QC limits. Since this compound was not detected in unspiked sample 504SB006C1, no action was necessary.

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following compounds and associated samples:

<u>Sample</u>	<u>Compound</u>	<u>%D</u>
504SB006B1	heptachlor epoxide	265
504SB006B1	endosulfan sulfate	140
	methoxychlor	604
504SB006B1DL	endrin aldehyde	163
504SB006B2	endrin aldehyde	163
504SB008B1	heptachlor epoxide	147
	endrin aldehyde	115
504SB012C1	4,4'-DDT	100

The %D for methoxychlor in sample 504SB006B1 was greater than 300%. The result for methoxychlor in this sample was rejected (R). The results for the other compounds with %D's below 300% were flagged as estimated (J).

IX.) Field Duplicates:

Field duplicate samples 504SB006C1 and 504CB006C1 were analyzed in this SDG. The Relative Percent Difference (RPD) for endrin aldehyde was 24%, which was within the 60% QC limit for soil samples. No action was necessary.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil Check data were not present in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC cleanup data were not present in the data package. No action was taken.

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

The concentrations of endrin, 4,4'-DDE, 4,4'-DDT, alpha-chlordane and endrin aldehyde exceeded the standard calibration range in sample 504SB006B1. In addition, the concentration of 4,4'-DDE exceeded the standard calibration range in sample 0504SB008B1. The concentrations of these compounds in the original analyses were replaced by the validator with the associated diluted sample results and qualifiers.

XII.) Overall Assessment of Data/General:

The detection of methoxychlor in sample 504SB006B1 was rejected because the PIS Percent Difference exceeded 300%. All other laboratory data were acceptable with qualifications.

*CHLORINATED HERBICIDES*

I.) Holding Times:

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

II.) Instrument Performance:

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

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was taken.

Continuing Calibration:

The Percent Difference (%D) was 32.9% for dalapon in the standard analyzed on the primary column

on 8/2/97 at 08:31, which exceeded the 25% QC limit. The non-detect results for dalapon in the associated samples were flagged as estimated (UJ). The associated samples were 504SB006B1, 504SB006B2, 504SB007B1, 504SB007B2, 504SB008B1, 504SB008B2, 504SB005C1 and 504SB07C1.

The Percent Differences (%D's) were 29.6% and 27.1%, respectively, for dalapon and 2,4-D, which exceeded the 25% QC limit, in the standards analyzed on the primary column on 8/2/97 at 14:51. The non-detect results for the two compounds in associated samples 504SB004C1, 504SB004C2, 504SB006C1 and 504CB006C1 were flagged as estimated (UJ).

IV.) Blanks:

There were no positive detections in the method, deionized water or equipment rinsate blank. No action was taken.

V.) Surrogate Recoveries:

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

VI.) Laboratory Control Sample (LCS):

Four LCS's were analyzed by the laboratory. All Recovery criteria were met. No action was taken.

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

The Percent Recoveries (%R's) for spiked samples 504SB013C1MS and 504SB013C1MSD were outside the QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
2,4-D	33	25	43-121%
2,4,5-TP	39	33	47-141%
2,4,5-T	41	25	45-113%
dicamba	-	35	41-152%
dichloroprop	46	37	48-126%
MCPD	130	-	40-114%

MCPD was not detected in unspiked sample 504SB013C1. No action was required. The non-detect results for the other five compounds in this sample were flagged as estimated (UJ).

The Relative Percent Differences (RPD's) for spiked samples 504EB010C2MS and 504SB010C2MSD exceeded the QC limits for the following compounds:

<u>Compound</u>	<u>%RPD</u>	<u>QC Limit</u>
2,4-D	37	26%
2,4-DB	31	30%
2,4,5-T	41	29%
dicamba	47	27%
dichloroprop	45	17%
MCPA	23	16%

Since the spiked samples was the equipment rinsate blank, no action was required.

VIII.) Field Duplicates:

One pair of field duplicate samples (504SB006C1 / 504CB006C1) was analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the sample pair. No action was necessary.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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 Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>5X Action Level</u>
DWB	aluminum	153 ug/L	153 mg/kg
DWB	antimony	3.80 ug/L	3.80 mg/kg
DWB	barium	1.20 ug/L	1.20 mg/kg
DWB	beryllium	0.27 ug/L	0.27 mg/kg
DWB	calcium	228 ug/L	228 mg/kg
ERB	chromium	1.10 ug/L	1.10 mg/kg
PBW	cobalt	2.15 ug/L	2.15 mg/kg
DWB	iron	76.6 ug/L	76.6 mg/kg
CCB3	lead	1.20 ug/L	1.20 mg/kg
DWB	magnesium	61.0 ug/L	61.0 mg/kg
DWB	manganese	1.40 ug/L	1.40 mg/kg

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>5X Action Level</u>
ERB	nickel	0.83 ug/L	0.83 mg/kg
DWB	sodium	620 ug/L	620 mg/kg
PBW	zinc	9.99 ug/L	9.99 mg/kg
PBW	cyanide	0.08 ug/L	0.08 mg/kg

CCB = Continuing Calibration Blank, DWB = Deionized Water Blank,  
ERB = Equipment Rinsate 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), after correction for percent moisture, for which the contaminated blank was an associated calibration, deionized water, equipment rinsate or preparation blank were flagged as undetected (U).

The following analytes had negative blank results with absolute values greater than the IDL:

<u>Blank ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
CCB4	beryllium	-0.40 ug/L	0.40 mg/kg
PBW	lead	-1.44 ug/L	1.44 mg/kg
CCB4	magnesium	-59.3 ug/L	59.3 mg/kg
CCB4	potassium	-199 ug/L	199 mg/kg

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

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

#### IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	3 ug/L
arsenic	6 ug/L
cobalt	1 ug/L
lead	2 ug/L
manganese	1 ug/L
selenium	4 ug/L
sodium	68 ug/L
thallium	15 ug/L

These analytes should not be present. Additionally, negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

arsenic	-3 ug/L
cadmium	-4 ug/L
chromium	-1 ug/L

potassium	-290 ug/L
selenium	-7 ug/L

Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken.

V.) ICP Serial Dilution Analysis:

All Serial Dilution Analysis criteria were met. No action was necessary.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was necessary.

VIII.) Matrix Spike Recoveries (MS):

MS samples were not analyzed in this fraction of the SDG. No action was taken.

IX.) Field Duplicates:

One pair of field duplicate samples (504SB006C1 / 504CB006C1) was analyzed in this SDG. The calculable Relative Percent Differences were:

<u>Compound</u>	<u>504SB006C1</u>	<u>504CB006C1</u>	<u>RPD</u>
aluminum	16100 mg/kg	216800 mg/kg	4.3%
arsenic	8.2 mg/kg	14.5 mg/kg	56%
barium	30.3 mg/kg	34.8 mg/kg	14%
calcium	2550 mg/kg	3160 mg/kg	21%
chromium	23.1 mg/kg	24.2 mg/kg	4.7%
cobalt	5.1 mg/kg	4.5 mg/kg	13%
copper	22.4 mg/kg	30.8 mg/kg	31%
iron	17400 mg/kg	21500 mg/kg	14%
lead	22.9 mg/kg	123 mg/kg	137%
magnesium	2020 mg/kg	2340 mg/kg	15%
manganese	350 mg/kg	353 mg/kg	0.9%
mercury	0.07 mg/kg	0.25 mg/kg	113%
nickel	13.6 mg/kg	9.6 mg/kg	34%
potassium	1380 mg/kg	1590 mg/kg	19%
vanadium	36.9 mg/kg	44.5 mg/kg	19%
zinc	109 mg/kg	178 mg/kg	48%

The RPD's for lead and mercury exceeded the 60% QC limit for soil samples. The detections of these two analytes in the two samples were flagged as estimated (J). Since the other RPD's were within the 60% QC limit for soil samples, no further action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was necessary.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

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(770) 923-8769 (Fax)

## DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe / Allen & Hoshall  
SITE NAME: Charleston Naval Base, Zone L  
SUBZONES: L-C, L-E and L-Sediment  
SERVICE ORDER NUMBER: 0250  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHODS: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRICES: Sediment and Soil  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides/PCB's, Chlorinated Herbicides, Total Metals, Cyanide  
SDG NUMBER: 30039 (Level III)

### SAMPLES:

#### SUBZONE L-C:

Client	Lab		Volatile	Semi-	Pesticides/
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>
504SB001C1	30039.06	Soil	X	X	X
504SB001C2	30039.07	Soil	X	X	X
504SB002C1	30039.08	Soil	X	X	X
504SB002C2	30039.09	Soil	X	X	X
504SB003C1	30039.10	Soil	X	X	X
504SB003C2	30039.11	Soil	X	X	X
504SB009C1	30070.08	Soil	X	X	X
504SB014C1	30070.07	Soil	X	X	X
504SB015C1	30070.06	Soil	X	X	X
504SB016C1	30070.05	Soil	X	X	X
504SB017C1	30070.02	Soil	X	X	X
504SB017C2	30070.03	Soil	X	X	X
504CB017C2	30070.04	Soil	X	X	X
504SB018C1	30070.01	Soil	X	X	X
504TB017C2	30070.09	Soil	X		
504SB001C1MS	30039.06MS	Soil	+		

Client <u>Sample #</u>	Lab <u>Sample #</u>	Lab <u>Matrix</u>	Volatile <u>Organics</u>	Semi- <u>volatiles</u>	Pesticides/ <u>PCB's</u>
504SB001C1MSD	30039.06MSD	Soil	+		
504SB018C1MS	30070.01MS	Soil	+		+
504SB018C1MSD	30070.01MSD	Soil	+		+
504SB003C1MS	30039.11MS	Soil		+	
504SB003C1MSD	30039.11MSD	Soil		+	
504SB009C1MS	30039.08MS	Soil		+	
504SB009C1MSD	30039.08MSD	Soil		+	

Client <u>Sample #</u>	Lab <u>Sample #</u>	<u>Matrix</u>	Chlorinated <u>Herbicides</u>	Total <u>Metals</u>	<u>Cyanide</u>
504SB001C1	30039.06	Soil	X	X	X
504SB001C2	30039.07	Soil	X	X	X
504SB002C1	30039.08	Soil	X	X	X
504SB002C2	30039.09	Soil	X	X	X
504SB003C1	30039.10	Soil	X	X	X
504SB003C2	30039.11	Soil	X	X	X
504SB009C1	30070.08	Soil	X	X	X
504SB014C1	30070.07	Soil	X	X	X
504SB015C1	30070.06	Soil	X	X	X
504SB016C1	30070.05	Soil	X	X	X
504SB017C1	30070.02	Soil	X	X	X
504SB017C2	30070.03	Soil	X	X	X
504CB017C2	30070.04	Soil	X	X	X
504SB018C1	30070.01	Soil	X	X	X
504SB003C1MS	30039.10MS	Soil	+		
504SB003C1MSD	30039.10MSD	Soil	+		
504SB009C1MS	30070.01MS	Soil	+		
504SB009C1MSD	30070.01MSD	Soil	+		

SUBZONE L-E:

Client <u>Sample #</u>	Lab <u>Sample #</u>	<u>Matrix</u>	Volatile <u>Organics</u>	Semi- <u>volatiles</u>	Pesticides/ <u>PCB's</u>
504SB008E1	30039.03	Soil	X	X	X
504CB008E1	30039.04	Soil	X	X	X
504SB008E2	30039.05	Soil	X	X	X
504SB009E1	30039.01	Soil	X	X	X
504SB009E2	30039.02	Soil	X	X	X
504TB008E1	30039.12	Soil	X		
504SB009E1MS	30039.01MS	Soil			+
504SB009E1MSD	30039.01MSD	Soil			+

Client <u>Sample #</u>	Lab <u>Sample #</u>	<u>Matrix</u>	Chlorinated <u>Herbicides</u>	Total <u>Metals</u>	<u>Cyanide</u>
504SB008E1	30039.03	Soil	X	X	X
504CB008E1	30039.04	Soil	X	X	X
504SB008E2	30039.05	Soil	X	X	X

Client	Lab		Chlorinated	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Herbicides</u>	<u>Metals</u>	<u>Cyanide</u>
504SB009E1	30039.01	Soil	X	X	X
504SB009E2	30039.02	Soil	X	X	X

SUBZONE L-Sediment:

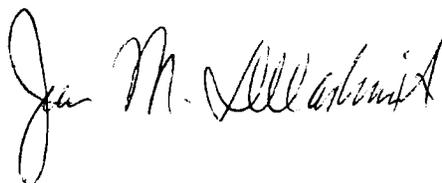
Client	Lab		Volatile	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>Metals</u>	<u>Cyanide</u>
699M0001E1	30070.10	Sediment	X	X	X
699M0002E2	30070.11	Sediment	X	X	X
699M0004E1	30070.12	Sediment	X	X	X
699M0007E1	30070.13	Sediment	X	X	X
699T0007E1	30070.14	Soil	X		

+ = Non-billable analysis

CB = FIELD DUPLICATE, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE,  
T = TRIP BLANK

DATA REVIEWER(S): 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

Southwest Laboratories of Oklahoma, Inc. - 30039 CLP Organics and Inorganics

SAMPLES: 504SB001C1, 504SB001C2, 504SB002C1, 504SB002C2, 504SB003C1, 504SB003C2, 504SB009C1, 504SB014C1, 504SB015C1, 504SB016C1, 504SB017C1, 504SB017C2, 504CB0017C2, 504SB018C1, 504TB017C2, 504SB001C1MS, 504SB001C1MSD, 504SB018C1MS, 504SB018C1MSD, 504SB003C1MS, 504SB003C1MSD, 504SB009C1MS, 504SB009C1MSD, 504SB008E1, 504CB008E1, 504SB008E2, 504SB009E1, 504SB009E2, 504TB009E1, 504SB009E1MS, 504SB009E1MSD, 699M0001E1, 699M0002E2, 699M0004E1, 699M00007E1, 699T0007E1

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 5/21/97 on instrument R:

chloromethane	33.7%
bromomethane	42.5%
chloroethane	43.3%
acetone	60.3%
2-butanone	44.4%
2-hexanone	52.9%
4-methyl-2-pentanone	40.1%

The detections of acetone in samples 504SB001C1, 504SB001C2, 504SB002C1, 504SB002C2, 504SB003C2, 504CB008E1, 504SB008E2 and 504SB009E2 were flagged as estimated (J). There were no other detections of these compounds in the associated samples after blank qualifications. No further action was taken.

The Percent Relative Standard Deviations (%RSD's) of the following compounds exceeded the 30% QC limit for the initial calibration analyzed on 7/17/97 on instrument R:

bromomethane	32.2%
chloroethane	40.3%
acetone	34.4%
2-hexanone	45.5%

The detections of acetone in samples 504SB009C1, 504SB017C2, 699M0001E1, 699M0002E1, 699M0004E1 and 699M0007E1 were flagged as estimated (J). There were no other detections of these compounds in the associated samples after blank qualifications. No further action was taken.

Continuing Calibration:

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/14/97 at 14:40 on instrument R:

chloromethane	27.8%
chloroethane	31.1%
acetone	27.3%
2-butanone	28.9%
vinyl acetate	32.9%
4-methyl-2-pentanone	27.9%
2-chloroethyl vinyl ether	33.1%

The positive results for acetone in the associated samples were previously qualified based on the initial calibration. All other results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB001C1, 504CB008E1, 504SB008E2 and 504CB009E2.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/16/97 at 08:57 on instrument R:

chloroethane	38.3%
acetone	34.9%
2-butanone	33.4%
2-hexanone	30.5%

All positive results for acetone were flagged as estimated (J), and all non-detect results for acetone and the three other compounds in the associated samples were flagged as estimated (UJ). The associated samples were 504SB001C2, 504SB002C1, 504SB002C2, 504SB003C1, 504SB003C2, 504SB008E1 and 504SB009E1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/18/97 at 10:11 on instrument R:

chloroethane	35.9%
2-hexanone	40.1%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB009C1, 504SB014C1, 504SB016C1,

504SB017C1, 504SB017C2, 504CB017C2, 699M0001E1, 699M0002E1, 699M0004E1 and 699M0007E1.

The Percent Differences (%D's) of the following compounds exceeded the 25% QC limit for the continuing calibration analyzed on 7/21/97 at 13:52 on instrument R:

2-hexanone	43.5%
2-chloroethyl vinyl ether	38.7%

All results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB015C1 and 504SB018C1.

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride, chloroform and trichloroethene were detected at 5 ug/kg, 4 ug/kg and 1 ug/kg, respectively, in soil method blanks VBLK1. Trichloroethene was not detected in the associated samples. Since the trip blanks were used for blank qualifications of methylene chloride and chloroform, no action was necessary.

Chloroform was detected at 2 ug/kg, 3 ug/kg and 3 ug/kg in soil method blanks VBLK2, VBLK3 and VBLK4. Since the trip blanks were used for blank qualifications of this compound, no action was required. In addition, acetone was detected at 7 ug/kg in soil method blank VBLK4. The detections of acetone in associated samples 504SB015C1 and 504SB018C1, which were less than 10X the blank amount, were flagged as undetected (U) with the analytical results below the CRQL being replaced with the CRQL.

##### Trip Blanks:

Methylene chloride and chloroform were detected at 8 ug/kg and 2 ug/kg, respectively, in soil trip blank 504TB017C2. The detections of methylene chloride in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL. In addition, the detections of chloroform in the associated samples, which were less than 5X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being replaced with the CRQL. The associated samples were 504SB001C1, 504SB001C2, 504SB002C1, 504SB002C2, 504SB003C1, 504SB003C2, 504SB009C1, 504SB014C1, 504SB015C1, 504SB016C1, 504SB017C1, 504SB017C2, 504CB017C2 and 504SB018C1.

Methylene chloride and chloroform were detected at 2 ug/kg each in soil trip blank 504TB008E1. The detections of methylene chloride in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being replaced with the CRQL. In addition, the detections of chloroform in the associated samples, which were less than 5X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL. The associated samples were 504SB008E1, 504CB008E1, 504SB008E2, 504SB009E1 and 504SB009E2.

Methylene chloride and chloroform were detected at 4 ug/kg and 2 ug/kg, respectively, in soil trip

blank 699T0007E1. The detections of methylene chloride in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being replaced with the CRQL. In addition, the detections of chloroform in the associated samples, which were less than 5X the blank amount, were flagged as undetected (U) with analytical results below the CRQL being replaced with the CRQL. The associated samples were 699M0001E1, 699M0002E2, 699M0004E1 and 699M0007E1.

Tentatively Identified Compounds (TIC):

There were no TIC's detected in the method or trip blanks. No action was necessary.

V.) Surrogate Recoveries:

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

VI.) Laboratory Control Samples (LCS):

Eight LCS's were analyzed by the laboratory. Two LCS Recoveries exceeded the QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

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

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

VIII.) Field Duplicates:

Two pairs of field duplicate samples (504SB017C2 / 504CB017C2 and 504SB008E1 / 504CB008E1) were analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the two sample pairs. No action was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*SEMIVOLATILE ORGANICS*

I.) Holding Times:

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

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) was 35.7% for benzo(k)fluoranthene in the standards analyzed on 7/21/97 on instrument P, which exceeded the 30% QC limit. The detections of this compound in the associated samples were qualified using the continuing calibrations. No further action was required.

The Percent Relative Standard Deviations (%RSD's) were 31.2% and 44.3%, respectively for benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene in the standards analyzed on 7/21/97 on instrument T, which exceeded the 30% QC limit. The detections of benzo(k)fluoranthene in associated samples 504SB015C1, 504SB017C1 and 504CB018C1 were flagged as estimated (J). All positive and non-detect results for indeno(1,2,3-cd)pyrene were qualified using the continuing calibration. No further action was taken.

Continuing Calibration:

The Percent Difference (%D) was 33.4% for indeno(1,2,3-cd)pyrene in the standard analyzed on 7/22/97 at 12:42 on instrument T, which exceeded the 25% QC limit. The positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB009C1, 504SB014C1, 504SB015C1, 504SB016C1, 504SB017C1, 504SB017C2, 504CB017C2 and 504SB018C1.

The Percent Difference (%D) was 33.4% for benzo(k)fluoranthene in the standard analyzed on 7/23/97 at 10:48 on instrument P, which exceeded the 25% QC limit. The positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB001C1, 504CB001C2, 504SB002C2, 504SB003C1, 504SB003C2, 504SB008E1, 504CB008E1, 504SB008E2, 504SB009E1 and 504SB009E2.

The Percent Difference (%D) was 48.6% for benzo(k)fluoranthene in the standard analyzed on 7/24/97 at 16:14 on instrument P, which exceeded the 25% QC limit. The non-detect result for this compound in associated sample 504SB002C1 was flagged as estimated (UJ).

IV.) Blanks:

Bis(2-ethylhexyl)phthalate was detected at 78 ug/kg in water method blank SBLK2. The detection of this compound in associated sample 504SB009E1, which was less than 10X the blank amount, was flagged as undetected (U) with the analytical result below the CRQL being replaced with the CRQL.

Tentatively Identified Compounds (TIC):

4-Hydroxy-4-methyl-2-pentanone, 3-pentene-2-ol, 3-penten-2-one, ethyl benzenediol, dimethylethyl-methyl furan, 2,5-diethyl furan, and 3-methyl-2-butanol were detected in the method blanks at sufficient concentrations to eliminate, by applying the 5X Action Limit Rule, the detections of these TIC's in all associated SDG samples. Since data validation action based on blank TIC's was not required, no action was taken.

V.) Surrogate Recoveries:

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

VI.) Laboratory Control Samples (LCS):

Four LCS's were analyzed by the laboratory. Two LCS recoveries exceeded the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

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

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

VIII.) Field Duplicates:

Two pairs of field duplicate samples (504SB017C2 / 504CB017C2 and 504SB008E1 / 504CB008E1) were analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the two sample pairs. No action was necessary.

IX.) Internal Standards Performance:

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

X.) TCL Compound Identification:

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

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

All CRQL criteria were met. No action was taken.

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

All TIC criteria were met. No action was necessary.

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) were 28.8% for endrin on the primary column and 33.0% for alpha-BHC on the secondary column for the PEM15B standard analyzed on 7/22/97 at 07:05, which exceeded the 25% QC limit. The results for these two compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB002C1, 504SB002C2, 504SB003C2, 502SB008E1, 504CB008E1, 504SB009E1 and 504SB009E2.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Difference (%D) was 31.7% for 4,4'-DDE for the continuing calibration analyzed on the secondary column on 7/22/97 at 07:25, which exceeded the 25% QC limit. The positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB002C1, 504SB002C2, 504SB003C2, 502SB008E1, 504CB008E1, 504SB009E1 and 504SB009E2.

IV.) Blanks:

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

V.) Surrogate Recoveries:

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

VI.) Laboratory Control Sample (LCS):

Four LCS's were analyzed by the laboratory. Five LCS recoveries were outside the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

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

The Percent Recoveries (%R's) of 4,4'-DDE were 118% and 10%, respectively, in spiked samples 504SB009E1MS and 504SB009E1MSD, which were outside the 24-121% QC limits. The non-detect result for this compound in unspiked sample 504SB009E1 was flagged as estimated (UJ).

The Relative Percent Differences (RPD's) for spiked samples 504SB009E1MS and 504SB009E1MSD exceeded the QC limit for the following compounds:

<u>Compound</u>	<u>RPD</u>	<u>QC Limits</u>
heptachlor epoxide	21%	20%
4,4'-DDD	22%	20%
4,4'-DDT	36%	20%
endrin aldehyde	80%	20%
endrin ketone	23%	20%
gamma-chlordane	23%	20%

The positive and non-detect results for these compounds in unspiked sample 504SB009E1 were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) was 158% for spiked sample 504SB018C1MS, which exceeded the 54-131% QC limits. Since this compound was not detected in unspiked sample 504SB018C1, no action was necessary.

The Relative Percent Differences (RPD's) for spiked samples 504SB018C1MS and 504SB018C1MSD exceeded the QC limit for the following compounds:

<u>Compound</u>	<u>RPD</u>	<u>QC Limits</u>
endosulfan I	21%	20%
4,4'-DDT	47%	20%

The non-detect results for these two compounds in unspiked sample 504SB018C1 were flagged as estimated (UJ).

VIII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between columns 1 and 2 exceeded the 70% QC limit for the following compounds and associated samples:

<u>Sample</u>	<u>Compound</u>	<u>%D</u>
504SB003C1	4,4'-DDE	341
504SB009C1	endrin aldehyde	88
504SB014C1	endrin aldehyde	127
504SB015C1	endrin aldehyde	106
504SB016C1	endrin aldehyde	93
504CB017C2	endrin aldehyde	91
504SB008E1	gamma-chlordane	177
504SB009E1	endrin aldehyde	76

Since the %D for 4,4'-DDE in sample 504SB003C1 was greater than 300%, that result was rejected (R). The results for compounds with %D's below 300% were flagged as estimated (J).

IX.) Field Duplicates:

Two pairs of field duplicate samples (504SB017C2 / 504CB017C2 and 504SB008E1 / 504CB008E1) were analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the two sample pairs. No action was necessary.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil Check data were not present in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC cleanup data were not present in the data package. No action was taken.

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

All CRQL criteria were met. No action was necessary.

XII.) Overall Assessment of Data/General:

The detection of 4,4'-DDE in sample 504SB003C1 was rejected because the PIS Percent Difference exceeded 300%. All other laboratory data were acceptable with qualifications.

*CHLORINATED HERBICIDES*

I.) Holding Times:

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

II.) Instrument Performance:

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

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) were 28.0% and 22.1%, respectively, for dalapon and MCPP on the primary column in the standards analyzed on 7/27/97, which exceeded the 20% QC limit. The non-detect results for MCPP and MCPA in the associated samples were flagged as estimated (UJ). The associated samples were 504SB001C2, 504SB002C1, 504SB003C1 and 504SB003C2.

Continuing Calibration:

The Percent Differences (%D's) were 37.5% and 36.7%, respectively, for MCPP and MCPA on the primary column in the standards analyzed on 7/27/97 at 21:40, which exceeded the 25% QC limit. The non-detect results for MCPP and MCPA in the associated samples were flagged as estimated (UJ). The associated samples were 504SB001C2, 504SB002C1, 504SB003C1 and 504SB003C2.

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%R's) of 2,4-dichlorophenylacetic acid (DCAA) exceeded the 18-94% QC limits for the following samples:

<u>Sample</u>	<u>DCAA, %R</u>
504SB016C1	116
504SB017C1	104

Since there were no detections in the two samples, no action was required.

VI.) Laboratory Control Sample (LCS):

Four LCS's were analyzed by the laboratory. Two LCS recoveries exceeded the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

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

The Percent Recovery (%R) was 34% for MCPP in spiked sample 504SB009C1MSD, which was below the 40-114% QC limits. The non-detect result for MCPP in unspiked sample 504SB009C1 was flagged as estimated (UJ).

The Percent Recovery (%R) was 16% for MCPP in spiked sample 504SB003C2MSD, which was below the 40-114% QC limits. In addition the Relative Percent Difference (RPD) was 88% for MCPP in spiked samples 504SB003C2MS and 504SB003C2MSD, which exceeded the 29% QC limit. The non-detect result for MCPP in unspiked sample 504SB003C2 was previously flagged based on the associated calibration. No further action was required.

VIII.) Field Duplicates:

Two pairs of field duplicate samples (504SB017C2 / 504CB017C2 and 504SB008E1 / 504CB008E1) were analyzed in this SDG. There were no calculable Relative Percent Differences (RPD's) for the two sample pairs. No action was necessary.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

XI.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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:

Blank Type/ID#	Analyte	Max. Conc.	5X Action Level
CCB9	aluminum	14.2 ug/L	14.2 mg/kg
CCB9	potassium	87.0 ug/L	87.0 mg/kg
PBS	cyanide	0.13 mg/kg	0.65 mg/kg

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), after correction for percent moisture, for which the contaminated blank was an associated calibration or preparation blank were flagged as undetected (U).

A negative result was observed for thallium (-5.00 ug/L) with an absolute value greater than the IDL in continuing calibration blank CCB7. All associated positive sample results below 5X the absolute value

of the negative blank results and all associated non-detects were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

arsenic	5 ug/L
beryllium	1 ug/L
cobalt	2 ug/L
lead	2 ug/L
manganese	2 ug/L
selenium	5 ug/L
sodium	76 ug/L
thallium	7 ug/L
vanadium	2 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was detected in the samples at a concentration comparable to or greater than that of ICS Solution A, no action was taken. No analytes were observed with negative result greater than the IDL. No further action was necessary.

V.) ICP Serial Dilution Analysis:

All Serial Dilution Analysis criteria were met. No action was necessary.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was necessary.

VIII.) Matrix Spike Recoveries (MS):

MS samples were not analyzed in this fraction of the SDG. No action was taken.

IX.) Field Duplicates:

Two pairs of field duplicate samples (504SB017C2 / 504CB017C2 and 504SB008E1 / 504CB008E1) were analyzed in this SDG. The calculable Relative Percent Differences were:

<u>Compound</u>	<u>504SB017C2</u>	<u>504CB017C2</u>	<u>RPD</u>
aluminum	1120 mg/kg	577 mg/kg	66%
barium	5.9 mg/kg	3.3 mg/kg	57%
calcium	10500 mg/kg	21500 mg/kg	68%

<u>Compound</u>	<u>504SB017C2</u>	<u>504CB017C2</u>	<u>RPD</u>
chromium	4.0 mg/kg	2.2 mg/kg	58%
iron	2290 mg/kg	1110 mg/kg	69%
lead	5.0 mg/kg	2.6 mg/kg	63%
magnesium	282 mg/kg	212 mg/kg	28%
manganese	26.1 mg/kg	10.2 mg/kg	88%
zinc	10.5 mg/kg	3.3 mg/kg	104%

The RPD's of aluminum, calcium, iron, lead, manganese and zinc exceeded the 60%QC limit for soil samples. The detections of these analytes in the field duplicate sample pair were flagged as estimated (J). The other RPD's were within the 60% QC limit. No further action was necessary.

<u>Compound</u>	<u>504SB008C1</u>	<u>504CB008C1</u>	<u>RPD</u>
aluminum	5450 mg/kg	5580 mg/kg	2.4%
arsenic	3.1 mg/kg	4.3 mg/kg	32%
barium	22.6 mg/kg	21.2 mg/kg	6.4%
calcium	21200 mg/kg	45100 mg/kg	72%
chromium	23.3 mg/kg	21.9 mg/kg	6.2%
copper	6.9 mg/kg	8.5 mg/kg	21%
iron	3670 mg/kg	4700 mg/kg	25%
lead	16.8 mg/kg	20.0 mg/kg	17%
magnesium	610 mg/kg	935 mg/kg	42%
manganese	28.3 mg/kg	29.8 mg/kg	5.2%
mercury	0.12 mg/kg	0.07 mg/kg	53%
vanadium	7.6 mg/kg	10.7 mg/kg	34%
zinc	22.3 mg/kg	25.7 mg/kg	14%

The RPD of calcium exceeded the 60% QC limit for soil samples. The detections of calcium in the field duplicate sample pair were flagged as estimated (J). Since all other RPD's were within the 60% QC limit for soil samples, no further action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was required.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met, so no action was necessary.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# 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 L  
SUBZONES: L-A and L-B  
SERVICE ORDER NUMBER: 0252  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 or SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994

SAMPLE MATRIX: Soils  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides / PCB's, Chlorinated Herbicides, Total Metals, Cyanide

SDG NUMBER: 30147

SAMPLES:

SUBZONE L-A:

Client	Lab		Volatile	Semi-	Pesticides/
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>
504SB001A1	30147.12	Soil	X	X	X
504SB001A2	30147.13	Soil	X	X	X
504SB001A2RE	30147.13RE	Soil		+	+
504SB002A1	30174.10	Soil	X	X	X
504SB002A2	30174.11	Soil	X	X	X
504SB005A1	30174.06	Soil	X	X	X
504SB005A1RE	30147.06RE	Soil			+
504SB005A2	30174.07	Soil	X	X	X
504SB005A2RE	30174.07RE	Soil			+
504SB006A1	30174.08	Soil	X	X	X
504SB006A2	30174.09	Soil	X	X	X
504SB006A2RE	30174.09RE	Soil			+
504SB007A1	30174.01	Soil	X	X	X
504CB007A1	30174.02	Soil	X	X	X

Client <u>Sample #</u>	Lab <u>Sample #</u>	<u>Matrix</u>	<u>Volatile Organics</u>	<u>Semi- volatiles</u>	<u>Pesticides/ PCB's</u>
504SB007A2	30174.03	Soil	X	X	X
504SB007A2RE	30174.03RE	Soil			+
504SB008A1	30174.04	Soil	X	X	X
504SB008A2	30174.05	Soil	X	X	X
504SB008A2RE	30174.05RE	Soil			+
504TB007A1	30174.14	Soil	X		
504SB001A2MS	30147.13MS	Soil		+	+
504SB001A2MSD	30147.13MSD	Soil		+	+
504SB007A1MS	30174.01MS	Soil	+		
504SB007A1MSD	30174.01MSD	Soil	+		

Client <u>Sample #</u>	Lab <u>Sample #</u>	<u>Matrix</u>	<u>Herbicides</u>	<u>Total Metals</u>	<u>Cyanide</u>
504SB001A1	30147.12	Soil	X	X	X
504SB001A2	30147.13	Soil	X	X	X
504SB002A1	30174.10	Soil	X	X	X
504SB002A2	30174.11	Soil	X	X	X
504SB005A1	30174.06	Soil	X	X	X
504SB005A2	30174.07	Soil	X	X	X
504SB006A1	30174.08	Soil	X	X	X
504SB006A2	30174.09	Soil	X	X	X
504SB007A1	30174.01	Soil	X	X	X
504CB007A1	30174.02	Soil	X	X	X
504SB007A2	30174.03	Soil	X	X	X
504SB008A1	30174.04	Soil	X	X	X
504SB008A2	30174.05	Soil	X	X	X
504SB007A1MS	30174.01MS	Soil	+		
504SB007A1MSD	30174.01MSD	Soil	+		

SUBZONE L-B:

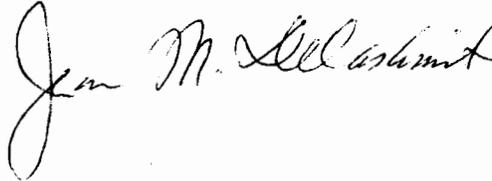
Client <u>Sample #</u>	Lab <u>Sample #</u>	<u>Matrix</u>	<u>Volatile Organics</u>	<u>Semi- volatiles</u>	<u>Pesticides/ PCB's</u>
504SB002B1	30147.08	Soil	X	X	X
504SB003B1	30147.06	Soil	X	X	X
504SB003B1RE	30147.06RE	Soil	+		
504SB003B2	30147.07	Soil	X	X	X
504SB004B1	30147.04	Soil	X	X	X
504SB004D2	30147.05	Soil	X	X	X
504SB005B1	30147.01	Soil	X	X	X
504SB005B2	30147.02	Soil	X	X	X
504CB005B2	30147.03	Soil	X	X	X
504TB005B2	30147.09	Soil	X		
504SB002B1MS	30147.08MS	Soil		+	+
504SB002B1MSD	30147.08MSD	Soil		+	+
504SB005B1MS	30147.01MS	Soil	+		
504SB005B1MSD	30147.01MSD	Soil	+		

<u>Client</u> <u>Sample #</u>	<u>Lab</u> <u>Sample #</u>	<u>Matrix</u>	<u>Herbicides</u>	<u>Total</u> <u>Metals</u>	<u>Cyanide</u>
504SB002B1	30147.08	Soil	X	X	X
504SB003B1	30147.06	Soil	X	X	X
504SB003B2	30147.07	Soil	X	X	X
504SB004B1	30147.04	Soil	X	X	X
504SB004D2	30147.05	Soil	X	X	X
504SB005B1	30147.01	Soil	X	X	X
504SB005B2	30147.02	Soil	X	X	X
504CB005B2	30147.03	Soil	X	X	X
504SB005B1MS	30147.01MS	Soil	+		
504SB005B1MSD	30147.01MSD	Soil	+		

C = FIELD DUPLICATE, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE,  
RE = REANALYSIS, T = TRIP BLANK

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

Southwest Laboratories of Oklahoma, Inc. - 30147 CLP Organics and Inorganics

SAMPLES: 504SB001A1, 504SB001A2, 504SB001A2RE, 504SB002A1, 504SB002A2, 504SB005A1, 504SB005A1RE, 504SB005A2, 504SB005A2RE, 504SB006A1, 504SB006A2, 504SB006A2RE, 504SB007A1, 504CB007A1, 504SB007A2, 504SB007A2RE, 504SB008A1, 504SB008A2, 504SB008A2RE, 504TB007A1, 504SB002B1, 504SB003B1, 504SB003B1RE, 504SB003B2, 504SB004B1, 504SB004B2, 504SB005B1, 504SB005B2, 504CB005B2, 504TB005B2, 504SB001A2MS, 504SB001A2MSD, 504SB007A1MS, 504SB007A1MSD, 504SB002B1MS, 504SB002B1MSD, 504SB005B1MS, 504SB005B1MSD

### *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. No action was required.

#### III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 7/17/97 on instrument R for the following compounds:

bromomethane	32.2%
chloroethane	40.3%
acetone	34.4%
2-hexanone	45.5%

All positive results for acetone in the associated samples were flagged as estimated (J). Since there were no positive results for the other compounds in the associated samples, no further action was required. The associated samples were 504SB001A2, 504SB006A2, 504SB007A2, 504SB008A2 and 504SB004B2.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/23/97 at 09:56 on instrument R for the following compounds:

chloroethane	26.1%
vinyl acetate	41.5%
4-methyl-2-pentanone	25.1%
2-hexanone	47.6%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB005B1, 504SB005B2, 504SB004B2, 504SB003B1, 504SB003B2 and 504SB002B1.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/24/97 at 10:42 on instrument R for the following compounds:

bromomethane	39.4%
chloroethane	46.9%
methylene chloride	42.0%
vinyl acetate	40.0%
2-hexanone	38.4%
2-chloroethyl vinyl ether	64.2%

The results for these compounds in the associated samples, which consisted entirely of non-detects after blank qualifications, were flagged as estimated (UJ). The associated samples were 504SB004B1, 504CB005B2, 504SB007A1, 504SB007A2, 504SB008A2, 504SB005A2, 504SB006A1, 504SB006A2, 504SB002A1 and 504SB001A2.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/25/97 at 08:37 on instrument R for the following compounds:

bromomethane	37.4%
chloroethane	51.1%
vinyl acetate	39.3%
2-hexanone	48.6%
2-chloroethyl vinyl ether	34.7%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504CB007A1, 504SB008A1, 504SB005A1, 504SB002A2 and 504SB001A1.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/28/97 at 11:04 on instrument R for the following compounds:

bromomethane	39.2%
chloroethane	51.7%
acetone	25.2%
2-hexanone	35.4%
2-chloroethyl vinyl ether	33.5%

Since the only associated samples were trip blanks, no action was required.

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride was detected at 2 ug/kg in method blank VBLK1. All positive results for this compound in the associated samples less than 10X the blank amount were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 504SB002B1, 504SB003B1, 504SB003B2, 504SB004B2, 504SB005B1 and 504SB005B2.

Methylene chloride was detected at 5 ug/kg in method blank VBLK2. The positive results for methylene chloride in the associated samples less than 10X the blank amount were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 504SB004B1, 504CB005B2, 504SB007A1, 504SB007A2, 504SB008A2, 504SB005A2, 504SB006A1, 504SB006A2, 504SB002A1 and 504SB001A2.

Acetone was detected at 11 ug/kg in method blank VBLK4. Since the associated sample was a trip blank, no action was required.

##### Trip Blanks:

Methylene chloride was detected at 7 ug/kg in trip blank 504TB005B2. All positive results for this compound in the associated samples not previously flagged less than 10X the blank amount were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 504SB002B1, 504SB003B1, 504SB003B2, 504SB004B1, 504SB004B2, 504SB005B1, 504CB004B1 and 504SB005B2.

##### Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or trip blanks. No action was required.

#### V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of toluene-d8 and 1,2-dichloroethane were 135% and 165%, respectively, for sample 504SB003B1, which exceeded their respective 81-117% and 70-121% QC limits. There were positive results for this sample after blank qualifications. No action was required.

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

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

#### VII.) Laboratory Control Samples (LCS):

Four LCS's were analyzed for this SDG. All LCS criteria were met. No action was taken.

#### VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples in this fraction of the SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

The Percent Recoveries (%R's) for bromochloromethane (44.7%) and chlorobenzene-d5 (42.4%) for sample 504SB003B1 were below the 50-200% QC limits. All results for the compounds quantitated on these ISTD's, which consisted entirely of non-detects after blank qualification, were flagged as estimated (J) and (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analysis of sample 504SB003B1 was considered by the validator to be of preferable data quality to the reanalysis because of better surrogate and internal standards performances. All laboratory data were acceptable with qualifications.

*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. No action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) exceeded the 30% QC limit for the standards analyzed on 7/18/97 on instrument M for 4-chloroaniline (32.7%). There were no positive results for this compound in the associated samples. No action was required.

The Percent Relative Standard Deviation (%RSD) exceeded the 30% QC limit for the standards analyzed on 7/21/97 on instrument P for benzo(k)fluoranthene (35.7%). The positive results for this compound in associated samples 504SB003B1, 504SB005B1 and 504SB004B1 were flagged as estimated (J).

#### Continuing Calibration:

The Percent Differences (%D's) for 4-chloroaniline (36.1%) and hexachlorobenzene (25.6%) exceeded the 25% QC limit for the standards analyzed on 7/30/97 at 14:43 on instrument M. The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB007A1, 504SB006A1, 504SB008A1, 504SB007A2, 504SB008A2, 504SB005A1, 504SB006A2, 504SB002A1, 504SB002A2, 504SB001A1 and 504SB001A2.

The Percent Difference (%D) for 4-chloroaniline (34.5%) exceeded the 25% QC limit for the standards analyzed on 7/31/97 at 16:18 on instrument M. The results for this compound in associated samples 504SB005A2 and 504CB007A1, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Difference (%D) for benzo(k)fluoranthene (49.1%) exceeded the 25% QC limit for the standards analyzed on 7/25/97 at 12:20 on instrument P. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB002B1, 504SB005B1, 504SB005B2, 504CB005B2, 504SB004B1 and 504SB004B2.

The Percent Differences (%D's) for hexachlorocyclopentadiene (30.2%) and benzo(k)fluoranthene (46.8%) exceeded the 25% QC limit for the standards analyzed on 7/28/97 at 12:19 on instrument P. All positive and non-detect results for these compounds not previously flagged in associated samples 504SB003B1 and 504SB003B2 were flagged as estimated (J) and (UJ).

#### IV.) Blanks:

##### Method Blanks:

Butylbenzylphthalate and bis(2-ethylhexyl)phthalate were detected at 47 ug/kg and 140 ug/kg, respectively, in method blank SBLK1. The positive result for bis(2-ethylhexyl)phthalate in associated samples 504CB005B2, which was less than 10X the blank amount, was flagged as undetected (U) with the analytical result being replaced with the CRQL. The other compound was not detected in the associated samples. No further action was taken.

##### Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method blanks. No action was required.

#### V.) Surrogate Recoveries:

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

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

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

VII.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was taken.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples in this fraction of the SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

The Percent Recovery (%R) of chrysene-d12 was 49.0% for sample 504SB001A2, which was below the 50-200% QC limit. All positive and non-detect results for the compounds quantitated on this ISTD were flagged as estimated (J) and (UJ).

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The original analysis of sample 504SB001A2 was considered by the validator to be of preferable data quality compared to the reanalysis because of better internal standards performances. All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Difference (%D) for endrin (32.8%) exceeded the 25% QC limit for the PEM analyzed on 7/30/97 at 17:15 on the secondary column. All positive and non-detect results for this compound in the

associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB007A2, 504SB008A2, 504SB005A1, 504SB005A2, 504SB006A2, 504SB002A2 and 504SB001A2.

The Percent Difference (%D) for endrin (34.2%) exceeded the 25% QC limit for the PEM analyzed on 7/31/97 at 12:52 on the secondary column. All results for this compound in the associated samples were previously flagged. No further action was required.

The Percent Difference (%D) for 4,4'-DDT (29.1%) exceeded the 25% QC limit for the PEM analyzed on 8/01/97 at 21:33 on the secondary column. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB007A2, 504SB008A2, 504SB005A1, 504SB005A2, 504SB006A2, 504SB002A2 and 504SB001A2.

### III.) Calibration:

#### Initial Calibration:

All Initial Calibration criteria were met. No action was required.

#### Continuing Calibration:

The Percent Difference (%D) for endosulfan I (78.3%) exceeded the 25% QC limit for the standards analyzed on 7/31/97 at 12:53 on the primary column. All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB007A2, 504SB008A2, 504SB005A1, 504SB005A2, 504SB006A2, 504SB002A2 and 504SB001A2.

The Percent Difference (%D) for 4,4'-DDT (43.1%) exceeded the 25% QC limit for the standards analyzed on 8/01/97 at 22:03 on the primary column. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB007A1, 504CB007A1, 504SB008A1, 504SB006A1, 504SB002A1 and 504SB001A1.

The Percent Differences (%D's) for 4,4'-DDT (47.4%) and methoxychlor (28.6%) exceeded the 25% QC limit for the standards analyzed on 8/01/97 at 22:03 on the secondary column. The results for 4,4'-DDT were previously flagged. The results for the other compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB007A1, 504CB007A1, 504SB008A1, 504SB006A1, 504SB002A1 and 504SB001A1.

### IV.) Blanks:

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

### V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of decachlorobiphenyl (DCB) on the primary column (174%) and the secondary column (227%) for sample 504SB002A1 exceeded the 30-150% QC limits. Since there were no positive results for this sample, no action was required.

The Percent Recovery (%R) of decachlorobiphenyl (DCB) on the secondary column for sample 504SB003B1 was 305%, which exceeded the 30-150% QC limits. Since there were no positive results for this sample, no action was required.

The Percent Recovery (%R) of decachlorobiphenyl (DCB) on the secondary column for sample 504SB002B1 was 222%, which exceeded the 30-150% QC limits. Since there were no positive results for this sample, no action was required.

The Percent Recovery (%R) of decachlorobiphenyl (DCB) on the secondary column for sample 504SB006A1 was 243%, which exceeded the 30-150% QC limits. Since there were no positive results for this sample, no action was required.

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

The Percent Recoveries (%R's) for spiked samples 504SB001A2MS and 504SB001A2MSD exceeded their QC limits for the following compound:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
4,4'-DDT	151	134	54-131%

Since this compound was not detected in unspiked sample 504SB001A2, no action was required.

The Relative Percent Differences (RPD's) for spiked samples 504SB002B1MS and 504SB002B1MSD exceeded the 20% QC limit for the following compounds:

alpha-BHC	79%
beta-BHC	70%
gamma-BHC	76%
delta-BHC	77%
heptachlor	76%
aldrin	88%
heptachlor epoxide	73%
endosulfan I	77%
4,4'-DDE	200%
dieldrin	67%
endrin	67%
endosulfan II	72%
4,4'-DDD	63%
endosulfan sulfate	67%
4,4'-DDT	200%
endrin aldehyde	59%
methoxychlor	67%
alpha-chlordane	73%
endrin ketone	65%

The positive and non-detect results for these compounds in associated unspiked sample 504SB002B1 were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) for spiked samples 504SB002B1MS and 504SB002B1MSD were below their respective QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
aldrin	17	-	22-119%
endosulfan I	12	-	24-121%
4,4'-DDE	0	22	50-117%
endosulfan II	17	-	24-142%
4,4'-DDD	35	-	57-160%
4,4'-DDT	0	30	54-131%
endrin aldehyde	26	-	27-160%

The results for these compounds in the associated sample were previously flagged based on the RPD's. No further action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between column 1 and column 2 exceeded the 70% QC limit for the following samples:

<u>Sample</u>	<u>Compound</u>	<u>Col., %D</u>
504SB001A1	4,4'-DDT	71%
504SB002A2	heptachlor epoxide	147%
	4,4'-DDE	72%
	endrin	999%
	endosulfan II	190%
	endrin aldehyde	137%
504SB005A1	4,4'-DDT	85%
	endrin aldehyde	155%
504SB006A1	4,4'-DDE	84%
	endosulfan II	316%
504SB003B1	endrin ketone	200%

The results for the compounds with %D greater than 300% were rejected (R). The results for the other compounds were flagged as estimated (J).

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the two sets of field duplicate samples in this SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria were met. No action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met. No action was necessary.

X.) Overall Assessment of Data/General:

The original analyses of samples 504SB001A2, 504SB005A1, 504SB005A2, 504SB006A2, 504SB007A2 and 504SB008A2 were considered by the validator to be of preferable data quality compared to the reanalyses because of better holding times.

The results for two compounds whose column Percent Differences exceeded 300% were rejected (R). All other laboratory data were acceptable with qualification.

*CHLORINATED 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:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) for MCPP (22.7%) and MCPA (32.6%) exceeded the 20% QC limit for the standards analyzed on 8/04/97 on the primary column. All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB004B1, 504SB005B1, 504SB005B2 and 504CB005B2.

The Percent Relative Standard Deviations (%RSD's) for MCPP (35.7%) and MCPA (21.4%) exceeded the 20% QC limit for the standards analyzed on 8/04/97 on the secondary column. All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB004B1, 504SB005B1, 504SB005B2 and 504CB005B2.

The Percent Relative Standard Deviation (%RSD) for MCPP (48.9%) exceeded the 20% QC limit for the standards analyzed on 8/06/97 on the primary column. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB007A1, 504CB007A1, 504SB007A2 and 504SB008A1.

The Percent Relative Standard Deviation (%RSD) for MCPP (45.3%) exceeded the 20% QC limit for the standards analyzed on 8/06/97 on the primary column. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB008A2, 504SB005A1, 504SB005A2, 504SB006A1, 504SB006A2, 504SB002A1, 504SB002A2, 504SB001A1 and 504SB001A2.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 8/06/97 at 14:31 on the primary column for 2,4,5-T (29.0%). The results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB007A1, 504CB007A1, 504SB007A2 and 504SB008A1.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 8/06/97 at 14:31 on the secondary column for the following compounds:

MCCP	31.4%
2,4-D	45.1%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB007A1, 504CB007A1, 504SB007A2 and 504SB008A1.

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of 2,4-dichlorophenylacetic acid (DCAA) exceeded the 18-94% QC limits for the following samples:

504SB001A1	107%
504SB001A2	107%
504SB002A1	104%
504SB002A2	102%
504SB005A1	96%
504SB005A2	97%
504SB006A1	97%
504SB006A2	103%
504SB007A1	116%
504CB007A1	109%
504SB007A2	115%
504SB008A1	125%
504SB008A2	124%

Since there were no positive results for these samples, no action was required.

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

The Percent Recoveries (%R's) of MCCP in spiked samples 504SB007A1MS (129%) and 504SB007A1MSD (148%) were above the 40-114% QC limits. This compound was not detected in unspiked sample 504SB007A1. No action was taken.

VII.) TCL Compound Identification (HIS):

All HIS criteria were met. No action was required.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples in this fraction of the SDG. No action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing 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:

Blank Type/ID#	Analyte	Max. Conc.	Action Level mg/kg
CCB2	aluminum	24.7 ug/L	24.7
CCB4	cobalt	0.90 ug/L	0.90
CCB4	iron	20.5 ug/L	20.5
CCB5	potassium	117 ug/L	117
CCB5	selenium	3.20 ug/L	3.20
PBS	cyanide	0.09 mg/kg	0.45

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

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

A negative result was observed for thallium (-5.00 ug/L) with an absolute value greater than the IDL in the first continuing calibration blank. All associated positive sample results less than 5X the absolute value of the negative blank result (5.00 mg/kg) and all associated non-detects were flagged as estimated (J) and (UJ).

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

arsenic	6 ug/L
beryllium	1 ug/L
cobalt	2 ug/L
manganese	1 ug/L
selenium	5 ug/L
thallium	7 ug/L

These analytes should not be present. Additionally, a negative result was observed for potassium (-73 ug/L) in ICS Solution A at an absolute concentration greater than the IDL. Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike Analysis was not performed in this fraction of the SDG. No action was required.

IX.) Field Duplicates:

Two sets of field duplicate samples were analyzed by the laboratory in this SDG. The calculable Relative Percent Differences (RPD's) were:

<u>Compound</u>	<u>504SB007A1, ug/kg</u>	<u>504CB007A1, ug/kg</u>	<u>RPD</u>
aluminum	3750	3840	2.4%
barium	15.4	15.9	3.2%
calcium	296	279	4.9%
iron	5160	4340	17%
lead	11.5	13.9	18%
manganese	20.1	20.2	0.5%
zinc	23.7	25.9	8.9%

<u>Compound</u>	<u>504SB005B2, ug/kg</u>	<u>504CB005B2, ug/kg</u>	<u>RPD</u>
aluminum	6290	5880	6.7%
barium	13.2	12.3	7.1%
calcium	243000	236000	2.9%
chromium	64	60.6	5.4%
iron	5710	5760	0.9%
magnesium	19000	20000	5.1%
manganese	74.9	82.3	9.4%
vanadium	36.7	35.1	4.4%
zinc	59.5	58.2	2.2%

All RPD's were within the 60% QC limit for soil samples. No action was required.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# 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 L  
SUBZONES: L-A, L-E and L-H  
SERVICE ORDER NUMBER: 0253  
CONTRACTED LAB: Southwest Laboratories of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 or SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatile Organics, Semivolatile Organics, Pesticides / PCB's, Chlorinated Herbicides, Total Metals, Cyanide

SDG NUMBER: 30197 (Level III)

SAMPLES:

SUBZONE L-A:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's
504SB009A1	30197.01	Soil	X	X	X
504SB009A1RE	30197.01RE	Soil			+
504SB009A2	30237.04	Soil	X	X	X
504SB009A2RE	30237.04RE	Soil			+
504CB009A2	30237.05	Soil	X	X	X
504CB009A2RE	30237.05RE	Soil			+
504SB010A1	30197.02	Soil	X	X	X
504SB010A1RE	30197.02RE	Soil			+
504SB010A2	30237.06	Soil	X	X	X
504SB010A2RE	30237.06RE	Soil			+
504SB011A1	30197.03	Soil	X	X	X
504SB011A1RE	30197.03RE	Soil			+
504SB011A2	30237.07	Soil	X	X	X
504SB011A2RE	30237.07RE	Soil			+
504SB012A1	30197.04	Soil	X	X	X
504SB012A1RE	30197.04RE	Soil			+

Client	Lab		Volatile	Semi-	Pesticides/
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>
504SB012A2	30237.08	Soil	X	X	X
504SB012A2RE	30237.08RE	Soil			+
504DB009A2	30237.10	Water	X	X	X
504EB009A2	30237.11	Water	X	X	X
504TB009A2	30237.09	Soil	X		
504TB012A1	30197.05	Soil	X		
504TB009A2	30237.12	Water	X		
504DB009A2MS	30237.10MS	Water	+		
504DB009A2MSD	30237.10MSD	Water	+		
504EB009A2MS	30237.11MS	Water			+
504EB009A2MSD	30237.11MSD	Water			+
504SB009A1MS	30197.01MS	Soil	+	+	
504SB009A1MSD	30197.01MSD	Soil	+	+	
504SB009A2MS	30237.04MS	Soil			+
504SB009A2MSD	30237.04MSD	Soil			+

Client	Lab		Herbicides	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>		<u>Metals</u>	<u>Cyanide</u>
504SB009A1	30137.01	Soil	X	X	X
504SB009A2	30237.04	Soil	X	X	X
504CB009A2	30237.05	Soil	X	X	X
504SB010A1	30197.02	Soil	X	X	X
504SB010A2	30237.06	Soil	X	X	X
504SB011A1	30197.03	Soil	X	X	X
504SB011A2	30237.07	Soil	X	X	X
504SB012A1	30197.04	Soil	X	X	X
504SB012A2	30237.08	Soil	X	X	X
504DB009A2	30237.10	Water	X	X	X
504EB009A2	30237.11	Water	X	X	X
504EB009A2MS	30237.11MS	Water	+		
504EB009A2MSD	30237.11MSD	Water	+		
504SB012A2MS	30237.08MS	Soil	+		
504SB012A2MSD	30237.08MSD	Soil	+		

SUBZONE L-E:

Client	Lab		Volatile	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>Metals</u>	<u>Cyanide</u>
699M0003E1	30237.01	Soil	X	X	X
699M0009E1	30237.02	Soil	X	X	X
699TM0009E1	30237.03	Soil	X		

SUBZONE L-H:

<u>Client</u> <u>Sample #</u>	<u>Lab</u> <u>Sample #</u>	<u>Matrix</u>	<u>Volatile</u> <u>Organics</u>	<u>Semi-</u> <u>volatiles</u>	<u>Pesticides/</u> <u>PCB's</u>
037GW002H1	30283.01	Water	X	X	X
037GW003H1	30283.02	Water	X	X	X
037TW002H1	30238.03	Water	X		

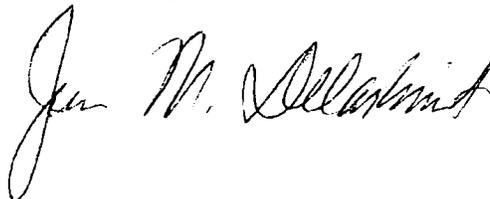
<u>Client</u> <u>Sample #</u>	<u>Lab</u> <u>Sample #</u>	<u>Matrix</u>	<u>Total</u> <u>Metals</u>	<u>Cyanide</u>
037GW002H1	30283.01	Water	X	X
037GW003H1	30283.02	Water	X	X

+ = Non-billable analysis

C = FIELD DUPLICATE, D = DEIONIZED RINSATE BLANK, E = EQUIPMENT RINSATE BLANK, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, RE = REANALYSIS, T = TRIP BLANK

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

Southwest Laboratories of Oklahoma, Inc. - 30197 CLP Organics and Inorganics

SAMPLES: 504SB009A1, 504SB009A1RE, 504SB009A2, 504SB009A2RE, 504CB009A2, 504CB009A2RE, 504SB010A1, 504SB010A1RE, 504SB010A2, 504SB010A2RE, 504SB011A1, 504SB011A1RE, 504SB011A2, 504SB011A2RE, 504SB012A1, 504SB012A1RE, 504SB012A2, 504SB012A2RE, 504DB009A2, 504EB009A2, 504TB009A2, 504TB012A1, 504TB09AA2, 699M0003E1, 6999M0009E1, 699TM009E1, 037GW002H1, 037GW003H1, 037TW002H1, 504DB009A2MS, 504DB009A2MSD, 504EB009A2MS, 504EB009A2MSD, 504SB009A1MS, 504SB009A1MSD, 504SB009A2MS, 504SB009A2MSD, 504SB012A2MS, 504SB012A2MSD

### *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 required.

#### III.) Calibration:

##### Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit for the standards analyzed on 7/17/97 on instrument R for the following compounds:

bromomethane	32.2%
chloroethane	40.3%
acetone	34.4%
2-hexanone	45.5%

The positive result for acetone in associated sample 699M0009E1 was flagged as estimated (J). Since there were no other positive results for acetone and the other compounds in the associated samples, no further action was required.

##### Continuing Calibration:

The Percent Difference (%D) exceeded the 25% QC limit for the standards analyzed on 7/24/97 at 09:21 on instrument N for vinyl acetate (38.9%). Since the only associated samples were field and trip blanks, no action was required.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/28/97 at 11:04 on instrument R for the following compounds:

bromomethane	39.2%
chloroethane	51.7%
acetone	25.2%
2-hexanone	35.4%
2-chloroethyl vinyl ether	33.5%

The results for these compounds in the associated samples, which consisted entirely of non-detects, after blank qualifications were flagged as estimated (UJ). The associated samples were 504SB009A1, 504SB010A1, 504SB012A1, 504SB011A1, 699M0003E1, 699M0009E1, 504SB009A2, 504CB009A2, 504SB010A2 and 504SB011A2.

The Relative Response Factor (RRF) for 2-chloroethyl vinyl ether was 0.029 for the standards analyzed on 7/29/97 at 11:11 on instrument R, which was below the 0.050 QC limit. The non-detect result for this compound in associated sample 504SB012A2 was rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/29/97 at 11:11 on instrument R for the following compounds:

chloromethane	31.3%
bromomethane	44.8%
chloroethane	44.8%
2-butanone	35.3%
vinyl acetate	57.5%
4-methyl-2-pentanone	42.6%
2-hexanone	68.7%
2-chloroethyl vinyl ether	83.2%
1,1,2,2-tetrachloroethane	28.7%

The result for 2-chloroethyl vinyl ether in the associated sample was previously rejected. The results for the other compounds in associated sample 504SB012A2, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Relative Response Factor (RRF) for 2-chloroethyl vinyl ether was 0.048 for the standards analyzed on 7/30/97 at 11:08 on instrument R, which was below the 0.050 QC limit. The non-detect result for this compound in associated trip blank 504TB009A2 was rejected (R).

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 7/30/97 at 11:08 on instrument R for the following compounds:

vinyl acetate	26.1%
2-hexanone	25.2%
2-chloroethyl vinyl ether	72.3%

The result for 2-chloroethyl vinyl ether in the associated blank was previously rejected. Since the only associated sample was a trip blank, no further action was required.

#### IV.) Blanks:

##### Method Blanks:

Acetone was detected at 11 ug/kg in soil method blank VBLK3. All positive results for this compound in the associated samples less than 10X the blank amount were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 504SB009A1, 504SB010A1, 504SB012A1, 504SB011A1, 699M0003E1, 699M0009E1, 504SB009A2, 504CB009A2, 504SB010A2 and 504SB011A2.

##### Field Blanks:

Chloroform and bromodichloromethane were detected at 7 ug/L and 2 ug/L in deionized water blank 504DB009A2. These compounds were not detected in the associated samples. No action was required.

Chloroform was detected at 9 ug/L in equipment rinsate blank 504EB009A2. Since there were no positive results for this compound in the associated samples, no action was required.

##### Trip Blanks:

Methylene chloride and acetone were detected at 12 ug/kg and 13 ug/kg in trip blank 699TM009E1. All positive results for these compounds in associated samples 699M0003E1 and 699M0009E1 less than 10X the blank amount were flagged as undetected (U) with the detection limits being raised to the level of contamination in each sample.

##### Tentatively Identified Compounds (TIC):

There were no TIC's detected in the method, field or trip blanks. No action was required.

#### V.) Surrogate Recoveries:

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

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

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

#### VII.) Laboratory Control Samples (LCS):

Six LCS's were analyzed for this SDG. Several Percent Recoveries were outside their respective QC limits. Data validation action based on LCS criteria was not required. No action was taken.

#### VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples in this fraction of the SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The non-detect results for 2-chloroethyl vinyl ether in sample 504SB012A2 and trip blank 504TB009A2 were rejected because of low RRF's in the continuing calibrations. All other laboratory data were acceptable with qualifications.

*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 required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) exceeded the 30% QC limit for the standards analyzed on 7/18/97 on instrument M for 4-chloroaniline (32.7%). There were no positive results for this compound in the associated samples. No action was required.

The Percent Relative Standard Deviation (%RSD) exceeded the 30% QC limit for the standards analyzed on 7/21/97 on instrument P for benzo(k)fluoranthene (35.7%). There were no positive results for this compound in the associated samples. No action was required.

Continuing Calibration:

The Percent Difference (%D) exceeded the 25% QC limit for the standards analyzed on 7/29/97 at 13:38 on instrument M for 4-chloroaniline (30.5%). The results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB009A1, 504SB010A1, 504SB011A1 and 504SB012A1.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 8/01/97 at 10:52 on instrument M for the following compounds:

4-chloroaniline	41.1%
hexachlorocyclopentadiene	42.0%
2,4-dinitropehnol	50.4%
4,6-dinitro-2-methylphenol	41.8%

The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 037GW002H1 and 037GW003H1.

The Percent Difference (%D) exceeded the 25% QC limit for the standards analyzed on 7/31/97 at 20:43 on instrument P for benzo(k)fluoranthene (42.4%). All results for this compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB009A2, 504CB009A2, 504SB010A2, 504SB011A2 and 504SB012A2.

IV.) Blanks:

Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 6 ug/L in method blank SBLK2. Since the associated samples were field blanks, no action was required.

The following compounds were detected in method blank SBLK4:

phenol	6 ug/L
diethylphthalate	2 ug/L
di-n-butylphthalate	2 ug/L
bis(2-ethylhexyl)phthalate	3 ug/L

The positive results for phenol in associated samples 037GW002H1 and 037GW003H1, which were less than 5X the blank amount, were flagged as undetected (U) with analytical results less than the CRQL being raised to the CRQL. The results for the other compounds in the associated samples less than 10X the blank amount were flagged as undetected (U) with analytical results less than the CRQL being raised to the CRQL.

Field Blanks:

Phenol, benzoic acid and bis(2-ethylhexyl)phthalate were detected at 1 ug/L, 1 ug/L and 34 ug/L, respectively, in deionized water blank 504DB009A2. There were no positive results for phenol and benzoic acid in the associated samples, so no action was required. All positive results for

bis(2-ethylhexyl)phthalate in the associated samples less than 10X the blank amount were flagged as undetected (U) with the results less than the CRQL being raised to the CRQL. The associated samples were 504SB009A1, 504SB009A2, 504CB009A2, 504SB010A1, 504SB010A2, 504SB011A1, 504SB011A2, 504SB012A1 and 504SB012A2.

Phenol, benzoic acid and bis(2-ethylhexyl)phthalate were detected at 2 ug/L, 2 ug/L and 9 ug/L, respectively, in equipment rinsate blank 504EB009A2. There were no positive results for phenol and benzoic acid in the associated samples, so no action was required. The results for bis(2-ethylhexyl)-phthalate in the associated samples were previously flagged. No further action was required.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or field blanks. No action was required.

V.) Surrogate Recoveries:

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

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

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

VII.) Laboratory Control Samples (LCS):

All LCS criteria were met. No action was taken.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples in this fraction of the SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

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 necessary.

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. No action was taken.

XIV.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) for endrin exceeded the 25% QC limit for the PEM standard analyzed on 7/30/97 at 17:15 on both the primary column (26.2%) and the secondary column (26.8%). Since the associated samples were field blanks, no action was necessary.

The Percent Differences (%D's) for endrin (37.2%) and 4,4'-DDT (26.0%) exceeded the 25% QC limit for the PEM standard analyzed on 7/31/97 at 22:39 on the primary column. All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB009A2, 504CB009A2, 504SB010A2, 504SB011A2 and 504SB012A2.

The Percent Difference (%D) for 4,4'-DDT (29.1%) exceeded the 25% QC limit for the PEM standard analyzed on 8/01/97 at 21:33 on the secondary column. All positive and non-detect results for this compound in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 504SB009A1, 504SB010A1, 504SB011A1 and 504SB012A1.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Difference (%D) for 4,4'-DDT (43.1%) exceeded the 25% QC limit in the standards analyzed on 8/01/97 at 22:03 on the primary column. All positive and non-detect results for this compound in the associated samples were previously flagged as estimated. No further action was required.

The Percent Differences (%D's) for 4,4'-DDT (47.4%) and methoxychlor (28.6%) exceeded the 25% QC limit for the standards analyzed on 8/01/97 at 22:03 on the secondary column for 4,4'-DDT (47.4%) and methoxychlor (28.6%). The results for 4,4'-DDT were previously flagged. The results for the other compound in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB009A1, 504SB010A1, 504SB011A1 and 504SB012A1.

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of decachlorobiphenyl (DCB) on the primary column (15%) and the secondary column (14%) for sample 037GW002H1 were below the 30-150% QC limits. All results for this sample, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Recovery (%R) of decachlorobiphenyl (DCB) on the secondary column for sample 504SB009A1 was 201%, which exceeded the 30-150% QC limits. All positive results for this sample were flagged as estimated (J).

The Percent Recovery (%R) of decachlorobiphenyl (DCB) on the secondary column for sample 504SB012A1 was 180%, which exceeded the 30-150% 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) for spiked blanks 504EB009A2MS and 504EB009A2MSD exceeded their respective QC limits for the following compounds:

<u>Compound</u>	<u>MS, %R</u>	<u>MSD, %R</u>	<u>QC Limits</u>
endosulfan I	26	27	46-134%
4,4'-DDE	64	64	70-122%
endosulfan II	33	35	41-149%
4,4'-DDD	68		70-133%

Since the unspiked sample was an equipment rinsate blank, no action was required.

The Relative Percent Differences (RPD's) for spiked samples 504SB009A2MS and 504SB009A2MSD exceeded the 20% QC limit for the following compounds:

alpha-BHC	124%
beta-BHC	117%
gamma-BHC	122%
delta-BHC	128%
heptachlor	113%
aldrin	120%
heptachlor epoxide	118%
endosulfan I	114%
4,4'-DDE	133%
dieldrin	131%
endrin	132%
endosulfan II	124%
4,4'-DDD	124%
endosulfan sulfate	117%

4,4'-DDT	138%
endrin aldehyde	114%
methoxychlor	112%
alpha-chlordane	121%
gamma-chlordane	115%
endrin ketone	118%

The positive and non-detect results for these compounds in unspiked sample 504SB009A2 were flagged as estimated (J) and (UJ).

The Percent Recoveries (%R's) for spiked samples 504SB009A2MSD were below their respective QC limits for the following compounds:

<u>Compound</u>	<u>MSD, %R</u>	<u>QC Limits</u>
alpha-BHC	14	20-160%
beta-BHC	16	22-147%
gamma-BHC	15	21-153%
delta-BHC	14	23-104%
heptachlor	17	21-145%
aldrin	15	22-119%
heptachlor epoxide	16	20-119%
endosulfan I	8	24-121%
4,4'-DDE	17	50-117%
dieldrin	17	20-123%
endrin	20	25-138%
endosulfan II	11	24-142%
4,4'-DDD	20	57-160%
endosulfan sulfate	20	22-126%
4,4'-DDT	19	54-131%
endrin aldehyde	22	27-160%
methoxychlor	24	26-140%
alpha-chlordane	18	21-119%
gamma-chlordane	18	21-118%
endrin ketone	19	23-147%

The associated sample results (504SB009A2) were previously flagged. No further action was necessary.

VII.) TCL Compound Identification:

Pesticide/PCB Identification Summary (PIS):

The Percent Differences (%D's) between column 1 and column 2 exceeded the 70% QC limit for the following samples:

<u>Sample</u>	<u>Compound</u>	<u>Column %D</u>
504SB009A1	dieldrin	593
	4,4'-DDT	204
504SB010A1	dieldrin	194

<u>Sample</u>	<u>Compound</u>	<u>Column %D</u>
504SB011A1	dieldrin	171
	4,4'-DDD	119
504SB012A1	4,4'-DDD	695

The results for compounds with %D's greater than 300% were rejected (R), and the results for the other compounds were flagged as estimated (J).

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the two sets of field duplicate samples in this fraction of the SDG. No action was required.

IX.) Pesticide Cleanup Check:

Florisil Cartridge Check:

All criteria were met. No action was taken.

Gel Permeation Chromatography (GPC):

All GPC criteria were met. No action was necessary.

X.) Overall Assessment of Data/General:

The original analyses of all samples in this SDG were considered by the validator to be of preferable data quality compared to the reanalyses because of better holding times.

The results for two compounds with column Percent Differences exceeding 300% in the samples in this SDG were rejected (R). All other laboratory data were acceptable with qualifications.

*CHLORINATED 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:

Initial Calibration:

The Percent Relative Standard Deviation (%RSD) exceeded the 20% QC limit for the standards analyzed on 7/30/97 on the primary column for dalapon (23.3%). Since the associated samples were field blanks,

no action was required.

The Percent Relative Standard Deviation (%RSD) exceeded the 20% QC limit for the standards analyzed on 8/08/97 on the secondary column for MCP (40.7%). Since there were no positive results for this compound in the associated samples, no action was required.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 8/08/97 at 13:46 on the primary column for 2,4,5-T (38.2%) and on the secondary column for MCP (27.4%). The results for these compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 504SB010A2, 504SB011A2 and 504SB012A2.

IV.) Blanks:

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

V.) Surrogate Recoveries:

The Percent Recoveries (%R's) of 2,4-dichlorophenylacetic acid exceeded the 18-94% QC limits for the following samples:

504SB010A1	101%
504SB010A2	104%
504SB011A1	106%
504SB012A1	97%

Since there were no positive results for these samples, no action was required.

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

The Relative Percent Differences (RPD's) for spiked samples 504SB012A2MS and 504SB012A2MSD exceeded their respective QC limits for the following compounds:

<u>Compound</u>	<u>RPD</u>	<u>QC Limit</u>
2,4-DB	84%	49%
MCP	47%	29%

The non-detect results for these compounds in unspiked sample 504SB012A2 were flagged as estimated (UJ).

VII.) TCL Compound Identification (HIS):

All HIS criteria were met. No action was required.

VIII.) Field Duplicates:

There were no calculable Relative Percent Differences (RPD's) for the field duplicate samples in this

fraction of the SDG. No action was required.

IX.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing Calibration criteria were met. 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#	Analyte	Max. Conc.	Action Level	
			mg/kg	ug/L
504DB009A2	aluminum	1170 ug/L	1170	5850
PBW	antimony	3.60 ug/L	3.60	18.0
504DB009A2	arsenic	3.20 ug/L	3.20	16.0
504DB009A2	barium	5.80 ug/L	5.80	29.0
504DB009A2	calcium	5150 ug/L	5150	25800
PBS	chromium	0.07 mg/kg	0.35	0.07
PBW	cobalt	1.97 ug/L	1.97	9.85
504DB009A2	copper	14.2 ug/L	14.2	71.0
504DB009A2	iron	3160 ug/L	3160	15800
504DB009A2	lead	19.9 ug/L	19.9	99.5
504DB009A2	magnesium	1110 ug/L	1110	5550
504DB009A2	manganese	24.5 ug/L	24.5	123
504EB009A2	mercury	0.19 ug/L	0.19	0.95
504EB009A2	selenium	5.10 ug/L	5.10	25.5
504DB009A2	sodium	5900 ug/L	5900	29500
PBS	tin	1.64 mg/kg	8.20	1.64
504DB009A2	vanadium	2.50 ug/L	2.50	12.5
504DB009A2	zinc	27.6 ug/L	27.6	138
PBS	cyanide	0.09 mg/kg	0.45	0.09

504DB009A2 = Deionized Water Blank, 504EB009A2 = Equipment Rinsate Blank,  
PBS = Preparation Blank (Soil), PBW = Preparation Blank (Water)

All results greater than the IDL but less than 5X the blank amounts (Action Level, mg/kg for soil

samples and ug/L for water samples) for which the contaminated blank was an associated preparation, deionized water or equipment rinsate blank were flagged as undetected (U).

The following analytes had negative results with absolute values greater than the IDL:

Blank Type/ID#	Analyte	Neg. Conc.	Action Limit	
			mg/kg	ug/L
CCB3	beryllium	-2.50 ug/L	2.5	12.5
CCB2	silver	-1.00 ug/L	1.00	5.00
ICB	thallium	-4.70 ug/L	4.70	23.5

CCB = Continuing Calibration Blank, ICB = Initial Calibration Blank

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

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	8 ug/L
arsenic	4 ug/L
barium	2 ug/L
cobalt	1 ug/L
copper	3 ug/L
lead	2 ug/L
nickel	3 ug/L
selenium	10 ug/L
sodium	168 ug/L
thallium	12 ug/L
tin	4 ug/L
vanadium	1 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

cadmium	-4 ug/L
potassium	-109 ug/L
silver	-1 ug/L
zinc	-4 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration

comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

The Percent Difference (%D) was 19.2% for aluminum in water sample 037GW002H1L, which exceeded the 10% QC limit. All positive results for aluminum in the SDG water samples were flagged as estimated (J).

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this fraction of the SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike Analysis was not performed in this fraction of the SDG. No action was required.

IX.) Field Duplicates:

One set of field duplicate samples was analyzed by the laboratory in this fraction of the SDG. The only calculable Relative Percent Difference (RPD) was:

<u>Compound</u>	<u>504SB009A2</u>	<u>504CB009A2</u>	<u>RPD</u>
aluminum	2540 ug/kg	2580 ug/kg	1.5%

Since the RPD was within the 60% QC limit for soil samples, no action was required.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was taken.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

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 qualifications.

# VALIDATA

Chemical Services, Inc.

P. O. Box 930422, Norcross, GA 30093

(770) 923-3890

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## DATA VALIDATION SUMMARY REPORT

COMPANY: Ensafe / Allen & Hoshall  
SITE NAME: Charleston Naval Base, Zone L  
SUBZONES: L-A, L-E, L-G, L-H and L-I  
SERVICE ORDER NUMBER: 0259  
CONTRACTED LAB: Southwest Laboratory of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRICES: Soil and Water  
TYPES OF ANALYSES: Volatiles Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide  
SDG NUMBER: 30304 (Level III)

### SAMPLES:

#### SUBZONE L-A:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037GW001A1	30304-05	Water	X	X	X	X	X
037TW001A1	30304-06	Water	X				

#### SUBZONE L-E:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi- volatiles	Pesticides/ PCB's	Total Metals	Cyanide
037GW001E1	30461-02	Water	X	+	X	X	X
037GW001E1RE	30461-02RE	Water		X			
037GW002E1	30461-02	Water	X	X	X	X	X
037DW001E1	30461.04	Water	X	X	X	X	X
037EW001E1	30461.03	Water	X	X	X	X	X
037TW001E1	30461.05	Water	X				

SUBZONE L-G:

<u>Client</u> <u>Sample #</u>	<u>Lab</u> <u>Sample #</u>	<u>Matrix</u>	<u>Volatile</u> <u>Organics</u>	<u>Semi-</u> <u>volatiles</u>	<u>Pesticides/</u> <u>PCB's</u>	<u>Total</u> <u>Metals</u>	<u>Cyanide</u>
037GW001G1	30304-04	Water	X	X	X	X	X
037GW002G1	30304-03	Water	X	+	X	X	X
037GW002G1RE	30304-03RE	Water		X			

SUBZONE L-H:

<u>Client</u> <u>Sample #</u>	<u>Lab</u> <u>Sample #</u>	<u>Matrix</u>	<u>Volatile</u> <u>Organics</u>	<u>Semi-</u> <u>volatiles</u>	<u>Pesticides/</u> <u>PCB's</u>	<u>Total</u> <u>Metals</u>	<u>Cyanide</u>
037GW001H1	30304-02	Water	X	X	X	X	X

SUBZONE L-I:

<u>Client</u> <u>Sample #</u>	<u>Lab</u> <u>Sample #</u>	<u>Matrix</u>	<u>Volatile</u> <u>Organics</u>	<u>Semi-</u> <u>volatiles</u>	<u>Pesticides/</u> <u>PCB's</u>	<u>Total</u> <u>Metals</u>	<u>Cyanide</u>
037GW002I1	30304-01	Water	X	X	X	X	X

DW = DEIONIZED WATER BLANK, EW = EQUIPMENT RINSATE BLANK, RE = REANALYSIS,  
TW = TRIP BLANK

DATA REVIEWER(S): 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

Southwest Laboratories of Oklahoma, Inc. - 30304 CLP Organics and Inorganics

SAMPLES: 037GW001A1, 037TW00101, 037GW001E1, 037GW001E1RE, 037GW002E1,  
037DW001E1, 037EW001E1, 037TW001E1, 037GW001G1, 037GW002G1,  
037GW002G1RE, 037GW001H1, 037GW002I1

### *VOLATILE 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. No action was required.

#### III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit in the standards analyzed on 8/1/97 on instrument I for the following compounds:

bromomethane	50.7%
acetone	71.3%
methylene chloride	83.6%
chloroethane	50.7%
2-hexanone	48.0%
4-methyl-2-pentanone	30.5%

Since these compounds were not detected in the associated samples, no action was required.

The average Relative Response Factor (RRF) was 0.030 for 2-chloroethyl vinyl ether in the standards analyzed on 8/4/97 on instrument I, which was below the 0.050 QC limit. The results for this compound in the associated samples, deionized water blank, equipment rinsate blank and trip blank, which consisted entirely of non-detects, were rejected (R). The associated samples and blanks were 037GW001E1, 037GW002E1, 037DW001E1, 037EW001E1 and 037TW001E1.

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit in the standards analyzed on 8/4/97 on instrument I for the following compounds:

acetone	65.6%
2-butanone	60.4%
1,1,2,2-tetrachloroethane	46.0%
2-chloroethyl vinyl ether	38.6%

The non-detect results for 2-chloroethyl vinyl ether were previously rejected because of a low RRF in this calibration. Since the three other compounds were not detected in associated samples 037GW001E1 and 037GW002E1, no action was necessary.

#### Continuing Calibration:

The Relative Response Factor (RRF) was 0.043 for 2-chloroethyl vinyl ether in the standards analyzed on 8/6/97 at 10:48 on instrument I, which was below the 0.050 QC limit. The non-detect results for this compound in the associated samples, deionized water blank, equipment rinsate blank and trip blank were previously rejected because of a low RRF in the initial calibration. No further action was required. The associated samples and blanks were 037GW001E1, 037GW002E1, 037DW001E1, 037EW001E1 and 037TW001E1.

The Percent Differences (%D's) exceeded the 25% QC limit in the standard analyzed on 8/6/97 at 10:48 on instrument I for the following compounds:

chloromethane	25.6%
2-hexanone	49.7%
2-chloroethyl vinyl ether	43.3%

The non-detect results for 2-chloroethyl vinyl ether in the associated samples were previously rejected because of a low RRF in the initial calibration. The non-detect results for the other two compounds in associated samples 037GW001E1 and 037GW002E1 were flagged as estimated (UJ).

#### IV.) Blanks:

##### Method Blanks:

Methylene chloride was detected at 12 ug/L in method blank VBLK2. The detection of this compound in associated sample 037GW002I1, which was less than 10X the blank amount, was flagged as undetected (U) with the detection limit being raised to the amount of contamination in the sample.

##### Field Blanks:

Chloroform and bromodichloromethane were detected at 8 ug/L and 2 ug/L, respectively, in deionized water blank 037DW001E1. There were no positive results for these compounds in the associated samples. No action was taken.

Chloroform and bromodichloromethane were detected at 7 ug/L and 2 ug/L, respectively, in equipment rinsate blank 037EW001E1. There were no positive results for these compounds in the associated samples. No action was taken.

Trip Blanks:

Chloroform, bromodichloromethane and dibromochloromethane were detected at 140 ug/L, 28 ug/L and 6 ug/L, respectively, in trip blank 037TW001E1. There were no positive results for these compounds in the associated samples. No action was taken.

Methylene chloride was detected at 15 ug/L in trip blank 037TW001A1. Methylene chloride was previously qualified using method blank VBLK2. No further action was necessary.

Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method, field or trip blanks. No action was required.

V.) Surrogate Recoveries:

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

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

MS / MSD samples were not analyzed in this SDG. No action was necessary.

VII.) Laboratory Control Samples (LCS):

Five LCS's were analyzed in this SDG. Four LCS Recoveries were outside the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The non-detect result for 2-chloroethyl vinyl ether in samples 037GW001E1 and 037GW002E1, field blanks 037DW001E1 and 037EW001E1, and trip blank 037TW001E1 were rejected because of a low RRF in the initial calibration. All other laboratory data were acceptable with qualifications.

*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. No action was required.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSD's) exceeded the 30% QC limit in the standards analyzed on instrument P for the following compounds:

hexachlorocyclopentadiene	40.7%
benzo(k)fluoranthene	32.4%

These compounds were not detected in the associated samples. No action was taken.

Continuing Calibration:

The Percent Difference (%D) was 36.5% for 2,4-dinitrophenol in the standard analyzed on 8/14/97 at 13:26 on instrument M. The non-detect result for this compound in associated sample 037GW002G1RE was flagged as estimated (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 8/18/97 at 18:35 on instrument P for the following compounds:

n-nitroso-di-n-propylamine	38.3%
hexachlorocyclopentadiene	74.8%
4-nitrophenol	27.8%
benzo(k)fluoranthene	37.9%

The non-detect results for these compounds in the associated sample 037GW002E1 were flagged as

estimated (UJ).

The Percent Difference (%D) was 41.2% for benzo(k)fluoranthene in the standard analyzed on 8/21/97 at 13:46 on instrument P. The non-detect result for this compound in associated sample 037GW001E1RE was flagged as estimated (UJ).

#### IV.) Blanks:

##### Method Blanks:

Bis(2-ethylhexyl)phthalate was detected at 2 ug/L and 6 ug/L, respectively, in method blanks SBLK2 and SBLK3. The detections of this compound in associated samples 037GW001E1RE, 037GW002G1RE and 037GW002I1, which were less than 10X the blank amounts, were flagged as undetected (U) with analytical results below the CRQL being raised to the CRQL. In addition, phenol was detected at 3 ug/L in method blank SBLK3. Since this compound was not detected in the associated samples, no further action was necessary.

##### Field Blanks:

Bis(2-ethylhexyl)phthalate was detected at 1 ug/L each in deionized water blank 037DW001E1 and equipment rinsate blank 037EW001E1. Since the method blanks were used for blank qualifications, no further action was taken.

##### Tentatively Identified Compounds (TIC's):

Ethylbenzenediol and methyl-(dimethylethyl)-furan were detected in the method blank at a concentrations sufficient, using the 5X Rule, to eliminate their detections in samples 039GW001A1, 037GW001G1, 037GW001H1 and 037GW002I1. Data validation action based on TIC criteria was not required. No action was taken.

#### V.) Surrogate Recoveries:

The Percent Recoveries (%R) were below their respective QC limits in sample 037GW002G1RE for the following surrogates:

<u>Surrogate</u>	<u>%R</u>	<u>QC Limits</u>
phenol-d5	6	10-94%
2-fluorophenol	4	21-110%
2,4,6-tribromophenol	3	10-123%

This was an overall improvement over the original analysis, so the reanalysis was selected for validation. All acid compound results in this sample, which consisted entirely of non-detects, were rejected (R).

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

MS / MSD samples were not analyzed in this SDG. No action was required.

VII.) Laboratory Control Samples (LCS):

Three LCS's were analyzed for this SDG. Two LCS Recoveries were below the QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

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

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

XIII.) System Performance:

All System Performance criteria were met. No action was taken.

XIV.) Overall Assessment of Data/General:

The reanalyses of samples 037GW001E1 and 037GW002G1 were considered by the validator to be of preferable data quality as compared to the original analyses because of improved surrogate recoveries.

All acid compound results in sample 037GW002G1RE were rejected because of low (less than 10%) surrogate recoveries. All other laboratory data were acceptable with qualifications.

*PESTICIDES/PCB's*

I.) Holding Times:

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

II.) Instrument Performance:

The Percent Differences (%D's) were 40.4% and 29.0%, respectively, for endrin and 4,4'-DDT on the primary column, and 32.6% for endrin on the secondary column in the PEMBI standard analyzed on

8/5/97 at 08:58, which exceeded the 25% QC limit. The non-detect results for endrin and 4,4'-DDT in associated samples 037GW001A1, 037GW001G1, 037GW002G1, 037GW00H1 and 037GW002I1 were flagged as estimated (UJ).

The Percent Differences (%D's) were 26.0%, 26.0% and 25.8%, respectively, for alpha-BHC, gamma-BHC and endrin on the primary column for the PEM4E standard analyzed on 8/20/97 at 23:17, and 50.0%, 45.0% and 29.4%, respectively, for alpha-BHC, gamma BHC and endrin on the secondary column, which exceeded the 25% QC limit. The non-detect results for these three compounds in associated samples 037GW001E1 and 037GW002E1 were flagged as estimated (UJ).

### III.) Calibration:

#### Initial Calibration:

All Initial Calibration criteria were met. No action was taken.

#### Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standard analyzed on 8/20/97 at 23:47 on the secondary column for endosulfan II (28.2%) and endrin ketone (46.9%). The non-detect results for the two compounds in associated samples 037GW001E1 and 037GW002E1 were flagged as estimated (UJ).

### IV.) Blanks:

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

### V.) Surrogate Recoveries:

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

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

MS / MSD samples were not analyzed in this SDG. No action was taken.

### VII.) TCL Compound Identification:

All criteria were met. No action was taken.

### VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

### IX.) Pesticide Cleanup Check:

#### Florisil Cartridge Check:

Florisil Cartridge Check data was not included in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC Cleanup was not required for samples in this SDG. No action was necessary.

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

All CRQL criteria were met. No action was required.

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. No action was taken no action was taken.

II.) Calibration:

All Initial and Continuing Calibration criteria were met. 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>Analyte</u>	<u>Max. Conc.</u>	<u>Action Level</u>
CCB3	aluminum	17.4 ug/L	87.0 ug/L
PBW	barium	0.38 ug/L	1.90 ug/L
CCB8	beryllium	0.30 ug/L	1.50 ug/L
ERB	calcium	116 ug/L	580 ug/L
PBW	cobalt	0.81 ug/L	4.05 ug/L
CCB8	lead	1.20 ug/L	6.00 ug/L
CCB3	manganese	0.30 ug/L	1.50 ug/L
DWB	sodium	1080 ug/L	5400 ug/L
PBW	cyanide	2.21 ug/L	11.1 ug/L

CCB = Continuing Calibration Blank, DWB = Deionized Water Blank,  
ERB = Equipment Rinsate Blank, PBW = Preparation Blank (Water)

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

The following analytes had negative results with absolute values greater than the IDL in the soil

preparation blank (PBS) and continuing calibration blank (CCB):

<u>Blank ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
CCB3	beryllium	-0.60 ug/L	3.00 ug/L
PBW	cobalt	-0.85 ug/L	4.25 ug/L
PBW	mercury	-0.15 ug/L	0.75 ug/L
CCB7	silver	-1.00 ug/L	5.00 ug/L

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

IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	7 ug/L
barium	2 ug/L
beryllium	1 ug/L
cobalt	1 ug/L
lead	3 ug/L
nickel	2 ug/L
selenium	5 ug/L
sodium	133 ug/L
thallium	12 ug/L
vanadium	3 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

barium	-1 ug/L
cadmium	-1 ug/L
chromium	-1 ug/L
potassium	-866 ug/L
zinc	-7 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the samples at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

Serial Dilution analysis was not performed. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike analysis was not performed in this SDG. No action was required.

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

# 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 L  
SUBZONE: L-A  
SERVICE ORDER NUMBER: 0264  
CONTRACTED LAB: Southwest Laboratory of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRIX: Water  
TYPES OF ANALYSES: Volatiles Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide  
SDG NUMBER: 30629 (Level III)

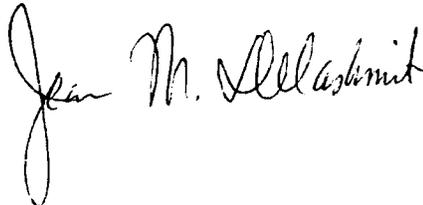
### SAMPLES:

Client	Lab		Volatile	Semi-	Pesticides/	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>	<u>Metals</u>	<u>Cyanide</u>
037GW002A1	30629.01	Water	X	X	X	X	X
037TW002A1	30629.02	Water	X				

T = TRIP BLANK

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:



barium	-4 ug/L
cadmium	-2 ug/L
zinc	-9 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the sample at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

Serial Dilution analysis was not performed in this SDG. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike analysis was not performed in this SDG. No action was required.

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

## DATA QUALIFICATION SUMMARY

Southwest Laboratories of Oklahoma, Inc. - 30629 CLP Organics and Inorganics

SAMPLES: 037GW002A1, 037TW002A1

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

All Initial Calibration criteria were met. No action was necessary.

##### Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit in the standard analyzed on 8/22/97 at 11:54 on instrument N for the following compounds:

carbon disulfide	43.5%
1,1,1-trichloroethane	30.3%
carbon tetrachloride	35.5%
2-chloroethyl vinyl ether	55.4%

The non-detect results for these compounds in sample 037GW002A1 were flagged as estimated (UJ).

#### IV.) Blanks:

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

##### Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or trip blanks. No action was required.

# 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 L  
SUBZONE: L-A  
SERVICE ORDER NUMBER: 0264  
CONTRACTED LAB: Southwest Laboratory of Oklahoma, Inc.  
QA/QC LEVEL: EPA Level III  
EPA METHOD: EPA SOW 3-90 / SW-846  
VALIDATION GUIDELINES: USEPA CLP National Functional Guidelines for Organic Data Review, 1994; USEPA CLP National Functional Guidelines for Inorganic Data Review, 1994  
SAMPLE MATRIX: Water  
TYPES OF ANALYSES: Volatiles Organics, Semivolatile Organics, Pesticides / PCB's, Total Metals, Cyanide  
SDG NUMBER: 30629 (Level III)

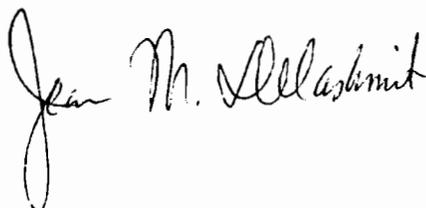
### SAMPLES:

Client	Lab		Volatile	Semi-	Pesticides/	Total	
<u>Sample #</u>	<u>Sample #</u>	<u>Matrix</u>	<u>Organics</u>	<u>volatiles</u>	<u>PCB's</u>	<u>Metals</u>	<u>Cyanide</u>
037GW002A1	30629.01	Water	X	X	X	X	X
037TW002A1	30629.02	Water	X				

T = TRIP BLANK

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:



II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was required.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was necessary.

IV.) Blanks:

Bis(2-ethylhexyl)phthalate was detected at 1 ug/L in method blank SBLK1. This compound was not detected in sample 037GW002A1. No action was taken.

Tentatively Identified Compounds (TIC's):

2-Butoxyethanol was detected in method blank SBLK1 at a concentration sufficient, using the 5X Rule, to eliminate the detection in sample 037GW002A1. Data validation action based on TIC criteria was not required. No action was taken.

V.) Surrogate Recoveries:

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

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

MS / MSD samples were not analyzed in this SDG. No action was required.

VII.) Laboratory Control Samples (LCS):

Two LCS's were analyzed in this SDG. All LCS Recovery criteria were met. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

IX.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No action was required.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

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

All CRQL criteria were met. No action was necessary.

## DATA QUALIFICATION SUMMARY

Southwest Laboratories of Oklahoma, Inc. - 30629 CLP Organics and Inorganics

SAMPLES: 037GW002A1, 037TW002A1

### *VOLATILE 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. No action was required.

#### III.) Calibration:

##### Initial Calibration:

All Initial Calibration criteria were met. No action was necessary.

##### Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit in the standard analyzed on 8/22/97 at 11:54 on instrument N for the following compounds:

carbon disulfide	43.5%
1,1,1-trichloroethane	30.3%
carbon tetrachloride	35.5%
2-chloroethyl vinyl ether	55.4%

The non-detect results for these compounds in sample 037GW002A1 were flagged as estimated (UJ).

#### IV.) Blanks:

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

##### Tentatively Identified Compounds (TIC's):

There were no TIC's detected in the method or trip blanks. No action was required.

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

MS / MSD samples were not analyzed in this SDG. No action was taken.

VIII.) TCL Compound Identification:

All criteria were met. No action was taken.

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

X.) Pesticide Cleanup Check:

Florisil Cartridge Check:

Florisil Cartridge Check data were not included in the data package. No action was taken.

Gel Permeation Chromatography (GPC):

GPC Cleanup was not required for the sample in this SDG. No action was necessary.

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

All CRQL criteria were met. No action was required.

XII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

*TOTAL METALS AND CYANIDE*

I.) Holding Times:

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

II.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was necessary.

III.) Blanks:

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

<u>Blank Type/ID#</u>	<u>Analyte</u>	<u>Max. Conc.</u>	<u>Action Level</u>
CCB4	antimony	3.50 ug/L	17.5 ug/L
CCB5	beryllium	0.20 ug/L	1.00 ug/L
PBW	mercury	0.19 ug/L	0.95 ug/L
PBW	sodium	50.5 ug/L	251 ug/L
PBW	cyanide	3.34 ug/L	16.7 ug/L

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

All results greater than the IDL but less than 5X the blank amounts (Action Level, 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 blank results with absolute values greater than the IDL:

<u>Blank ID#</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
PBW	aluminum	-12.0 ug/L	60.0 ug/L
CCB3	lead	-1.00 ug/L	5.00 ug/L

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

The associated positive sample result for aluminum was greater than 5X the absolute value of the negative blank result. No action was required. The associated non-detect for lead was flagged as estimated (UJ).

#### IV.) ICP Interference Check Sample Results:

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

The following analytes were detected in ICS Solution A at concentrations greater than the IDL:

antimony	9 ug/L
cobalt	1 ug/L
nickel	1 ug/L
sodium	43 ug/L
thallium	6 ug/L
vanadium	2 ug/L

These analytes should not be present. Since neither aluminum, calcium, iron nor magnesium was present in the sample at a concentration comparable to or greater than the amount in Solution A, no action was required.

Negative results were observed in ICS Solution A at absolute concentrations greater than the IDL for the following analytes:

barium	-4 ug/L
cadmium	-2 ug/L
zinc	-9 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in the sample at a concentration comparable to or greater than the amount in Solution A, no action was required.

V.) ICP Serial Dilution Analysis:

Serial Dilution analysis was not performed in this SDG. No action was required.

VI.) Laboratory Control Samples (LCS):

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

VII.) Duplicate Sample Analysis:

Duplicate Sample Analysis was not performed in this SDG. No action was required.

VIII.) Matrix Spike Recoveries:

Matrix Spike analysis was not performed in this SDG. No action was required.

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

X.) Graphite Furnace Atomic Absorption QC (GFAA):

Graphite Furnace analyses were not used for the samples in this SDG. No action was necessary.

XI.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was required.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No action was taken.

XIII.) Overall Assessment of Data/General:

All laboratory data were acceptable with qualifications.

**Appendix E**  
**Chain of Custodies**

**Subzone A  
Soil Boring**



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 Rel. #21

CLIENT Naval Base Charleston PROJECT MANAGER Charlid Verney  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Robert B. Blythe

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	Silica, Pet/Res	Metals, CN		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	Silica, Pet/Res	Metals, CN				
					TEMP.	CHEMICAL								
NBCL/037SB015H1	5/16/97	1003	Soil	2-202, 2-402	4°C	None	4	X	X	X				
NBCL/037SB015H2		1020					4	X	X	X				
NBCL/037SB005G1		1114					4	X	X	X				
NBCL/037SB005G2		1137					4	X	X	X				
NBCL/037SB001G1		1351					4	X	X	X				
NBCL/037SB001G2		1401					4	X	X	X				
NBCL/037SB001A1		1441					4	X	X	X				
<del>NBCL/037SB002A1</del>														
NBCL/037SB002A1		1521					4	X	X	X				
NBCL/037SB001A2	✓	1457	✓	✓	✓	✓	4	X	X	X				

RELINQUISHED BY: SIGNATURE <u>Robert B. Blythe</u> PRINTED <u>Robert B. Blythe</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/16/97</u> TIME <u>1615</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>0904036733</u> SPECIAL INSTRUCTION: <u>None</u>	COMMENTS: <u>All samples are DQ03.</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	--	---



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O.4 Rel #21

CLIENT NAVAL Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 874-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Robert B. S/John V.

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	SVOA, Pest/PCB	Metals/ICA			
2 X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<u>MSLL/037 BROODAN 5/16/97</u>			<u>Soil</u>	<u>2-2 02</u>	<u>4°C</u>	

RBS  
5/16/97

RELINQUISHED BY: SIGNATURE <u>Robert B. S/John V.</u> PRINTED <u>Robert B. S/John V.</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/16/97</u> TIME <u>1615</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 0904036733  
 SPECIAL INSTRUCTION: None

COMMENTS: All samples are 0203.

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: PO. 4 REL-21 SWL

CLIENT NAVAL BASE CHAS PROJECT MANAGER Charlie Demay  
ADDRESS ZONE A (L) TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) RK [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	VDA	SVDA	TEST METAL/EN	
4	2	1	1	
4	2	1	1	
4	2	1	1	
1	1			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCH037SR003A1	6/10/97	0920	Soil	20x40	4C	NONE
004A1		0935				
005A1		0940				
NBCH037TR005A1				202		

RS Johnson  
6.10.97

RELINQUISHED BY: SIGNATURE <u>RK [Signature]</u> PRINTED <u>RK Brewer</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/10/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>4643769045</u> SPECIAL INSTRUCTION: <u>NONE</u>	COMMENTS: <u>ALL SAMPLES ARE DQ03 UNLESS NOTED IN REMARKS</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
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**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O.4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J. A. Huneault

ANALYSIS REQUIRED		REMARKS
NO. OF CONTAINERS		
VOA		
Metals, Chemicals		
SVOCs		
PCBs		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	Metals, Chemicals	SVOCs	PCBs	REMARKS
					TEMP.	CHEMICAL						
NRCL5045B007A1	7/17/97	0800	soil	2oz, 4oz	4°C	none	4	2	1	1		
NRCL504CB007A1		0800					4	2	1	1		
NRCL5045B007A2		0810					4	2	1	1		
NRCL5045B008A1		0825					4	2	1	1		
NRCL5045B008A2		0830					4	2	1	1		
NRCL5045B005A1		0910					4	2	1	1		
NRCL5045B005A2		0920					4	2	1	1		
NRCL5045B006A1		0935					4	2	1	1		
NRCL5045B006A2		0940					4	2	1	1		
NRCL5045B002A1		0955					4	2	1	1		

RELINQUISHED BY: SIGNATURE <u>J.A. Huneault</u> PRINTED <u>J.A. Huneault</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/17/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151495</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL SAMPLES HREDD03</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
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(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

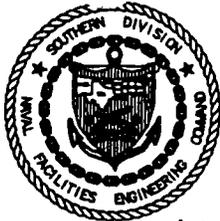
FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL	NO. OF CONTAINERS	VDA	Metals/Cleaned	SPAC/TECH	
NBCL504SR002A2	7/17/97	1005	Soil	202, 402	4°C	none	4	2	1	1	
NBCL504SR001A1	↓	1025	↓	↓	↓	↓	4	2	1	1	
NBCL504SR001A2	↓	1035	↓	↓	↓	↓	4	2	1	1	
NBCL504TB007A1	↓	-	↓	202	↓	↓	1	1			
<u>[Signature]</u>											

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>J. H. Hume</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/17/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx  
SHIPMENT NO. 4849151495  
SPECIAL INSTRUCTION: SWL

COMMENTS: ALL SAMPLES ARE DQOS

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone 1 TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Huneault

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL	NO. OF CONTAINERS	VDA	Metals, Cyanide	SVA/MS/MS	
NBCL\504SB009A1	7/18/97	0725	soil	20z, 40z	4°C	none	4	2	1	1	
NBCL\504SB010A1		0735					4	2	1	1	
NBCL\504SB011A1		0745					4	2	1	1	
NBCL\504SB012A1		0755					4	2	1	1	
NBCL\504TB012A1		-		20z			1	1			
<i>J.A. Huneault</i>											

RELINQUISHED BY: SIGNATURE <u>J.A. Huneault</u> PRINTED <u>J.A. Huneault</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/18/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151484</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL SAMPLES ARE DQ03</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



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Amended 8/22/97  
 CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
 ADDRESS Zone 1 TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J. A. Hunsicker

soil H<sub>2</sub>O

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS		
					TEMP.	CHEMICAL		VDA	Metals	Cyanide	SVDA	Pest/PCB	Metals	Cyanide	Herbs					
NBCU504SB009A2	7/22/97	0720	soil	2oz, 4oz	4°C	none	4	2	1	1										
NBCU504CB009A2		0720					4	2	1	1										
NBCU504SB010A2		0735					4	2	1	1										
NBCU504SB011A2		0750					4	2	1	1										
NBCU504SB012A2		0800					4	2	1	1										
NBCU504TB009A2		-		2oz			1	1												
NBCU504DW009A2		0940	H <sub>2</sub> O	40ml vial 12 Amber		*	10				2	2	2	1	1	2				
NBCU504EW009A2		0950					10				2	2	2	1	1	2				
NBCU504TW009A2		-		40ml vial			2				2									504TB09AA2

RELINQUISHED BY: SIGNATURE <u>J. A. Hunsicker</u> PRINTED <u>J. A. Hunsicker</u> COMPANY <u>DET</u> REASON <u>preposition</u>	DATE <u>7/22/97</u> TIME <u>1430</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151473</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL SAMPLES ARE DODS</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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VDA = HCL  
 met = HNO<sub>3</sub>  
 CN = NaOH

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCDRI

01/24/91 00:42 TEL 141300

ENSAFE ALLEN BUS \*\*\* CHAINSAFE

01/24/91

**Subzone A  
Groundwater**

07/25/97 16:21 TEL 7477306 ENSAFE ALLEN HOS → CHARSAFE 01



**NAVY CLEAN**  
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 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: FOY REL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08440 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	6 VOA Pest/PEB	Metal/LEN		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\0376W002T1	7-25-97	0845	H2O	11 Amber, 11-1017 40 mL VOA	4°C	VOA-1111 Met-Mic3 Pest-Mic3
NBCL\0376W001H1	7-25-97	1005	↓	↓	↓	↓
NBCL\0376W002G1	7-25-97	1115	↓	↓	↓	↓
NBCL\0376W001G1	7-25-97	1215	↓	↓	↓	↓
NBCL\0376W001A1	7-25-97	1445	↓	↓	↓	↓
NBCL\0376W001A1	7-25-97	—	↓	40 mL	↓	↓
<u>[Signature]</u> 7-25-97						

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B. Temple</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to Lab</u>	DATE <u>7/25/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849149502</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>DDO3 files</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernay  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08440 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	SVOA/Pest/PCB	Me To IS	CN	
8	X	X	X	X	
2	X				
<i>[Signature]</i>					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
1 BCLV037G002A1	8/13/97	1145	H <sub>2</sub> O	12 Amber, 12 P17 40 ML	4°C	VOA-HCL SVOA-HCL Me To IS
NBCLV037T002A1	↓	—	H <sub>2</sub> O	40 ML	4°C	HCL

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B Temple</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to Lab</u>	DATE <u>8/13/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849149292</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>D203 + TISS</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**Subzone A**  
**DPT**



NAVY CLEAN  
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CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: FO 4 REL 21

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER JACK MAYFIELD  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Jack Mayfield

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
<u>1</u>					<u>DDO LEVEL 2</u>
<u>1</u>					<u>" "</u>
<u>1</u>					<u>" "</u>
<u>1</u>					<u>" "</u>
<u>1</u>					<u>" "</u>

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
<u>037SP001-A1</u>	<u>5-19-97</u>	<u>1:40</u>	<u>SOIL</u>	<u>GLASS (4")</u>	<u>4°</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>DDO LEVEL 2</u>
<u>037SP002-A1</u>	<u>5-19-97</u>	<u>2:15</u>	<u>SOIL</u>	<u>" "</u>	<u>4°</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>" "</u>
<u>037SP003-A1</u>	<u>5-19-97</u>	<u>2:40</u>	<u>SOIL</u>	<u>" "</u>	<u>4°</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>" "</u>
<u>037SP004-A1</u>	<u>5-19-97</u>	<u>3:10</u>	<u>SOIL</u>	<u>" "</u>	<u>4°</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>" "</u>
<u>037SP005-A1</u>	<u>5-19-97</u>	<u>3:45</u>	<u>SOIL</u>	<u>" "</u>	<u>4°</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>" "</u>

RELINQUISHED BY: SIGNATURE <u>Jack Mayfield</u> PRINTED <u>JACK MAYFIELD</u> COMPANY <u>ELIHA</u> REASON <u>LAB</u>	DATE <u>5/19</u> TIME <u>4:15</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>0904036652</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DDO LEVEL 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Amended : 10-97



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO 4 REL 21

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES VERNON  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0607  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	WAL	POB	POZ	
1					
1					KLH
1					
1					KLH
2					
1					KLH
1					
1					KLH
1					
1					KLH

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
037SP001-A1	5/19	1340	Soil	glass		
<del>037SP001-A1</del>	<del>5/19</del>	<del>1340</del>	<del>Soil</del>	<del>glass</del>		
037SP002-A1	5/19	1425	Soil	glass		
<del>037SP002-A1</del>	<del>5/19</del>	<del>1425</del>	<del>Soil</del>	<del>glass</del>		
037SP003-A1	5/19	1445	Soil	glass		
<del>037SP003-A1</del>	<del>5/19</del>	<del>1445</del>	<del>Soil</del>	<del>glass</del>		
037SP004-A1	5/19	1510	Soil	glass		
<del>037SP004-A1</del>	<del>5/19</del>	<del>1510</del>	<del>Soil</del>	<del>glass</del>		
037SP005-A1	5/19	1540	Soil	glass		
<del>037SP005-A1</del>	<del>5/19</del>	<del>1540</del>	<del>Soil</del>	<del>glass</del>		

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>19 MAY 97</u> TIME <u>1644</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JAMES B. VERNON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>5/19/97</u> TIME <u>1648</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

05/20/97 18:53 TEL 7477306 ENSAFE ALLEN HOS →→→ CHARSAFE 04



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 7 OF 2  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PC4 REL 21

CLIENT: NAVAL BASE CHARLESTON PROJECT MANAGER: CITARLE VERNON  
 ADDRESS: LEVEL L TELEPHONE NO.: (803) 804-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX NO.: (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL		METALS	CYANIDE				
NBCL0376P002-A1	5/20/97	0900	WATER	2-1.8 Poly	4°	NH <sub>2</sub> /NaOH	2	1					DDO Level 2
NBCL0376P001-A1	5/20/97	0831	WATER	2-1.8 Poly	4°	NH <sub>2</sub> /NaOH	2	1					" " "
NBCL0376P003-A1	5/20/97	0920	"	2-1.8 Poly	4°	NH <sub>2</sub> /NaOH	2	1					" " "
NBCL0376P010-A1	5/20/97	0931	"	2-1.8 Poly	4°	NH <sub>2</sub> /NaOH	2	1					" " "
NBCL0376P005-A1	5/20/97	1120	"	2-1.8 Poly	4°	NH <sub>2</sub> /NaOH	2	1					" " "
NBCL0376P007-A1	5/20/97	1150	"	2-1.8 Poly	4°	NH <sub>2</sub> /NaOH	2	1					" " "
NBCL0376P011-A1	5/20/97	1205	"	" "	"	" "	2	1					" " "
NBCL0376P006-A1	5/20/97	1221	"	" "	"	" "	2	1					" " "
NBCL0376P008-A1	5/20/97	1440	"	" "	"	" "	2	1					" " "
NBCL0376P013-A1	5/20/97	1445	"	" "	"	" "	2	1					" " "

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>5/20/97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>	TIME: <u>4:50</u>	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____
PRINTED: <u>JACK VERNON</u>	COMPANY: <u>ENAH</u>	PRINTED: _____	COMPANY: _____	PRINTED: _____	COMPANY: _____	PRINTED: _____	COMPANY: _____
REASON: <u>LAB</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: <u>FED EX</u>	COMMENTS: <u>DDO Level 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>0904036663</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>SOUTHWEST LAB</u>		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

05/20/97 18:53 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 R2 Z1



NAVY CLEAN  
 ENSAFE/ALLEN & HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEANDY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410-1 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Cyanide	Mercury	Lead	Other	
2	1	1				DDO LEVEL II
1		1				" " "
2	1	1				" " "
2	1	1				" " "
2	1	1				" " "
2	1	1				" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0376P009-AA	5.20.97	1247	WATER	2-1.8 Poly	4°	None
NBCL0376P000-AA	5.20.97	1510	SOIL	1-4 1/2 GLASS	4°	None
NBCL0376P012-AA	5.20.97	1532	WATER	2-1.8 Poly	4°	None/NaOH
NBCL0376P015-AA	5.20.97	1520	"	"	"	"
NBCL0376P016-AA	5.20.97	1550	"	"	"	"
NBCL0376P017-AA	5.20.97	1605	"	"	"	"

[Signature]  
 5.20.97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JACK MARRASO</u> COMPANY <u>ETAH</u> REASON <u>LAB</u>	DATE <u>5/21/97</u> TIME <u>4:50</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FEDEX  
 SHIPMENT NO. 0904036667  
 SPECIAL INSTRUCTION: SOUTHWEST LAB  
 COMMENTS: DDO LEVEL 2  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verney  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) R. Brand / W. Binkley

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						
2						
2						WAS NOT COLLECTED
2						
2						
2						
2						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	NOA
					TEMP.	CHEMICAL		
037GPO02-A1	5/20	0950	water	glass		HCL	2	
037GPO03-A1	5/20	0910	water	glass		HCL	2	
<del>037GPO04-A1</del>	<del>5/20</del>	<del>0950</del>	<del>water</del>	<del>glass</del>		<del>HCL</del>	<del>2</del>	
037GPO05-A1	5/20	1050	water	glass		HCL	2	
037GPO11-A1	5/20	1200	water	glass		HCL	2	
037GPO08-A1	5/20	1210	water	glass		HCL	2	
037GPO15-A1	5/20	1510	water	glass		HCL	2	
037GPO16-A1	5/20	1550	water	glass		HCL	2	

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>CMO</u>	DATE <u>20 MAY 97</u> TIME <u>1739</u>	RECEIVED BY: SIGNATURE <u>W. Binkley</u> PRINTED <u>W. Binkley</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>20 MAY 97</u> TIME <u>1950</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Hand Delivered</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>Mobile Lab</u>	_____	

Amme. " 5-2797



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**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: 6.04 Rel. # 21 SWC

CLIENT Naval Base Chul PROJECT MANAGER Charlie Versey  
 ADDRESS Zone L TELEPHONE NO. (903) 974-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (903) 956-0107  
 SAMPLERS: (SIGNATURE) J. Watson

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	Cyanide			
2	X	X			
1	X	X			
1	X	X			
2	X	X			

KLH

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL/D376P014A	5-21-97	1525	Water	2-1 liter poly	4°C	NADH HNO <sub>3</sub>
NBCL/D375P007A1	5-21-97	1510	soil	4oz jar	4°C	NONE
NBCL/D375P009A1	5-21-97	1445	soil	4oz jar	4°C	NONE
NBCL/D376P001B1	5-21-97	0929	Water	2-1 liter poly	4°C	NADH HNO <sub>3</sub>

J. Watson  
5-21-97

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>J. Watson</u>	5-21-97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>J. Watson</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>E/A&amp;H</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>Sh. p 7 Lab</u>	TIME <u>1710</u>	REASON _____	TIME _____	REASON _____	TIME _____	REASON _____	TIME _____

METHOD OF SHIPMENT: DSD4036674  
 SHIPMENT NO. 722 CX  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: All samples are DQO2

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Metals - NADH  
 CN - NADH

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_









**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
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**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT \_\_\_\_\_ PROJECT MANAGER \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_  
 PROJECT NAME/NUMBER \_\_\_\_\_ FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						
1						
1						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
✓ 037GP010-BT	5/21	11:00	water	glass, VOA		HCL	2							
✓ 037SP002-A1	5/21	14:45	soil	glass, 2 oz.		NONE	1							
✓ 037SP007-A1	5/21	15:10	soil	glass, 2 oz		NONE	1							
✓ 037GP014-A1	5/21	15:25	water	glass VOA		HCL	2							

RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE <i>[Signature]</i> PRINTED <i>BOHOBUS</i> COMPANY <i>TARGET</i> REASON <i>LAS</i>	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: _____ SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFEE/ALLEN&HOSHALL  
(901) 383-9115

*Amended 5/28/97*  
CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: Southwest Lab  
BPA/SO: PO4REL21

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) *Carol Davis*

PROJECT MANAGER Charlie Vernon  
TELEPHONE NO. 803-884-0029  
FAX. NO. 803-856-0107

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS				REMARKS	
					TEMP.	CHEMICAL	Metals	CN				
NBCL037GP 004-A1	5/27/97	0856	Water	2-1L Poly	4°C	HNO <sub>3</sub> , NaOH	2	X	X			DRO Level II

RELINQUISHED BY: SIGNATURE <i>Carol Davis</i> PRINTED <u>Carol Davis</u> COMPANY <u>E/AFH</u> REASON <u>shipment</u>	DATE <u>5/27/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>1978219286</u> SPECIAL INSTRUCTION: <u>Southwest Lab</u>	COMMENTS: <u>7 day turnaround</u> <u>All samples DRO Level II - 28 day turnaround</u> <i>(Signature)</i>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-0840  
 COC #: TARGET MOBILE LABS  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS Zone L TELEPHONE NO. (803) 284-0069  
 PROJECT NAME/NUMBER 2912-0840 FA. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
22												DPO Lab 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS								
					TEMP.	CHEMICAL									
637GP004-A1	27-5-97	0856	H2O	40 mL	4	HCL	22								

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>RANDY BRAD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>27 MAY 97</u> TIME <u>1606</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JULIA B VONSTEL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>27 MAY 97</u> TIME <u>16:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To Target Mobile Lab

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-03410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-03410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Kerry Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1					DQO Level 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
0375POIL-A1	31-5-97	0919	SOIL	202 Jar	4	None					

*Handwritten signature and date: 15-31-97*

RELINQUISHED BY: SIGNATURE <u>Kerry Brand</u> PRINTED <u>Kerry Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>31-5-97</u> TIME <u>1630</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOE B VICKS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>31-5-97</u> TIME <u>1630</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. 5  
 SPECIAL INSTRUCTION: Target Lab DQO Level 2

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAF/ALLEN&HOSHALL  
(901) 353-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 02912-0840  
COC #: \_\_\_\_\_  
BPA/SO: P04 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernon  
ADDRESS Zone L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) P. ClL Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
<u>metals</u>					<u>DPO Level II</u>
<u>CN</u>					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
<u>NBCLO375POD-A1</u>	<u>6/3/97</u>	<u>0900</u>	<u>soil</u>	<u>8 oz glass</u>	<u>4°C</u>	<u>-</u>	<u>1</u>	<u>X X</u>	<u>DPO Level II</u>

RELINQUISHED BY: SIGNATURE <u>P. ClL Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>E/A&amp;H</u> REASON <u>shipment</u>	DATE <u>6/3/1997</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO. 4849151860  
SPECIAL INSTRUCTION: Southwest Labs

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHAL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VOENY  
ADDRESS FONE C TELEPHONE NO. (803) 854-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Kary Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1 X					DRO LEVEL 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
0315PC10-A1	3-6-97	0900	SOIL	202 Jar	4	Nase	1 X							

*Handwritten signature and date: 6-3-97*

RELINQUISHED BY: SIGNATURE <u>Kary Brand</u> PRINTED <u>Kary Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>3 June 97</u> TIME <u>1730</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Signature]</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>3/6 97</u> TIME <u>1620</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	--	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: Hand Delivered  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To TARGET LAB

COMMENTS: DRO Level 2

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER







**NAVY CLEAN**  
**ENSAF/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verney  
 ADDRESS Zone L TELEPHONE NO. (803) 384-1121  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
100					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
NBCL VAGSPOOLA1	7-22-97	1130	H <sub>2</sub> O	40ml glass	4°C	HCl	2	X				
<i>[Large handwritten signature/initials across the table]</i>												

RELINQUISHED BY: <u>[Signature]</u>	DATE <u>7/22/97</u>	RECEIVED BY: <u>[Signature]</u>	DATE <u>7/22/97</u>	RELINQUISHED BY: _____	DATE _____	RECEIVED BY: _____	DATE _____
SIGNATURE _____	TIME _____	SIGNATURE _____	TIME _____	SIGNATURE _____	TIME _____	SIGNATURE _____	TIME _____
PRINTED <u>Levin Ham</u>	COMPANY <u>E/A&amp;H</u>	PRINTED <u>JOHN B VONSTIE</u>	COMPANY <u>TARGET</u>	PRINTED _____	COMPANY _____	PRINTED _____	COMPANY _____
REASON <u>analysis</u>		REASON <u>LAB</u>		REASON _____		REASON _____	

METHOD OF SHIPMENT: hand delivered COMMENTS: VQTH  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: Target  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 Rel 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) Greg Goodrum

PROJECT MANAGER: Charlie Verney  
 TELEPHONE NO. 803-884-0029  
 FAX. NO. 803-856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	Cd					
1	X	X					DOQ level 2
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS	
					TEMP.	CHEMICAL		Metals	Cd						
NBCL 1504SP011A1	8-8-77	1338	soil	4 oz glass	4°C	None	1	X	X						DOQ level 2
NBCL 1504SP012A1		1350					1	X	X						
NBCL 1504SP013A1		1400					1	X	X						
NBCL 1504SP014A1		1405					1	X	X						
NBCL 1504SP015A1		1417					1	X	X						
NBCL 1504SP001C1		1439					1	X	X						
NBCL 1504SP002C1		1455					1	X	X						
NBCL 1504SP003C1		1503					1	X	X						
NBCL 1504SP004C1		1513					1	X	X						
NBCL 1504SP005C1		1549					1	X	X						

RELINQUISHED BY: SIGNATURE <u>Greg Goodrum</u> PRINTED <u>Greg Goodrum</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-8-77</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Facility</u> SHIPMENT NO. <u>4849149302</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brown

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
10A						DDO LVL 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS								
					TEMP.	CHEMICAL									
504SP001-A1	8-8-97	0920	SOL	202 JAR	4	NONE	1	X							
504SP002-A1	8-8-97	0940	"	" "	"	"	1	X							
504SP003-A1	8-8-97	0959	"	" "	"	"	1	X							
504SP004-A1	8-8-97	1013	"	" "	"	"	1	X							
504SP005-A1	8-8-97	1028	"	" "	"	"	1	X							
504SP006-A1	8-8-97	1042	"	" "	"	"	1	X							
504SP007-A1	8-8-97	1053	"	" "	"	"	1	X							
504SP008-A1	8-8-97	1106	"	" "	"	"	1	X							
504SP009-A1	8-8-97	1120	"	" "	"	"	1	X							
504SP011-A1	8-8-97	1338	"	" "	"	"	1	X							

RELINQUISHED BY: SIGNATURE <u>Randy Brown</u> PRINTED <u>Randy Brown</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/8</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>John Blum</u> PRINTED <u>JOHN BLUM</u> COMPANY <u>TMOSE</u> REASON <u>LAB</u>	DATE <u>8/8</u> TIME <u>1600</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 3

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS Forte L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-6107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1	X					D&D LVL 2
1	X					"
1	X					"
1	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
504SP012-A1	8-8-97	1350	SOIL	2 OZ JAR	4	NONE	1	X				
504SP013-A1	8-8-97	1359	"	" "	"	"	1	X				
504SP014-A1	8-8-97	1405	"	" "	"	"	1	X				
504SP015-A1	8-8-97	1417	"	" "	"	"	1	X				

*Jul 11 1997*  
*8-8-97*

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/8</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BLUMSTEIN</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/8</u> TIME <u>1600</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: SHIPMENT NO. <u>HAND DELIVERED</u> SPECIAL INSTRUCTION: <u>TO TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 Rel21 SWL

CLIENT: NAVAL BASE Charleston PROJECT MANAGER: Charlie Verney  
 ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX NO.: 803-856-0107  
 SAMPLERS: (SIGNATURE) Meg Gordon

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Cd				
1	X	X				DQ 0 Level 2
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	Cd						
					TEMP.	CHEMICAL									
NBCL/S04SP011 B1	8-9-97	1022	Soil	4 oz glass	4°C	None	1	X	X						
NBCL/S04SP012 B1		1034					1	X	X						
NBCL/S04SP013 B1		1040					1	X	X						
NBCL/S04SP014 B1		1050					1	X	X						
NBCL/S04SP006 C1		1120					1	X	X						
NBCL/S04SP010 A1		1148					1	X	X						
NBCL/S04SP001 E1		1215					1	X	X						
NBCL/S04SP002 E1		1225					1	X	X						

RELINQUISHED BY: SIGNATURE: <u>Meg Gordon</u> PRINTED: <u>Meg Gordon</u> COMPANY: <u>Ensafe</u> REASON: <u>Analysis</u>	DATE: <u>8-9-97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: Fedex COMMENTS: DQ 0 Level 2  
 SHIPMENT NO. 4849149351  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 4 OF 5

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE KEARNEY  
 ADDRESS ZONE 2 TELEPHONE NO. (803)884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803)856-0107  
 SAMPLERS: (SIGNATURE) Randy Brown

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
<u>1X</u>						<u>DDO LVL 2</u>

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<u>5045P010-A1</u>	<u>8/9/97</u>	<u>1148</u>	<u>SOIL</u>	<u>2oz Jar</u>	<u>4</u>	<u>NONE</u>

*[Handwritten signature]*  
8-9-97

RELINQUISHED BY: SIGNATURE <u>Randy Brown</u> PRINTED <u>Randy Brown</u> COMPANY <u>TALGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>SOUTH BUNNELL</u> COMPANY <u>TALGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TALGET LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone B  
Soil Boring**

07/15/97 15:32 TEL 7477306 ENSAFE ALLEN HOS ->>> CHARSAFE 03



**NAVY CLEAN**  
 ENSAFE/ALLEN & HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone 1 TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Humprecht

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	Metal, Cyanide	SPM, Pb, Cd	Res/PCBs	
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	Metal, Cyanide	SPM, Pb, Cd	Res/PCBs	REMARKS
					TEMP.	CHEMICAL						
NBCL5045B006B2	7/15/97	1125	soil	2oz, 4oz	4°C	none	4	2	1	1		
NBCL5045B006B1		1115					4	2	1	1		
NBCL5045B007B2		1100					4	2	1	1		
NBCL5045B007B1		1055					4	2	1	1		
NBCL5045B008B2		1035					4	2	1	1		
NBCL5045B008B1		1025					4	2	1	1		
NBCL5045B007C1		0850					4	2	1	1		
NBCL5045B005C1		0820					4	2	1	1		
NBCL5045B004C2		0755					4	2	1	1		
NBCL5045B004C1		0745					4	2	1	1		

RELINQUISHED BY: SIGNATURE <u>J.A. Humprecht</u> PRINTED <u>J.A. Humprecht</u> COMPANY <u>DET</u> REASON <u>prepar ship</u>	DATE <u>7/15/97</u> TIME <u>1530</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151532</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL SAMPLES ARE DDQ3</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
 ENSAF/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Humeycut

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	Metal Clean	SVOC	Pesticides	
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\504SB005B1	7/16/97	0800	soil	20z, 40z	4°C	none
NBCL\504SB005B2		0815				
NBCL\504CB005B2		0815				
NBCL\504SB004B1		0845				
NBCL\504SB004B2		0855				
NBCL\504SR003B1		0915				
NBCL\504SR003B2		0925				
NBCL\504SB002B1		0950				
NBCL\504TB005B2				20z		

RELINQUISHED BY: SIGNATURE <u>J.A. Humeycut</u> PRINTED <u>J.A. Humeycut</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/16/97</u> TIME <u>1515</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx  
 SHIPMENT NO. 4849151510  
 SPECIAL INSTRUCTION: SWL

COMMENTS: ALL SAMPLES ARE DQD3

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone B**  
**DPT**



Amman # 5-2797



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: 6.04 Rel. # 21 SWC

CLIENT NAVAL Base Chal PROJECT MANAGER Charlie Verney  
ADDRESS Zone L TELEPHONE NO. (903) 994-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (903) 956-0107  
SAMPLERS: (SIGNATURE) J. Wad, Sr

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	Cyanide					
2	X	X					
1	X	X					
1	X	X					
2	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL/0376P014A1	5-21-97	1525	Water	2-1 liter poly	4°C	NADH HNO <sub>3</sub>
NBCL/0375P067A1	↓	1510	soil	4oz jar	4°C	NONE
NBCL/0375P009A1	5-21-97	1445	soil	4oz jar	4°C	NONE
NBCL/0376P001B1	5-21-97	0929	Water	2-1 liter poly	4°C	NADH HNO <sub>3</sub>

KLH

J. Wad, Sr  
5-21-97

RELINQUISHED BY: SIGNATURE <u>J. Wad, Sr</u> PRINTED <u>J. Wad, Sr</u> COMPANY <u>E/A&amp;H</u> REASON <u>Ship to Lab</u>	DATE <u>5-21-97</u> TIME <u>1710</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>09D40X674</u> SHIPMENT NO. <u>7026x</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>All samples are DQ02</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Metals - NADH  
CN - NADH



NAVY CLEAN  
ENSAFE/ALLEN & HOSHAL  
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CHAIN OF CUSTODY RECORD

PAGE \_\_\_\_\_ OF \_\_\_\_\_

CTO-TASK: 2912-08410  
CCC #: \_\_\_\_\_  
BPA/SO: P.O. 4 Re 1 # 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone 2 TELEPHONE NO. (803) 884-2029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Robert B. Blithe

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Metals	Metals	Metals	Metals	
1	X	X				DQO Level II
1	X	X				" " "
2	X	X				" " "
2	X	X				" " "
1	X	X				" " "
2	X	X				" " "
1	X	X				" " "
2	X	X				" " "
1	X	X				" " "
2	X	X				" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	Metals	Metals	Metals	REMARKS
					TEMP.	CHEMICAL						
NSCL/0375P005B1	1/17/97	0844	Soil	1-4oz gbs / 2 1/2 Boig	4°C	None	1	X	X			DQO Level II
NSCL/0375P004B1		0910	Soil			None	1	X	X			" " "
NSCL/0375P005B1		1000	H <sub>2</sub> O			*	2	X	X			" " "
NSCL/0375P006B1		1000	H <sub>2</sub> O			*	2	X	X			" " "
NSCL/0375P007B1		1050	Soil			None	1	X	X			" " "
NSCL/0375P008B1		1059	H <sub>2</sub> O			*	2	X	X			" " "
NSCL/0375P009B1		1059	Soil			None	1	X	X			" " "
NSCL/0375P010B1		1050	H <sub>2</sub> O			*	2	X	X			" " "
NSCL/0375P011B1		1050	Soil			None	1	X	X			" " "
NSCL/0375P012B1		1054	H <sub>2</sub> O			*	2	X	X			" " "

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>Robert B. Blithe Jr.</u>	1/21/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>Robert B. Blithe Jr.</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>Ensafe</u>	TIME <u>1649</u>	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Analysis</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>All samples are DQO's</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>0904036674</u>		
SPECIAL INSTRUCTION: <u>None</u> <u>SOUTHWEST CLASS</u>		

\* Metals - HMOs  
CO - NAOH

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHAL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-0840  
COC #: TARGET Mobile LAB  
BPA/SO: \_\_\_\_\_

CLIENT NAVY Base Charleston PROJECT MANAGER CHARLIE Veendy  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Kerry Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOA						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS											
					TEMP.	CHEMICAL												
0376P020-A1	5/21	0810	water	glass, VOA		HCL	2	X										DRO Level 2
0375P002-B1	5/21	0850	soil	glass 2 oz.		NONE	1	X										"
0375P003-B1	5/21	0930	soil	glass 2 oz.		NONE	1	X										"
<del>0375P003-B1</del>	5/21	0950	water	glass, VOA		NONE	2	X										Equip Blank
0375P005-B1	5/21	1020	soil	glass, 2 oz.		NONE	1	X										DRO Level 2
0376P003-B1	5/21	1040	water	glass, VOA		HCL	2	X										"
0376P007-B1	5/21	1130	water	glass, VOA		HCL	2	X										"
<del>0376P007-B1</del>	5/21	1130	water	glass, VOA		HCL	2	X										Equip. Blank
0375P007-B1	5/21	1330	soil	glass, 2 oz		none	1	X										DRO Level 2
0376P006-B1	5/21	1340	water	glass, VOA		HCL	2	X										" "

RELINQUISHED BY: SIGNATURE <u>Kerry Brand</u> PRINTED <u>KERRY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>5/21</u> TIME <u>1630</u>	RECEIVED BY: SIGNATURE <u>John B. Vorse</u> PRINTED <u>JOHN B VORSE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>5/21</u> TIME <u>1620</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Hand Delivered TO TARGET</u>	COMMENTS: _____	<input checked="" type="checkbox"/> AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>MOBILE LAB</u>	_____	



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT \_\_\_\_\_ PROJECT MANAGER \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_  
 PROJECT NAME/NUMBER \_\_\_\_\_ FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS
2											
1											
1											
2											

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS			
					TEMP.	CHEMICAL															
✓ 0376P010-BV	5/21	11:00	water	glass, VOA		HCL	2														
✓ 0375P002-A1	5/21	7:45	soil	glass, 2 oz.		NONE	1														
✓ 0375P007-A1	5/21	15:10	soil	glass, 2 oz		NONE	1														
✓ 0376P014-A1	5/21	15:15	water	glass VOA		HCL	2														

RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>GOLDEN BURT</u> COMPANY <u>TRCOT</u> REASON <u>LAP</u>	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	--------------------------	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: _____ SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-----------------------------------	--



**NAVY CLEAN**  
ENSAFE/ALLEN & HOSBELL  
(901) 383-9115

# CHAIN OF CUSTODY RECORD

PAGE 3 OF 4

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT \_\_\_\_\_ PROJECT MANAGER \_\_\_\_\_  
ADDRESS \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_  
PROJECT NAME/NUMBER \_\_\_\_\_ FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						
1						
2						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL							
0375P008-B1	21/5/97	1339	SOIL	2 oz Jar	4		1						
0375P009-B1	21/5/97	1348	SOIL	2 oz Jar	4		1						
0376P009-B1	21/5/97	1404	H <sub>2</sub> O	40 mL	4	HCL	2						
0376P001-C1	21/5/97	1440	U	U	U	U	2	1					

RELINQUISHED BY:  
SIGNATURE Randy Bruno  
PRINTED RANDY BRUNO  
COMPANY TARGET  
REASON LAS

DATE 21 MAY 97  
TIME 1525

RECEIVED BY:  
SIGNATURE [Signature]  
PRINTED JOHN B VOLSTER  
COMPANY TARGET  
REASON LAS

DATE 21 MAY 97  
TIME 1525

RELINQUISHED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

DATE \_\_\_\_\_  
TIME \_\_\_\_\_

RECEIVED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

DATE \_\_\_\_\_  
TIME \_\_\_\_\_

METHOD OF SHIPMENT: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

MISSING 01/19/97

02



NAVY CLEAN  
ENSAFE/ALLEN&HOSHAL  
(901) 383-9115

# CHAIN OF CUSTODY RECORD

PAGE 2 OF 34

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

ENSAFE ALLEN HOS →→→ CHARSAFE

CLIENT \_\_\_\_\_ PROJECT MANAGER \_\_\_\_\_  
ADDRESS \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_  
PROJECT NAME/NUMBER \_\_\_\_\_ FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) \_\_\_\_\_

NO. OF CONTAINERS	YOA'S	ANALYSIS REQUIRED					REMARKS
1							
2							EQUIPMENT BLANK
1							
2							
2							
2							
2							EQUIPMENT BLANK
1							
2							
2							

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	YOA'S	REMARKS
					TEMP.	CHEMICAL			
037SP001-B1	21/3/97	0844	SOIL	2 OZ JAR	4		1		
RT 037EP001B1	21/5/97	0848	H <sub>2</sub> O	40 ML	4	HCL	2		EQUIPMENT BLANK
037SP004-B1	21/5/97	0910	SOIL	2 OZ JAR	"		1		
037OP001-B1	21/5/97	0929	H <sub>2</sub> O	40 ML	"	HCL	2		
037GP002-B1	21/5/97	1002	H <sub>2</sub> O	40 ML	"	HCL	2		
037GP004-B1	21/5/97	1010	H <sub>2</sub> O	40 ML	"	HCL	2		
RS 037EP002B1	21/5/97	1044	H <sub>2</sub> O	40 ML	"	HCL	2		EQUIPMENT BLANK
037SP006-B1	21/5/97	1050	SOIL	2 OZ JAR	"		1		
037GP005-B1	21/5/97	1109	H <sub>2</sub> O	40 ML	"	HCL	2		
037GP008-B1	21/5/97	1335	H <sub>2</sub> O	40 ML	"	HCL	2		

RELINQUISHED BY: SIGNATURE <u>Randy Bravo</u> PRINTED <u>RANDY BRAVO</u> COMPANY <u>TARGET</u> REASON <u>LAG</u>	DATE <u>21</u> <u>MAY</u> <u>97</u> TIME <u>1525</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Name]</u> COMPANY <u>PRO-ET</u> REASON <u>LAB</u>	DATE <u>21</u> <u>MAY</u> <u>97</u> TIME <u>16:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCDRI

05/23/97 10:56 TEL 7477306



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 5

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON  
 ADDRESS Zone C  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) Randy Brano

PROJECT MANAGER CLAUDE VERNOY  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
1	X											DQD LVL 2 ↓ V
1	X											
1	X											
1	X											
1	X											
1	X											
1	X											
1	X											
1	X											
1	X											

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
504SP001-B1	8-9-97	0841	SOL	202 Jar	4	NONE	1
504SP002-B1	8-9-97	0850	"	" "	"	"	1
504SP003-B1	8-9-97	0900	"	" "	"	"	1
504SP004-B1	8-9-97	0912	"	" "	"	"	1
504SP005-B1	8-9-97	0921	"	" "	"	"	1
504SP006-B1	8-9-97	0929	"	" "	"	"	1
504SP007-B1	8-9-97	0938	"	" "	"	"	1
504SP008-B1	8-9-97	0954	"	" "	"	"	1
504SP009-B1	8-9-97	1002	"	" "	"	"	1
504SP010-B1	8-9-97	1010	"	" "	"	"	1

RELINQUISHED BY: SIGNATURE <u>Randy Brano</u> PRINTED <u>RANDY BRANO</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN D. VUCIC</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT SHIPMENT NO. <u>HAND DELIVERED</u> SPECIAL INSTRUCTION: <u>TO TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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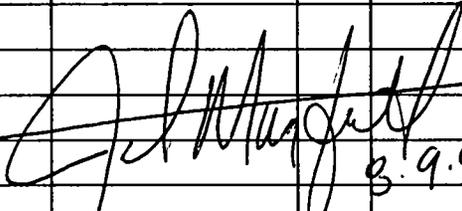
**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEENBY  
 ADDRESS ZONE C TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	1	2	3	4	5	
820-10A 820-10A						DBO LVL 2 ↓

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
504SP011-B1	8-9-97	1022	S	4oz	-	-
504SP012-B1	8-9-97	1034	S	4oz	-	-
504SP013-B1	8-9-97	1040	S	4oz	-	-
504SP014-B1	8-9-97	1050	S	4oz	-	-
 8.9.97						

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TRACET</u> REASON <u>LAD</u>	DATE <u>8/9</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE <u>JWB Vorster</u> PRINTED <u>JWB VORSTER</u> COMPANY <u>TRACET</u> REASON <u>LAD</u>	DATE <u>8/9</u> TIME <u>1300</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TRACET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHAL**  
 (901) 383-9113

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 Rel 21 SWL

CLIENT: NAVAL Base Charleston PROJECT MANAGER: Charlie Vernoy  
 ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX NO.: 803-856-0107  
 SAMPLERS: (SIGNATURE) Greg Anderson

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	Cd			
1	X	X			DQ 0 level 2
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	Cd								
					TEMP.	CHEMICAL											
NBCL1504SP001B1	8-9-97	0841	soil	4oz glass	4°C	None	1	X	X							DQ 0 level 2	
NBCL1504SP002B1		0850					1	X	X								
NBCL1504SP003B1		0900					1	X	X								
NBCL1504SP004B1		0912					1	X	X								
NBCL1504SP005B1		0921					1	X	X								
NBCL1504SP006B1		0929					1	X	X								
NBCL1504SP007B1		0938					1	X	X								
NBCL1504SP008B1		0954					1	X	X								
NBCL1504SP009B1		1002					1	X	X								
NBCL1504SP010B1		1010					1	X	X								

RELINQUISHED BY: SIGNATURE: <u>Greg Anderson</u> PRINTED: <u>Greg Anderson</u> COMPANY: <u>Ensafe</u> REASON: <u>Analysis</u>	DATE: <u>8-9-97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO.: <u>48491049351</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQ 0 Level 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 Rel21 SWL

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Vernoy  
 ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX. NO.: 803-856-0107  
 SAMPLERS: (SIGNATURE) Mary Gordon

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED					REMARKS	
					TEMP.	CHEMICAL	NO. OF CONTAINERS	Metals	Cd				
NBCL1504SP011 B1	8-9-97	1022	Seal	4 oz glass	4°C	None	1	X	X				DQ O Level 2
NBCL1504SP012 B1		1034					1	X	X				
NBCL1504SP013 B1		1040					1	X	X				
NBCL1504SP014 B1		1050					1	X	X				
NBCL1504SP006 C1		1120					1	X	X				
NBCL1501SP010 A1		1148					1	X	X				
NBCL1504SP001 E1		1215					1	X	X				
NBCL1504SP002 E1		1225					1	X	X				

RELINQUISHED BY: SIGNATURE <u>Mary Gordon</u> PRINTED <u>Mary Gordon</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-9-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fedex COMMENTS: DQ O Level 2  
 SHIPMENT NO. 4549149351  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone C  
Soil Boring**

Ammer... 5-22-97



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 Rel. # 2

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Paul B. Blythe

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	SVOA	Pest/PCB	Metals	CW-	
4	X	X	X	X	X	
4	X	X	X	X	X	
4	X	X	X	X	X	
4	X	X	X	X	X	FED Hit (Diesel/OL)
4	X	X	X	X	X	
8	X	X	X	X	X	
8	X	X	X	X	X	
2	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL/037SB001C1	5/20/97	0835	Soil	2-2oz, 2-4oz	42	None
NBCL/037SB002C1		0910				
NBCL/037SB003E1	5/20/97	0952				
NBCL/037SB004E2	5/20/97	1005				
NBCL/037SB005E1	5/20/97	1036				
NBCL/037DB005E1	5/20/97	1500	H <sub>2</sub> O	2-40mL, 4-1 Ltr 4oz bag, 2-11oz poly		*
NBCL/037EB005E1	5/20/97	1505	H <sub>2</sub> O	" "		*
NBCL/037TB005E1	5/20/97	-	Soil	2-2oz		None

RELINQUISHED BY: SIGNATURE <u>Paul B. Blythe</u> PRINTED <u>Paul B. Blythe</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/20/97</u> TIME <u>1715</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 0904036711  
 SPECIAL INSTRUCTION: None  
SWL

COMMENTS: All samples are DQOTT  
Note: NBCL/037SB001E2 had large FED hit + strong Petro odor (Heavy Diesel)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

\* VOA - HCL  
 Metals - HNO<sub>3</sub>  
 CW - NaOH

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

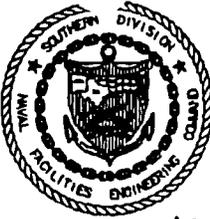
02/04

CHARSAFE

HOS

07/10/97 16:48

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.D. 4 REL. 21



**NAVY CLEAN**  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verbooy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	Metal Clean	Synthetic	Pesticides	
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	Metal Clean	Synthetic	Pesticides	REMARKS
					TEMP.	CHEMICAL						
NBCL504SB009E1	7/10/97	0730	SOIL	202, 4oz	4°C	none	4	2	1	1		
NBCL504SB009E2		0740					4	2	1	1		
NBCL504SB008E1		0800					4	2	1	1		
NBCL504CB008E1		0800					4	2	1	1		
NBCL504SB008E2		0810					4	2	1	1		
NBCL504SB001C1		0925					4	2	1	1		
NBCL504SB001C2		0940					4	2	1	1		
NBCL504SB002C1		1010					4	2	1	1		
NBCL504SB002C2		1025					4	2	1	1		
NBCL504SB003C1		1050					4	2	1	1		

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>J. A. Hume</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/10/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849151591</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL samples are DDD3</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	---------------------------------------	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCDRCR

03/04

CHARSAFE

07/10/97 16:48 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) J.A. Hineyart

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	Metals/Cyanide	SVOC/PCB	Asbestos	
4	2	1	1		
1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VDA	Metals/Cyanide	SVOC/PCB	Asbestos	REMARKS
					TEMP.	CHEMICAL						
NRCL504SR003C2	7-10-97	1100	soil	20Z, 40Z	4°C	none	4	2	1	1		
NRCL504TB008E1	↓	—	↓	20Z	↓	↓	1	1				
<i>J.A. Hineyart</i>												

RELINQUISHED BY: SIGNATURE <u>J.A. Hineyart</u> PRINTED <u>J.A. Hineyart</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/10/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151591</u> SPECIAL INSTRUCTION: <u>SW1</u>	COMMENTS: <u>ALL SAMPLES ARE DQ03</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	---------------------------------------	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.04-REL.21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Honeycutt

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	Metals	Cyanides	RESIDUES	
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\504SB018C1	7/11/97	0825	soil	2oz, 4oz	4°C	none
NBCL\504SB017C1		0840				
NBCL\504SB017C2		0855				
NBCL\504CB017C2		0855				
NBCL\504SB016C1		0915				
NBCL\504SB015C1		0930				
NBCL\504SB014C1		0955				
NBCL\504SB009C1		1035				
NBCL\504TB017C2		-		2oz		

RELINQUISHED BY: SIGNATURE <u>J.A. Honeycutt</u> PRINTED <u>J.A. Honeycutt</u> COMPANY <u>DET</u> REASON <u>prepar ship</u>	DATE <u>7/11/97</u> TIME <u>1445</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Fedex  
 SHIPMENT NO. 4849151565  
 SPECIAL INSTRUCTION: SWL

COMMENTS: ALL SAMPLES ARE DQDS

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Amen d 7/16/97 Julie



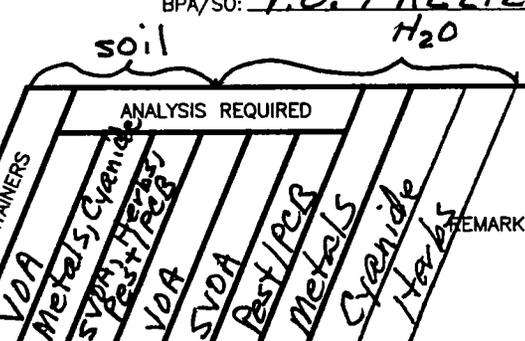
NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) J.A. Hume



FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS						
					TEMP.	CHEMICAL		VOA	Metals/Cyanide	SVDA	Pest/PCB	VOA	SVDA	Pest/PCB	Metals	Cyanide	Herb							
NBCL504SB013C1	7/14/97	0715	soil	20z, 4oz	4°C	none	4	2	1	1														
NBCL504SB011C1		0800					4	2	1	1														
NBCL504SB012C1		0950					4	2	1	1														
NBCL504SB008C1		1015					4	2	1	1														
NBCL504SB010C1		0850					4	2	1	1														
NBCL504SB010C2		0915					4	2	1	1														
NBCL504TB010C2		—		20z			1	1																
NBCL504DV010C2		1105	H <sub>2</sub> O	40ml vial, 1L Amber		*	10				2	2	2	1	1	2								
NBCL504EW010C2		1115					10				2	2	2	1	1	2								
NBCL504TR010C2		—		40ml vial			2				2													

RELINQUISHED BY: SIGNATURE <u>J.A. Hume</u> PRINTED <u>J.A. Hume</u> COMPANY <u>DBT</u> REASON <u>preparation</u>	DATE <u>7/14/97</u> TIME <u>1415</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151543</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL SAMPLES ARE DQ03.</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	--	---

\* VOA = HCL  
met = HNO3  
CN = NaOH



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### CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone 1 TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) J.A. Huneault

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	VOA	Metal, Cyanide	SYOP/Percol	Pest/PCB's			
4	2	1	1				
4	2	1	1				
4	2	1	1				
4	2	1	1				
4	2	1	1				
4	2	1	1				
4	2	1	1				
4	2	1	1				
4	2	1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL50458006B2	7/15/97	1125	SOIL	2oz, 4oz	4°C	none
NBCL50458006B1		1115				
NBCL50458007B2		1100				
NBCL50458007B1		1055				
NBCL50458008B2		1035				
NBCL50458008B1		1025				
NBCL50458007C1		0850				
NBCL50458005C1		0820				
NBCL50458004C2		0755				
NBCL50458004C1		0745				

RELINQUISHED BY: SIGNATURE <u>J.A. Huneault</u> PRINTED <u>J.A. Huneault</u> COMPANY <u>DET</u> REASON <u>prepar ship</u>	DATE <u>7/15/97</u> TIME <u>1530</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849151532</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL SAMPLES ARE DOQ3</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

07/15/97 15:32 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE



NAVY CLEAN  
 ENSAFE/ALLEN & HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 REC. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Hume

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		VOA	Metal Cleaned	SWA	PCB	
NBCU504CB006C1	7/15/97	0705	Soil	202, 402	4°C	none	4	2	1	1		
NBCU5045B006C1	↓	0705	↓	↓	↓	↓	4	2	1	1		
NBCU5047B006C1	↓	—	↓	202	↓	↓	1	1				
<i>J.A. Hume</i>												

RELINQUISHED BY: SIGNATURE <u>J.A. Hume</u> PRINTED <u>J.A. Hume</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/15/97</u> TIME <u>1530</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FoEx  
 SHIPMENT NO. 4849151532  
 SPECIAL INSTRUCTION: SWL  
 COMMENTS: All samples are DDD3  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone C  
Groundwater**

01/01

CHARSAFE

09/11/97 16:58 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08440  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
ADDRESS Zone L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08440 FAX. NO. 803-856-0167  
SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
					TEMP.	CHEMICAL		VOA	SVCA, Pest/RB	Metals	LN		
NBCL\0376W001C1	9-11-97	1230	H <sub>2</sub> O	10 Amber, 10-Poly. 40 mL	4°C	VOA = HCL Metals = HCL CN = HCL	8	X	X	X	X		
NBCL\0376W002C1	↓	1331	↓	↓	↓	↓	8	X	X	X	X		
NBCL\037TW002C1	↓	—	↓	40 mL glass	↓	HCL	2	X					
<u>[Signature]</u>													

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B. Temple</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to Lab</u>	DATE <u>9/11/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FEDER</u> SHIPMENT NO. <u>4848854872</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>DDO3 + T.C.S</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-------------------------------	---

**Subzone C**  
**DPT**



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHAL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO.4 Rel.#21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 854-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Robert B. Blith Jr.

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	C.N.I.			
2 X X					DGO Level 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<del>NSCL/0346POST1</del>	<del>5/21/99</del>	<del>1440</del>	<del>H<sub>2</sub>O</del>	<del>2-Htr poly</del>	<del>4°C</del>	<del>*</del>

RELINQUISHED BY: SIGNATURE <u>Robert B. Blith Jr.</u> PRINTED <u>Robert B. Blith Jr.</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/21/99</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>0904036674</u> SPECIAL INSTRUCTION: <u>None</u> <u>Seawest Lab</u>	COMMENTS: <u>All samples are DGO #2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	---	---

\* Metals - HNO<sub>3</sub>  
 CN - NaOH



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# CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT \_\_\_\_\_ PROJECT MANAGER \_\_\_\_\_  
ADDRESS \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_  
PROJECT NAME/NUMBER \_\_\_\_\_ FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) \_\_\_\_\_

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
					TEMP.	CHEMICAL							
031GPO01-C1	21/5/97	1440	H <sub>2</sub> O	40 mL	4	AcL	2						

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>21</u> <u>MAY</u> <u>97</u> TIME <u>1525</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B VAN LITZ</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>21</u> <u>MAY</u> <u>97</u> TIME <u>15:25</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	--	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

01  
05/22/97 15:49 TEL 7477306 ENSAFE ALLEN HOS



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 3  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REC-21

CLIENT: NAVAL BASE CHARLESTON PROJECT MANAGER: CHARLIE VEENOF  
 ADDRESS: Base TELEPHONE NO.: (803) 864-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX NO.: (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED							REMARKS		
					TEMP.	CHEMICAL	NO. OF CONTAINERS	METALS	CYANIDE							
NBCL0376P002-C1	5.22.97	0821	WATER	*	4°	**	2	X	X							DOD LEVEL 2
NBCL0376P003-C1	5.22.97	0900	WATER	*	4°	**	2	X	X							"
NBCL0375P001-C1	5.22.97	0835	SOIL	***	4°	NONE	1	X	X							"
NBCL0376P006-C1	5.22.97	0855	WATER	*	4°	**	2	X	X							"
NBCL0375P002-C1	5.22.97	0920	SOIL	***	4°	NONE	1	X	X							"
NBCL0376P004-C1	5.22.97	0925	WATER	*	4°	**	2	X	X							"
NBCL0376P005-C1	5.22.97	0945	"	*	4°	**	2	X	X							"
NBCL0376P007-C1	5.22.97	1000	"	*	4°	**	2	X	X							"
NBCL0375P003-C1	5.22.97	1025	SOIL	***	4°	NONE	1	X	X							"
NBCL0376P008-C1	5.22.97	1026	WATER	*	4°	**	2	X	X							"

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>5/22/97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>		SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>[Signature]</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>ET&amp;H</u>	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <u>LAB</u>	TIME: <u>1525</u>	REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: FED EX COMMENTS: \* - 2-18 Poly  
 SHIPMENT NO. \_\_\_\_\_ \*\* - NaOH, HNO3  
 SPECIAL INSTRUCTION: 0904036696 \*\*\* - 1-700 Glass  
Southwest Labs

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

05/22/97 15:49 TEL 7477306 ENSAFE ALLEN HOS 02



NAVY CLEAN  
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(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 3  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 Re U

CLIENT NMNL Base Charleston PROJECT MANAGER CHARLIE VERNON  
ADDRESS Zone 6 TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	METALS	CYANIDE				
1	X	X				DDO Level 2
2	X	X				" " "
2	X	X				" " "
2	X	X				" " "
2	X	X				" " "
1	X	X				" " "
1	X	X				" " "
2	X	X				" " "
2	X	X				" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION								
					TEMP.	CHEMICAL							
• NBCL0375P004-C1	5.22.97	1043	Soil	1-4oz Glass	4°	NONE	1	X	X				
• NBCL0376P009-C1	5.22.97	1045	Water	2-1L Poly	4°	*	2	X	X				
• NBCL0376P010-C1	5.22.97	1055	"	"	"	"	2	X	X				
• NBCL0376P011-C1	5.22.97	1118	"	"	"	"	2	X	X				
• NBCL0376P012-C1	5.22.97	1125	"	"	"	"	2	X	X				
• NBCL0376P005-C1	5.22.97	1113	Soil	1-4oz Glass	4°	NONE	1	X	X				
• NBCL0375P006-C1	5.22.97	1325	Soil	1-4oz	4°	NONE	1	X	X				
• NBCL0375P007-C1	5.22.97	1328	Soil	1-4oz	4°	"	1	X	X				
• NBCL0376P014-C1	5.22.97	1330	Water	2-1L Poly	4°	*	2	X	X				
• NBCL0376P013-C1	5.22.97	1400	"	"	"	"	2	X	X				

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>5/22/97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>		SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>[Signature]</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>EJA&amp;H</u>	TIME: <u>1525</u>	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <u>LAB</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>* NaOH, HNO3</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>0904086696</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>South West Labs</u>		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: 104 Rel 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Veendy  
ADDRESS Fork C TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-6107  
SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL	NO. OF CONTAINERS	METALS	CHLORIDES			
<u>N3CLD376P017-C1</u>	<u>5-22-97</u>	<u>1443</u>	<u>WATER</u>	<u>2-1.2 POLY</u>	<u>4°</u>	<u>X</u>	<u>2</u>	<u>X</u>	<u>X</u>			<u>DDO-LVL 2</u>
<u>N3CLD375P012-C1</u>	<u>5-22-97</u>	<u>1450</u>	<u>SOIL</u>	<u>1.4oz Glass</u>	<u>4°</u>	<u>NONE</u>	<u>1</u>	<u>X</u>	<u>X</u>			<u>" "</u>
<u>N3CLD375P011-C1</u>	<u>5-22-97</u>	<u>1459</u>	<u>SOIL</u>	<u>"</u>	<u>4°</u>	<u>"</u>	<u>1</u>	<u>X</u>	<u>X</u>			<u>" "</u>
<u>[Large Signature]</u>												

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>5/22</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>	TIME: <u>141</u>	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____
PRINTED: <u>JACK DRYFUSO</u>	TIME: _____	PRINTED: _____	TIME: _____	PRINTED: _____	TIME: _____	PRINTED: _____	TIME: _____
COMPANY: <u>ET&amp;H</u>	REASON: <u>LAB</u>	COMPANY: _____	REASON: _____	COMPANY: _____	REASON: _____	COMPANY: _____	REASON: _____

METHOD OF SHIPMENT: <u>FED EX</u>	COMMENTS: <u>X HNO<sub>3</sub>, NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>0904036096</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>SOUTHWEST LABS</u>		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1  
 CTO-TASK: 2912-0840  
 COC #: TARGET LAB  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						VOA's ↓ RDD Level 2
2						
1						
2						
1						
2						
1						
2						
1						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
037SP001-C1	5/22	0845	soil	glass, 2 oz.		NONE	1	X	
037GP003-C1	5/22	0905	water	glass, VOA		HCL	2	X	
037SP002-C1	5/22	0930	soil	glass, 2 oz		NONE	1	X	
037GP005-C1	5/22	0950	water	glass, VOA		HCL	2	X	
037SP003-C1	5/22	1025	soil	glass, 2 oz		NONE	1	X	
037GP009-C1	5/22	1050	water	glass, VOA		HCL	2	X	
037GP011-C1	5/22	1125	water	glass, VOA		HCL	2	X	
037SP006-C1	5/22	1320	soil	glass, 2 oz		NONE	1	X	
037GP013-C1	5/22	1405	water	glass VOA		HCL	2	X	
037SP011-C1	5/22	1440	soil	glass, 2 oz		NONE	1	X	

RELINQUISHED BY: <u>[Signature]</u> SIGNATURE PRINTED <u>Tom Anderson</u> COMPANY <u>Target</u> REASON <u>LAB</u>	DATE <u>5/22</u> TIME <u>1455</u>	RECEIVED BY: <u>[Signature]</u> SIGNATURE PRINTED <u>ROBIN BUONITTE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>5/22</u> TIME <u>1455</u>	RELINQUISHED BY: _____ SIGNATURE PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: _____ SIGNATURE PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered  
 SHIPMENT NO. 16  
 SPECIAL INSTRUCTION: TARGET MOBILE LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410  
 COC #: TARGET LAB  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS ZONE C TELEPHONE NO. (803) 284-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	1	2	3	4	5	
2	2					DPO Level 2 ↓ DPO Level 2
2	2					
2	2					
2	2					
2	2					
1	1					
2	2					
1	1					
2	2					
1	1					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	YOA'S
					TEMP.	CHEMICAL		
0376P002-C1	22/5/97	0831	H2O	40 mL	4	HCL	2	2
0376P006-C1	22/5/97	0855	H2O	40 mL	4	"	2	2
0376P004-C1	22/5/97	0925	"	"	"	"	2	2
0376P007-C1	22/5/97	1000	"	"	"	"	2	2
0376P008-C1	22/5/97	1026	"	"	"	"	2	2
0375P004-C1	22/5/97	1041	SOIL	2 OZ JAR	"	"	1	1
0376P010-C1	22/5/97	1055	H2O	40 ML	"	HCL	2	2
0375P005-C1	22/5/97	1113	SOIL	2 OZ JAR	"	"	1	1
0376P012-C1	22/5/97	1125	H2O	40 ML	"	HCL	2	2
0375P007-C1	22/5/97	1328	SOIL	2 OZ JAR	"	"	1	1

RELINQUISHED BY: SIGNATURE <u>Randy Broad</u> PRINTED <u>RANDY BROAD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>22 MAY 97</u> TIME <u>1539</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B VOLSTER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TARGET  
MOBILE LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: TARGET LAB  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) John Maxwell

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2					DD Level 2
1					DD Level 2
2					DD Level 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
037GPO14-C1	22-5-97	1330	H <sub>2</sub> O	40 mL	4	HCL	2	2				
037SP012-C1	22-5-97	1415	SOIL	2 oz jar	"		1	1				
037GPO17-C1	22-5-97	1443	H <sub>2</sub> O	40 mL	"	HCL	2	2				

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>22 May 97</u> TIME <u>1530</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John B. Dierck</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: HAND DELIVERY COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: Mobile Lab  
Target Lab

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



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(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: SOUTHWEST LABS  
BPA/SO: POY REL 21

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE FEENEY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 896-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	METALS	LYNINE					
1	X	X					DDO Level 2
1	X	X					" " "
1	X	X					" " "
1	X	X					" " "
1	X	X					" " "
1	X	X					" " "
1	X	X					" " "
1	X	X					" " "
1	X	X					" " "
1	X	X					" " "

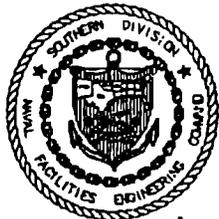
FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						REMARKS			
					TEMP.	CHEMICAL										
NBCL037SP00B-C1	5-23-97	0820	Soil	4oz GLASS	4°	NONE	1	X	X							DDO Level 2
NBCL037SP022-C1	5-23-97	0759	"	"	"	"	1	X	X							" " "
NBCL037SP010-C1	"	0820	"	"	"	"	1	X	X							" " "
NBCL037SP017-C1	"	0831	"	"	"	"	1	X	X							" " "
NBCL037SP009-C1	"	0835	"	"	"	"	1	X	X							" " "
NBCL037SP021-C1	"	0848	"	"	"	"	1	X	X							" " "
NBCL037SP010-E1	"	0910	"	"	"	"	1	X	X							" " "
NBCL037SP020-C1	"	0905	"	"	"	"	1	X	X							" " "
NBCL037SP019-C1	"	0922	"	"	"	"	1	X	X							" " "
NBCL037SP018-C1	"	0938	"	"	"	"	1	X	X							" " "

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John Mayfield</u> COMPANY <u>ELM</u> REASON <u>LAB</u>	DATE <u>5-23-97</u> TIME <u>1610</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FE EX  
SHIPMENT NO. 4643769130  
SPECIAL INSTRUCTION: SOUTHWEST LABS

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410  
 COC #: SOUTHWEST LABS  
 BPA/SO: PO4 REL 21

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEENEY  
 ADDRESS ZONE L TELEPHONE NO. (803) 854-0029  
 PROJECT NAME/NUMBER 291208410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
<u>2</u>	<u>X</u>	<u>X</u>			<u>DDO LEVEL 2</u>
<u>2</u>	<u>X</u>	<u>X</u>			
<u>2</u>	<u>X</u>	<u>X</u>			
<u>1</u>	<u>X</u>	<u>X</u>			
<u>1</u>	<u>X</u>	<u>X</u>			
<u>1</u>	<u>X</u>	<u>X</u>			
<u>1</u>	<u>X</u>	<u>X</u>			
<u>1</u>	<u>X</u>	<u>X</u>			
<u>1</u>	<u>X</u>	<u>X</u>			
<u>1</u>	<u>X</u>	<u>X</u>			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
<u>NBCL0376P015-C1</u>	<u>5-23-97</u>	<u>0450</u>	<u>Water</u>	<u>2-1/2 Poly</u>	<u>4°</u>	<u>None</u>	<u>2</u>	<u>X</u>	<u>X</u>					
<u>NBCL0376P013A-C1</u>	<u>"</u>	<u>0453</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>	<u>X</u>					
<u>NBCL0376P018-C1</u>	<u>"</u>	<u>1025</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>	<u>X</u>					
<u>NBCL037SP029-C1</u>	<u>"</u>	<u>1035</u>	<u>Soil</u>	<u>1-4oz Glass</u>	<u>"</u>	<u>None</u>	<u>1</u>	<u>X</u>	<u>X</u>					
<u>NBCL037SP023-C1</u>	<u>"</u>	<u>1037</u>	<u>Soil</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>	<u>X</u>					
<u>NBCL037SP024-C1</u>	<u>"</u>	<u>1051</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>	<u>X</u>					
<u>NBCL037SP028-C1</u>	<u>"</u>	<u>1055</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>	<u>X</u>					
<u>NBCL037SP025-C1</u>	<u>"</u>	<u>1105</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>	<u>X</u>					
<u>NBCL037SP027-C1</u>	<u>"</u>	<u>1110</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>	<u>X</u>					
<u>NBCL037SP026-C1</u>	<u>"</u>	<u>1118</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>	<u>X</u>					

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	<u>5-23-97</u>	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>JACK HARROD</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>ELASD</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>LAB</u>	<u>1610</u>	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4643769130  
 SPECIAL INSTRUCTION: SOUTHWEST LABS

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-0840  
COC #: TARGET MOORE LAB  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNBY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOD's						DPO LEVEL 2 ↓ DPO LEVEL 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS									
					TEMP.	CHEMICAL										
037SP022-C1	23-5-97	0759	SOIL	2 OZ JAR	4"	NONE	1	X								
037SP016-C1	23-5-97	0820	SOIL	2 OZ JAR	4	NONE	1	X								
037SP017-C1	23-5-97	0831	"	"	"	"	1	X								
037SP021-C1	23-5-97	0848	"	"	"	"	1	X								
037SP020-C1	23-5-97	0905	"	"	"	"	1	X								
037SP019-C1	23-5-97	0922	"	"	"	"	1	X								
037SP018-C1	23-5-97	0938	"	"	"	"	1	X								
037GP13A-C1	23-5-97	0958	H2O	40 ML	"	HCL	2	X								
037SP023-C1	23-5-97	1037	SOIL	2oz Jar	"	NONE	1	X								
037SP024-C1	23-5-97	1051	"	"	"	"	1	X								

RELINQUISHED BY: SIGNATURE <u>Kandy Brand</u> PRINTED <u>KANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>23 MAY 97</u> TIME <u>1330</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B UONSTER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>23 MAY 98</u> TIME <u>13:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. TO TARGET LAB  
SPECIAL INSTRUCTION: \_\_\_\_\_  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: TARGET MOBILE LAB  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS CONEL TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 291208410 FAX. NO. (803) 896-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOA						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
0375P008-C1	5/23	0830	soil	glass, 2oz		NONE	1	X	DDO Level 2
0376P015-C1	5/23	1000	water	glass, VOA		HCL	2	X	
0375P009-C1	5/23	0835	soil	glass, 2oz		NONE	1	X	
0375P010-C1	5/23	0900	soil	glass, 2oz		NONE	1	X	
0376P018-C1	5/23	1025	water	glass, VOA		HCL	2	X	
0375P029-C1	5/23	1035	soil	glass, 2oz		NONE	1	X	
0375P028-C1	5/23	1055	soil	glass, 2oz		NONE	1	X	
0375P027-C1	5/23	1110	soil	glass, 2oz		NONE	1	X	DDO Level 2

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>23 MAY 1997</u> TIME <u>1330</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JELON B UH...</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>23 MAY 1997</u> TIME <u>1330</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: LAND DELIVERY  
SHIPMENT NO. TO TARGET MOBILE  
SPECIAL INSTRUCTION: LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

05/27/97 18:56 TEL 7477306 ENSAFE ALLEN HOS →→→ CHARSAFE 02



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

*Amended 5/28/97*

PAGE 1 OF 2

CTO-TASK: 2912-08410  
 COC #: Southwest Lab  
 BPA/SO: PO4REL21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernon  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) P. Cellmaron

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
2	X	X			DQO Level II
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN									
					TEMP.	CHEMICAL												
<i>CSD</i> NBCL0376P004-Pit	5/21/97	0856	Water	2-1L poly	4°C	HNO <sub>3</sub> , HCl	2	X	X									
NBCL0376P019-C1		0929					2	X	X									
NBCL0376P020-C1		0943					2	X	X									
NBCL0376P021-C1		1010					2	X	X									
NBCL0376P022-C1		1032					2	X	X									
NBCL0376P023-C1		1136					2	X	X									
NBCL0376P024-C1		1324					2	X	X									
NBCL0376P025-C1		1337					2	X	X									
NBCL0376P026-C1		1354					2	X	X									
NBCL0376P030-C1	✓	1415	✓	✓			2	X	X									✓

RELINQUISHED BY: SIGNATURE <u>P. Cellmaron</u> PRINTED <u>Chuck Mason</u> COMPANY <u>EIA/SH</u> REASON <u>shipment</u>	DATE <u>5/27 1997</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>1975279296</u> SPECIAL INSTRUCTION: <u>Southwest Lab</u>	COMMENTS: <u>7 day turnaround</u> <u>All samples DQO Level II - 28 day turnaround</u> <u>Clu</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	--	---



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

*Amended 5/28/97*

PAGE 2 OF 2

CTO-TASK: See 1 of 2

COC #: \_\_\_\_\_

BPA/SO: PO4 Bel 21

CLIENT see 1 of 2 PROJECT MANAGER Charlie Veary  
 ADDRESS ZareL TELEPHONE NO. 903-994-0529  
 PROJECT NAME/NUMBER 2912-09410 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	DATE	TIME	BY	
1				DQO Level II
2				
2				
2				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	DATE	TIME	BY	REMARKS
					TEMP.	CHEMICAL					
NBCL037SP030-CI	5/27	1120	soil	8oz glass	4°C	-	1				DQO Level II
NBCL0376P031-CI	5/27	1457	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH	2				
NBCL0376P028-CI	5/27	1530	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH	2				
NBCL0376P029-CI	5/27	1542	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH	2				

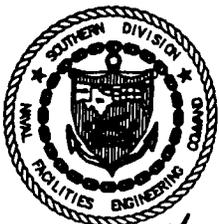
RELINQUISHED BY: SIGNATURE <u>P. C. L. Mason</u> PRINTED <u>Chyck Mason</u> COMPANY <u>E/A&amp;H</u> REASON <u>shipment</u>	DATE <u>5/27</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	--------------------------------------	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT see 1 of 2  
 SHIPMENT NO. 1970379286  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: 7 day turnaround  
All samples DQO Level II - 25 day  
turnaround  
CAV

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)



**NAVY CLEAN**  
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 2912-0840  
 COC #: Target Mobile Lab  
 BPA/SO: \_\_\_\_\_

CLIENT: NAVY BRG CHARLESTON PROJECT MANAGER: CHARLIE VERON  
 ADDRESS: Zone L TELEPHONE NO.: (803) 884-0029  
 PROJECT NAME/NUMBER: 2912-0840 FAX NO.: (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2					DPO Level II ↓
2					
2					
2					
1					
2					
2					
2					
2					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VQA'S						
					TEMP.	CHEMICAL								
037GP019-C1	27-5-97	0929	H2O	40 ML	4	HCL	2	2						
037GP020-C1	27-5-97	0943	"	"	"	"	2	2						
037GP 021-C1	27-5-97	1010	"	"	"	"	2	2						
037GP 022-C1	27-5-97	1032	"	"	"	"	2	2						
037SP030-C1	27-5-97	1118	SOIL	202 JAR	"	NONE	1	1						
037GP023-C1	27-5-97	1136	H2O	40 ML	"	HCL	2	2						
037GP024-C1	27-5-97	1324	"	"	"	"	2	2						
037GP025-C1	27-5-97	1337	"	"	"	"	2	2						
037GP026-C1	27-5-97	1354	"	"	"	"	2	2						
037GP030-C1	27-5-97	1415	"	"	"	"	2	2						

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>RANDY BRAND</u> COMPANY: <u>TARGET</u> REASON: <u>LAB</u>	DATE: <u>27 MAY 1997</u> TIME: <u>1606</u>	RECEIVED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>JOHN BURSTON</u> COMPANY: <u>TARGET</u> REASON: <u>LAB</u>	DATE: <u>27 MAY 1997</u> TIME: <u>1620</u>	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: <u>HAD DELIVER TO TARGET</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>MOBILE LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-0840  
 COC #: TARGET MOBILE LAB  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNADY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-6107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
100's					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION								
					TEMP.	CHEMICAL							
<del>NBCLO376P</del>													
0376P031-C1	27-5-97	1457	H <sub>2</sub> O	40 mL	4	HCL	2	2					DDP LEAK II
0376P028-C1	27-5-97	1530	H <sub>2</sub> O	"	"	"	2	2					"
0376P029-C1	27-5-97	1542	"	"	"	"	2	2					"

RELINQUISHED BY: <u>[Signature]</u> SIGNATURE <u>KANDY BROWN</u> PRINTED <u>KANDY BROWN</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>27 MAY 97</u> TIME <u>1606</u>	RECEIVED BY: <u>[Signature]</u> SIGNATURE <u>JOHN S. VON 100</u> PRINTED <u>TARGET</u> COMPANY <u>LAB</u> REASON <u>LAB</u>	DATE <u>27 MAY 97</u> TIME <u>16:20</u>	RELINQUISHED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. TO TARGET  
 SPECIAL INSTRUCTION: MOBILE LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Amen... 7-8-97



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) P. Cell Mason

PROJECT MANAGER Charlie Verroy  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	metals	CN					
2	X	X					DQO Level II
2	X	X					
2	X	X					
2	X	X					
2	X	X					
1	X	X					
1	X	X					
2	X	X					
2	X	X					
2	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0376P027-C1	5/28/97	0918	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH
NBCL0376P032-C1		0940	↓	↓	↓	↓
NBCL0376P033-C1		1000	↓	↓	↓	↓
NBCL0376P034-C1		1025	↓	↓	↓	↓
NBCL0376P039-C1		1040	↓	↓	↓	↓
NBCL0375P021-C1		0943	soil	8oz glass	4°C	-
NBCL0375P022-C1		1033	soil	8oz glass	↓	-
NBCL0376P035-C1		1105	water	2-1L poly	↓	HNO <sub>3</sub> , NaOH
NBCL0376P036-C1		1125	↓	↓	↓	↓
NBCL0376P037-C1		1255	↓	↓	↓	↓

KLH  
KLH

RELINQUISHED BY: SIGNATURE <u>P. Cell Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>E/A&amp;H</u> REASON <u>shipment</u>	DATE <u>5/28/1997</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fedex</u> SHIPMENT NO. <u>9403384502</u> SPECIAL INSTRUCTION: <u>Southwest labs</u>	COMMENTS: <u>DQO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	-------------------------------	---

05/29/97 09:20 TEL 7477306 ENSAFE ALLEN HOS



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2  
 CTO-TASK: 2912-08410  
 CCC #: \_\_\_\_\_  
 BPA/SO: PD4REL 21

CLIENT see 1 of 2 PROJECT MANAGER \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_  
 PROJECT NAME/NUMBER \_\_\_\_\_ FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) P. Allen Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
<u>metals</u> <u>CN</u>						<u>DDO Level II</u>

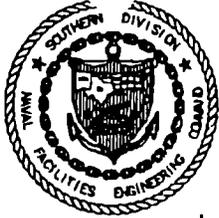
FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
<u>NBCL0376P038-C1</u>	<u>5/28/97</u>	<u>1315</u>	<u>water</u>	<u>2-1L poly</u>	<u>4°C</u>	<u>HNO<sub>3</sub>, NaOH</u>	<u>2</u>	<u>X</u>	<u>X</u>					

RELINQUISHED BY: SIGNATURE <u>P. Allen Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>EIAEH</u> REASON <u>shipment</u>	DATE <u>5/28</u> 1997 TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: fed ex  
 SHIPMENT NO. 9403384502  
 SPECIAL INSTRUCTION: see west lib  
 COMMENTS: DDO Level II  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER







NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 02912-08410

COC #:

BPA/SO: P04 REL 21 SWL

CLIENT Naval Base Charleston

PROJECT MANAGER Charlie Vennay

ADDRESS Zone L

TELEPHONE NO. 803-884-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. 803-856-0107

SAMPLERS: (SIGNATURE) P. C. Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	metals	CN			
1	X	X			DRO Level II
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0375P02B-C1	6/3/97	0921	soil	8 oz glass	4°C	—
NBCL0375P02A-C1		0945				—
NBCL0375P15A-C1		1015				—
NBCL0375P015-C1		1025				—
NBCL0375P01A-C1		1040				—
NBCL0375P013-C1		1055				—
NBCL0375P22B-C1		1145				—
NBCL0376P22A-C1		1130	water	2-1L poly		HNO <sub>3</sub> , NaOH

RELINQUISHED BY:  
SIGNATURE P. C. Mason  
PRINTED Chuck Mason  
COMPANY E/A & H  
REASON shipment

DATE 6/3/1997  
RECEIVED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

DATE \_\_\_\_\_  
RELINQUISHED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

DATE \_\_\_\_\_  
RECEIVED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

METHOD OF SHIPMENT: FedEx  
SHIPMENT NO. 434915160  
SPECIAL INSTRUCTION: Southwest Labs

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 7

CTO-TASK: 2912-08412  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEENBY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

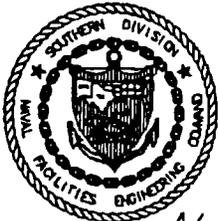
NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1	X					1400 Level 2
1	X					11
1	X					11
1	X					11
1	X					11
1	X					11
1	X					11

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
✓ 0375P028-C1	3-6-97	0920	SOIL	2oz Jar	4	NONE	1	X						
✓ 0375P02A-C1	3-6-97	0945	"	" "	"	"	1	X						11
✓ 0375P028-C1	3-6-97	1012	"	" "	"	"	1	X						11
✓ 0375P015-C1	3-6-97	1025	"	" "	"	"	1	X						11
✓ 0375P014-C1	3-6-97	1040	"	" "	"	"	1	X						11
✓ 0375P013-C1	3-6-97	1055	"	" "	"	"	1	X						11
✓ 0375P022B-C1	3-6-97	1145	"	" "	"	"	1	X						11
6														

*Col. Mangfall*  
 6-3-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>3</u> JUNE <u>97</u> TIME <u>1730</u>	RECEIVED BY: SIGNATURE <u>JOBIN B. VILFRU</u> PRINTED <u>JOBIN B. VILFRU</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/9/97</u> TIME <u>1743</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--	--	--	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	-----------------------------------	---



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE KENNEDY  
 ADDRESS ZONE L TELEPHONE NO. (803) 384-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 384-7017  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2					D40 Level 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
0576POZZAC1	6-3-97	11:30	H <sub>2</sub> O	40 ml	4	HCL

*[Handwritten signature]*  
 6-3-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>3/6/97</u> TIME <u>1730</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN A WISE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>4/2/97</u> TIME <u>1745</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--	--	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TARGET LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN  
ENSAFE/ALLEN & HOSHAL**  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO 4 Rel 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Verney  
TELEPHONE NO. 803-884-0029  
FAX NO. 803-856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Cu				
1	X	X				DOQ level 3
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION								
					TEMP.	CHEMICAL							
NBCL 1504SP011A1	8-8-97	1338	soil	4 oz glass	4°C	None	1	X	X				
NBCL 1504SP012A1		1350					1	X	X				
NBCL 1504SP013A1		1400					1	X	X				
NBCL 1504SP014A1		1405					1	X	X				
NBCL 1504SP015A1		1417					1	X	X				
NBCL 1504SP021C1		1439					1	X	X				
NBCL 1504SP022C1		1455					1	X	X				
NBCL 1504SP023C1		1503					1	X	X				
NBCL 1504SP024C1		1513					1	X	X				
NBCL 1504SP025C1		1549					1	X	X				

RELINQUISHED BY:		DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE	<u>[Signature]</u>	8-8-97	SIGNATURE		SIGNATURE		SIGNATURE	
PRINTED	<u>Greg Coulson</u>		PRINTED		PRINTED		PRINTED	
COMPANY	<u>Ensafe</u>		COMPANY		COMPANY		COMPANY	
REASON	<u>Analysis</u>		REASON		REASON		REASON	
		TIME		TIME		TIME		TIME
		1500						

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849149302</u>		
SPECIAL INSTRUCTION: _____		

09/06/97 10:00 TEL 141000 ENSAFE ALLEN HUD 111 CHARCAFE 09/07/02



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-0840  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS ZONE 4 TELEPHONE NO. (803) 824-0829  
 PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1 X						DPO LVL 2 ↓
1 X						
1 X						
1 X						
1 X						
1 X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
504SP001-C1	1439	8-8-97	SOIL	2 OZ JAR	4	NONE	1 X
504SP002-C1	1455	8-8-97	"	" "	"	"	1 X
504SP003-C1	1503	8-8-97	"	" "	"	"	1 X
504SP004-C1	1512	8-8-97	"	" "	"	"	1 X
504SP005-C1	1533	8-8-97	"	" "	"	"	1 X
504TP005-C1	1600	8-8-97	H <sub>2</sub> O	40 ML	4	NONE	1 X

*[Signature]*  
 8-8-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TOUGET</u> REASON <u>LAB</u>	DATE <u>8/8</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN W. BURSTE</u> COMPANY <u>TOUGET</u> REASON <u>LAB</u>	DATE <u>8/8</u> TIME <u>1600</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	-------------------------------------	---	-------------------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: Hand Delivered  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TOUGET LAB  
 COMMENTS: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 RelZ1 SWL

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Verney  
 ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX NO.: 803-856-0107  
 SAMPLERS: (SIGNATURE) Meg Gordon

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL	NO. OF CONTAINERS	METALS	CO			
NBCL1504SP011 B1	8-9-97	1022	Seal	4 oz glass	4°C	None	1	X	X			DQ 0 Level 2
NBCL1504SP012 B1		1034					1	X	X			
NBCL1504SP013 B1		1040					1	X	X			
NBCL1504SP014 B1		1050					1	X	X			
NBCL1504SP006 C1		1120					1	X	X			
NBCL1504SP010 A1		1148					1	X	X			
NBCL1504SP001 E1		1215					1	X	X			
NBCL1504SP002 E1		1225					1	X	X			

RELINQUISHED BY: SIGNATURE <u>Meg Gordon</u> PRINTED <u>Meg Gordon</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-9-97</u> TIME <u>1100</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fedex</u> SHIPMENT NO. <u>4849149351</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQ 0 Level 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	-------------------------------	---



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
504SP006-C1	8-9-97	1120	SOIL	2oz Jar	4	NONE	1	X VOA	DDO Lvl 2

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN O'NEAL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone D**  
**DPT**



NAVY CLEAN  
ENSAF/ALLEN&HOSHALL  
(901) 383-9115

Amended CAV 6/30/97  
CHAIN OF CUSTODY RECORD

PAGE 3 OF 3

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNAY  
ADDRESS ZONE L TELEPHONE NO. 803-855-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						DGD LEVEL 2
2						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X <u>GDDGPOOL-25</u>	<u>6/25/97</u>	<u>1100</u>	<u>H2O</u>	<u>40 mL</u>	<u>4</u>	<u>HCL</u>
X <u>GDDGPOOL-15</u>	<u>6/25/97</u>	<u>1105</u>	<u>H2O</u>	<u>40 mL</u>	<u>4</u>	<u>HCL</u>

Wendell C Powell  
6-25-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/25/97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JANIS BUNSTER</u> COMPANY <u>DYLOP</u> REASON <u>LAB</u>	DATE <u>6/25/97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To TARGET mobile LAB  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone E  
Sediment**



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

Amended 8/6/97  
CHAIN OF CUSTODY RECORD  
ZONE L

PAGE 1 OF 1  
CTO-TASK: 2912-08420  
COC #: ~~2912-084002~~  
BPA/SO: P04 REL 21 SWL

CLIENT: NAVAL BASE CHARLESTON PROJECT MANAGER: CHARLIE VEENOY  
ADDRESS: ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER: 2912-09000 FAX. NO. (803) 856-6107  
SAMPLERS: (SIGNATURE) *J. Hamilton*

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL		VDA	METALS/CN				
NBCL/699M0001-E1	7/11/97	0930	SED	202/402	4°	NONE	3	X	X				DOO LVL 3
NBCL/699M0002-E1		0955					3	X	X				
NBCL/699M0004-E1		1025					3	X	X				
NBCL/699M0007-E1		1145					3	X	X				
NBCL/699T0007-E1	7-11-97		SOL		40	"	1	X					

*Jul 11 7.11.97*

RELINQUISHED BY: <i>[Signature]</i>	DATE: 7.11.97	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <i>[Signature]</i>		SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <i>JACK M... 20</i>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <i>E/A 4</i>	TIME: 1430	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <i>ANALYSIS</i>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: *Fed Ex*  
SHIPMENT NO. *48191491004*  
SPECIAL INSTRUCTION: \_\_\_\_\_  
COMMENTS: *DOO 3 + fics*  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: P04 Rel. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verney  
ADDRESS Zone KL TELEPHONE NO. 803-864-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	Metals	CN			
3	X	X				DQO LVL 3
3	X	X				"
1	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	Metals	CN	REMARKS
					TEMP.	CHEMICAL					
✓ NBCL699M0003E1	7-22-97	1150	M	4,8oz	4°C	None	3	X	X		DQO LVL 3
✓ NBCL699M0009E1	↓	1400	M	↓	4°C	↓	3	X	X		"
✓ NBCL699TM0009E1	↓	—	Sand	2oz	4°C	↓	1	X			"

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B Temple</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to Lab</u>	DATE <u>7/22/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx  
SHIPMENT NO. 4849149572  
SPECIAL INSTRUCTION: SWL

COMMENTS: DQO3 + TICs

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone E  
Soil Boring**

Ammer 5-22-97



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 Rel. # 2

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernou  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Robert B. Blythe

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
					TEMP.	CHEMICAL		VOA	SVOA	Pest/PCB	Metals	CU-	
NBCL/037SB001C1	5/20/97	0835	Soil	2-2oz, 2-4oz	42	None	4	X	X	X	X	X	
NBCL/037SB002C1		0910					4	X	X	X	X	X	
NBCL/037SB003E1		0952					4	X	X	X	X	X	
NBCL/037SB004E1		1005					4	X	X	X	X	X	FED Hit (Diesel/Oil)
NBCL/037SB005E1		1036	↓	↓			4	X	X	X	X	X	
NBCL/037DB005E1		1500	H <sub>2</sub> O	2-40mL, 4-1 Lt 4oz, 2-11oz poly		*	8	X	X	X	X	X	
NBCL/037EB005E1		1505	H <sub>2</sub> O	" "		*	8	X	X	X	X	X	
NBCL/037TB005E1		-	Soil	2-2oz		None	2	X					
<del>Robert B. Blythe 5/20/97</del>													

RELINQUISHED BY: SIGNATURE <u>Robert B. Blythe</u> PRINTED <u>Robert B. Blythe</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/29/97</u> TIME <u>1715</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Red Ex  
 SHIPMENT NO. 0924036711  
 SPECIAL INSTRUCTION: None  
SWL

COMMENTS: All samples are DQ0111  
Note: NBCL/037SB001E2 had large FED hit + strong Petro odor (Heavy Diesel)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

\* VOA - HCL  
 Metals - HVOs  
 CU - NaOH



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

Amended 6/10/97

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.04-REL-215WL

CLIENT: NAVAL BASE CHAS.  
ADDRESS: ZONE 2 LCH  
PROJECT NAME/NUMBER: 0912-0840  
SAMPLERS: (SIGNATURE) RS [Signature]  
PROJECT MANAGER: CHARLIE Verney  
TELEPHONE NO.: 803-884-0029  
FAX NO.: \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED		REMARKS
	SYNTEST	METAL/CN	
4	2	1	
4	2	1	
4	2	1	
4	2	1	
4	2	1	
4	2	1	
1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBC103753002E1	6/7/97	1040	Soil	Zon 1/4 ton	4°C	NONE
003E1		1045				
004E1		1050				
005E1	5-20-97	1105				
006E1		1120				
007E1		1145				
NBC103753007E1	↓	—	↓	↓	↓	↓

sampled on

RS [Signature] 6/7/97

RELINQUISHED BY: SIGNATURE: <u>RS [Signature]</u> PRINTED: <u>RS JAWSON</u> COMPANY: <u>CEERD</u> REASON: <u>ANALYSIS</u>	DATE: <u>6/7/97</u> TIME: <u>1600</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: FED EX  
SHIPMENT NO.: AG43769082  
SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLE ARE DOO3 UNLESS OTHERWISE NOTED

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

*Amended 6/10/97*

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.04 DEL-21 SWL

CLIENT NAVAL BASE CHAS  
ADDRESS ZONE 2 L  
PROJECT NAME/NUMBER 0912-0840  
SAMPLERS: (SIGNATURE) RK Dawson RS Dawson  
PROJECT MANAGER CHARLIE VERNY  
TELEPHONE NO. 803-884-0029  
FAX NO. \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	SKOA	TEST/MS	CN	METAL	
8	2	2	2	1	1	
8	2	2	2	1	1	
2	2					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBC1037D008E1	6/9/97	1020	H2O	1L POLY, 1L AMBER 40 ML GLASS	4°C	HXG3 NAOH
NBC1037E008E1		1030	H2O	↓	↓	↓
NBC1037B008E1						

RELINQUISHED BY: SIGNATURE <u>RS Dawson</u> PRINTED <u>RS DAWSON</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/9/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FED EX  
SHIPMENT NO. 4643769097  
SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLE ARE UQ03 UNLESS OTHERWISE NOTED

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

Amended 7-9-97 CW  
 CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 REL. 2

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Hargrett

SOIL H<sub>2</sub>O

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED								REMARKS
					TEMP.	CHEMICAL		VOA	Metal/Cyanide/Herb/pest/PCB	VOA	SVOA	pest/PCB	Metals	Cyanide	Herbs	
NBCL504D <del>X</del> 001E1	7/8/97	0910	H <sub>2</sub> O	40ml vial, 1LPoly LAMBER	4°C	*	10			2	2	2	1	1	2	
NBCL504E <del>X</del> 001E1		0920		↓		↓	10			2	2	2	1	1	2	
NBCL504T <del>X</del> 001E1				40ml vial		VOA=HCL	2			2						
NBCL5045B001E1		1020	soil	2oz + 4oz		none	4	2	1	1						
NBCL504CB001E1		1020					4	2	1	1						
NBCL5045B002E1		1050					4	2	1	1						
NBCL5045B003E1		1145					4	2	1	1						
NBCL5045B003E2		1200		↓			4	2	1	1						
NBCL504TB001E1				2oz			1	1								

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>J.A. Hargrett</u>	7/8/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>J.A. Hargrett</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>DET</u>	TIME <u>1500</u>	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>pickup ship</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>FedEx</u>	COMMENTS: <u>ALL SAMPLES ARE DQ03</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>4849151624</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>SWL</u>		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

\* VOA=HCL  
 met=HNO<sub>3</sub>  
 CN=NaOH

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCDRI

01/08/97 13:38 TEL 141/300 ENSAFE ALLEN BUS CHAUNDALE 02/03



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Honeysuckle

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	Metal Cyanide	Swab, Hexas	Res. PCBs	
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\504SB004E1	7/9/97	0705	soil	20z, 40z	4°	none
NBCL\504SB004E2		0730				
NBCL\504SB005E1		0805				
NBCL\504SB005E2		0830				
NBCL\504CB005E2		0830				
NBCL\504SB006E1		0955				
NBCL\504CB006E1		0955				
NBCL\504SB006E2		1015				
NBCL\504SB007E1		1040				
NBCL\504SB007E2		1055				

RELINQUISHED BY: SIGNATURE <u>J.A. Honeysuckle</u> PRINTED <u>J.A. Honeysuckle</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/9/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx COMMENTS: ALL SAMPLES ARE DQ03 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849151602  
 SPECIAL INSTRUCTION: SWL  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN & HOSHAL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) A. Henscott

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
<u>1</u>	<u>1</u>						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<u>NBCL 504TROOSE2</u>	<u>7/19/97</u>	<u>—</u>	<u>soil</u>	<u>2oz</u>	<u>4°C</u>	<u>none</u>

*A. Henscott*

RELINQUISHED BY: SIGNATURE <u>A. Henscott</u> PRINTED <u>S. A. Henscott</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/19/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151602</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>All samples are DQD3</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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### CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.D. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verbooy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	Metal Cleaned	Prep	Residue	
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	Metal Cleaned	Prep	Residue	REMARKS
					TEMP.	CHEMICAL						
NBCL\504SB009E1	7/10/97	0730	SOIL	20Z, 40Z	4°C	none	4	2	1	1		
NBCL\504SB009E2		0740					4	2	1	1		
NBCL\504SB008E1		0800					4	2	1	1		
NBCL\504CB008E1		0800					4	2	1	1		
NBCL\504SB008E2		0810					4	2	1	1		
NBCL\504SB001C1		0925					4	2	1	1		
NBCL\504SB001C2		0940					4	2	1	1		
NBCL\504SB002C1		1010					4	2	1	1		
NBCL\504SB002C2		1025					4	2	1	1		
NBCL\504SB003C1		1050					4	2	1	1		

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>J. A. Huneault</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/10/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849151591</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL samples are DDD3</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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03/04

CHARSAFE

7306

16:48

07/10/97



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.D.4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	Metal/Cyanide	SVOC/Hydrocarbons	Asst/PCB	
4	2	1	1		
1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VDA	Metal/Cyanide	SVOC/Hydrocarbons	Asst/PCB
					TEMP.	CHEMICAL					
NBCL504SR003C2	7-10-97	1100	soil	20Z, 40Z	4°C	none	4	2	1	1	
NBCL504TB00BE1	↓	—	↓	20Z	↓	↓	1	1			
<u>[Signature]</u>											

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>D.A. Honeycutt</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/10/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151591</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>ALL SAMPLES ARE DQOR</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

**Subzone E  
Groundwater**



NAVY CLEAN  
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### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SC: P.1574/KE-21

CLIENT Charleston Naval Base

PROJECT MANAGER Charlie Venway

ADDRESS Zone 6

TELEPHONE NO. 803-884-0629

PROJECT NAME/NUMBER 2912-08440

FAX NO. \_\_\_\_\_

SAMPLERS: (SIGNATURE) JW, GG

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	SUOA	PEST/PCB	Metals	CYANIDE	
8	X	X	X	X	X	VOA-HCL
8	X	X	X	X	X	SUOA-NONE
8	X	X	X	X	X	PEST/PCB-NONE
8	X	X	X	X	X	Metals-HNO <sub>3</sub>
2	X					CN-NACH

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	SUOA	PEST/PCB	Metals	CYANIDE	REMARKS
					TEMP.	CHEMICAL							
NBCL\037GWOODIEI	8-4-97	1210	W	2-40m, 4-11m and 2-11m poly	4°C	SEC REMARKS	8	X	X	X	X	X	VOA-HCL
NBCL\037GWOODIEI	8-4-97	1430	W	↓	4°C	↓	8	X	X	X	X	X	SUOA-NONE
NBCL\037ENOODIEI	8-4-97	1630	W	2-40m, 4-11m and 2-11m poly	4°C	SEC REMARKS	8	X	X	X	X	X	PEST/PCB-NONE
NBCL\037DWOODIEI	8-4-97	1635	W	↓	4°C	↓	8	X	X	X	X	X	Metals-HNO <sub>3</sub>
NBCL\037TWOODIEI	8-4-97	1710	W	2-40ml	4°C	SEC REMARKS	2	X					CN-NACH

*[Handwritten signature]*  
8-4-97

RELINQUISHED BY SIGNATURE <u>[Signature]</u> PRINTED <u>JAMES WATSON</u> COMPANY <u>E/VAH</u> REASON <u>Ship to Lab</u>	DATE <u>8-4-97</u> TIME <u>1730</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>4844 FOLGE</u> SHIPMENT NO. <u>4949149421</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DG03 + TICs</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**Subzone E**  
**DPT**



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: POTREL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
ADDRESS Edon L TELEPHONE NO. (903) 984-0229  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (903) 856-0107  
SAMPLERS: (SIGNATURE) P. C. L. Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CN				
2	X	X				DQO Level II
2	X	X				
1	X	X				
2	X	X				
2	X	X				
2	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0376P002-E1	5/28/97	1335	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH
NBCL0376P003-E1		1355	water	2-1L poly		HNO <sub>3</sub> , NaOH
NBCL0376P004-E1		1335	soil	8oz glass		-
NBCL0376P007-E1		1430	water	2-1L poly		HNO <sub>3</sub> , NaOH
NBCL0376P010-E1		1510	water	2-1L poly		HNO <sub>3</sub> , NaOH
NBCL0376P009-E1		1450	water	2-1L poly		HNO <sub>3</sub> , NaOH
NBCL0376P001-E1		1522				
NBCL0376P006-E1		1631				
NBCL0376P005-E1		1543				

RELINQUISHED BY: SIGNATURE <u>P. C. L. Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>EIA/SH</u> REASON <u>shipment</u>	DATE <u>5/28 1997</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fedex</u> SHIPMENT NO. <u>9403384502</u> SPECIAL INSTRUCTION: <u>Southwest labs</u>	COMMENTS: <u>DQO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Amended 11/6/97



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #:   
BPA/SO: PO4 Re 1 21

CLIENT Charleston Naval Base PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. 803 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) RANDY BRAND

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						
2						
2						
2						
2						
2						
2						
1						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
					TEMP.	CHEMICAL							
037GP002-E1	5-28-97	1:35	H <sub>2</sub> O	40 mL	4	HCL	2						
037GP003-E1	5-28-97	1:55	H <sub>2</sub> O	40 ML	4	HCL	2						
037GP007-E1	5-28-97	2:30	H <sub>2</sub> O	40ML	4	HCL	2						
037GP009-E1	5-28-97	2:50	H <sub>2</sub> O	40ML	4	HCL	2						
037GP010-E1	5-28-97	3:10	H <sub>2</sub> O	40ML	4	HCL	2						
037GP001-E1	5-28-97	3:30	H <sub>2</sub> O	40 ML	4	HCL	2						
037GP006-E1	5-28-97	3:31	H <sub>2</sub> O	40 ML	4	HCL	2						
037GP005-E1	5-28-97	3:43	H <sub>2</sub> O	40 ML	4	HCL	2						
037SP001-E1	5-28-97	1:35	SOIL	202 IAM	"	NONE	1						
037TPO22E1	5-28-97		H <sub>2</sub> O	40ml	4	HCL	2						

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>28 MAY 97</u> TIME <u>1630</u>	RECEIVED BY: SIGNATURE <u>John B. Vernoy</u> PRINTED <u>JOHN B. Verno</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: _____ SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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02 05/29/97 09:20 TEL 7477306 ENSAFE ALLEN HOS



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernou  
 ADDRESS Zone L TELEPHONE NO. (203) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (408) 856-0107  
 SAMPLERS: (SIGNATURE) P. C. L. Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	metals	CN		
2	X	X		DQO Level II
2	X	X		
2	X	X		
1	X	X		
2	X	X		
2	X	X		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	metals	CN					
					TEMP.	CHEMICAL								
NBCL0376P004-E1	5/29/97	0825	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH	2	X	X					
NBCL0376P008-E1		0845	↓	↓		↓	2	X	X					
NBCL0376P013-E1		0945	↓	↓		↓	2	X	X					
NBCL0375P002-E1		0913	soil	8 oz glass		-	1	X	X					
NBCL0376P011-E1		1000	water	2-1L poly		HNO <sub>3</sub> , NaOH	2	X	X					
NBCL0376P012-E1		1215	↓	↓		↓	2	X	X					
			↓	↓		↓								

RELINQUISHED BY: SIGNATURE <u>P. C. L. Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>E/ASH</u> REASON <u>shipment</u>	DATE <u>5/29</u> <u>1997</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fedex</u> SHIPMENT NO. <u>1516555876</u> SPECIAL INSTRUCTION: <u>Southwest Labs</u>	COMMENTS: <u>DQO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verway  
 ADDRESS Zone TELEPHONE NO. \_\_\_\_\_  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Randy Brown

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS
2											
2											
2											
2											
2											

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
0576P004-E1	5-29-97	8:25	H <sub>2</sub> O	40 ML	4	HCL
0376P008-E1	5-29-97	8:45	H <sub>2</sub> O	40 ML	4	HCL
0576P0013-E1	5-29-97	9:45	H <sub>2</sub> O	40 ML	4	HCL
0376P0011-E1	5-29-97	10:00	H <sub>2</sub> O	40 ML	4	HCL
0376P0012-E1	5-29-97	10:15	H <sub>2</sub> O	40 ML	4	HCL

RELINQUISHED BY:  
 SIGNATURE Randy Brown  
 PRINTED RANDY BROWN  
 COMPANY TRAGET  
 REASON LAB

DATE 29 MAY 97  
 TIME 1630

RECEIVED BY:  
 SIGNATURE John B. ...  
 PRINTED JOHN B. ...  
 COMPANY TALON  
 REASON LAB

DATE 29 MAY 97  
 TIME 1630

RELINQUISHED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

METHOD OF SHIPMENT: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vermoy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
1	X	X			DQO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
NBC16998001-E	6-17-97	1015	Soil	4oz (Glass)	4°C	-	1	X	X	
<del>[Signature]</del> <del>6-17-97</del>										

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>6/17/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Express</u> SHIPMENT NO. <u>484914984</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE VERBOY  
 ADDRESS ZONE 1 TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Don B...

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		METALS	CN			
NBCL0996P002-E1	6/17/97	1040	H <sub>2</sub> O	1-LITER Poly	40C	*	1		X			All Samples DQD LEVEL II
"	"	1050	"	" " "	"	"	1	X				
NBCL0374P015-E1	"	1140	"	" " "	"	"	2	X	X			
NBCL0996P001-E1	"	1325	"	" " "	"	"	2	X	X			
<del>Don B... 6-17-97</del>												

RELINQUISHED BY: <u>Don B...</u>	DATE: <u>6-17-97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>Don B...</u>		SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>Don B...</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>EnSite</u>	TIME: <u>1600</u>	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <u>Lab</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: FEDEX COMMENTS: All Samples DQD LEVEL II AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849149841 \* HNO<sub>3</sub>, NaOH  DISPOSED OF  
 SPECIAL INSTRUCTION: \_\_\_\_\_  STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHAL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 4 OF 8

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2 X					DQD LEVEL 2
2 X					
2 X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
X 699GP002-E1	6-17-97	11:15	H <sub>2</sub> O	40 ml	4	HCL	2	X			
X 037GP015-E1	6-17-97	11:50	H <sub>2</sub> O	40 ml	4	HCL	2	X			
X 699GP001-E1	6-17-97	1:30	H <sub>2</sub> O	40 ml	4	HCL	2	X			
<p><i>Wendell Rawls</i> 6-17-97</p>											

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-17-97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CHARLIE VERNON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/17/97</u> TIME <u>3:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TA: TARGET</u> <u>MOBILE LAB</u>	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

Amended 7/8/97

PAGE 1 OF 1



NAVY CLEAN  
ENSAFE/ALLEN&HOSHAL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: 304 RZL SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES KENNY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	PAH	PCB	DDT	
1	X	X			DOOR 2
1	X	X			"
1	X	X			"
1	X	X			"
1	X	X			"
2	X	X			"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NBCL037SP003-E1	7.7.97	1010	SOIL	1-4" GLASS	4°C	NONE	1	X X	DOOR 2
NBCL037SP004-E1	7.7.97	1040	SOIL	"	4°C	NONE	1	X X	"
NBCL037SP006-E1	7.7.97	1405	SOIL	"	4°C	NONE	1	X X	"
NBCL037SP007-E1	7.7.97	1414	SOIL	"	4°C	NONE	1	X X	"
NBCL037SP008-E1	7.7.97	1424	SOIL	"	4°C	NONE	1	X X	"
NBCL037SP016-E1	7.7.97	1400	H2O	1 Liter POLY	4°C	*	2	X X	"

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>ENSAFE</u> REASON <u>Lab</u>	DATE <u>7/7/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FEDEX COMMENTS: \* HNO<sub>3</sub>, NaOH  
SHIPMENT NO. 4849149734  
SPECIAL INSTRUCTION: \_\_\_\_\_  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VDA						DOO LEVEL 2
						"
						"
						"
						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
037SP003-E1	7-7-97	1010	SOIL	2 OZ JAR	4	NONE	1	X				
037SP004-E1	7-7-97	1039	"	" "	"	"	1	X				
037SP006-E1	7-7-97	1400	"	" "	"	"	1	X				
037SP007-E1	7-7-97	1414	"	" "	"	"	1	X				
037SP008-E1	7-7-97	1422	"	" "	"	"	1	X				
Wendell Pankster 7-7-97												

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/7/97</u> TIME <u>3:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN D VORSEK</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/7/97</u> TIME <u>3:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--	--	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO TARGET mobile LAB</u>	_____	

Amended 7/14/95



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 4912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERANDY  
ADDRESS ZONE C TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Parks

NO. OF CONTAINERS	VPAK	ANALYSIS REQUIRED				REMARKS
						DQO LEVEL 2
						"
						037EPO17E

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VPAK									
					TEMP.	CHEMICAL											
037GPO16-E1	7/7/97	2:10	H2O	40 mL	4	HCL	2	X									
037GPO17-E1	7/7/97	2:30	H2O	40 mL	4	HCL	2	X									
<del>037EPO17-E1</del>	<del>7/7/97</del>	<del>2:35</del>	<del>H2O</del>	<del>40 mL</del>	<del>4</del>	<del>HCL</del>	<del>1</del>	<del>X</del>									
037EPO17-E1	7-7/97	2:40	H2O	40 ML	4	HCL	1	X									

*Wendell Parks*

RELINQUISHED BY: SIGNATURE <u>Wendell Parks</u> PRINTED <u>Wendell Parks</u> COMPANY <u>TARGET</u> REASON <u>LAS</u>	DATE <u>7-7-97</u> TIME <u>3:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BJORSTEN</u> COMPANY <u>TARGET</u> REASON <u>LAS</u>	DATE <u>7/7/97</u> TIME <u>3:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>MOB: &amp; LAS</u>	_____	

07/08/97 15:25 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE 01/03



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PD4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone 1  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlee Vernoy  
 TELEPHONE NO. (803) 384-0029  
 FAX NO. (803) 356-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CU				
1	X					DDO Level II (Limited volume)
1	X					(Limited volume)
2	X	X				
2	X	X				
2	X	X				
2	X	X				
2	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCLO376P017-E1	7-7-97	1420	H <sub>2</sub> O	1 Liter (Polys)	4°C	*
NBCLO376P017-E1	7-8-97	0832				
NBCLO376P018-E1		0945				
NBCLO376P019-E1		0907				
NBCLO376P020-E1		0940				
NBCLO376P022-E1		1050				
NBCLO376P003-E1		1117				
NBCLO376P025-E1		1405				

[Signature]  
 7-8-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab.</u>	DATE <u>7/8/97</u> TIME <u>1200</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4849149723  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: HNO<sub>3</sub> (Metals); NaOH (CU)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

CTD-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL21 SWL



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Denise McConnell

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	METALS	CAN				
1	X	X				DQO LEVEL 2
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	METALS	CAN								
					TEMP.	CHEMICAL											
NBCL037SP005-E1	7-8-97	0832	SOIL	1-4oz GLASS	4°	NONE	1	X	X								DQO LEVEL 2
NBCL699SP002-E1	"	0848	SOIL	"	"	"	1	X	X								"
NBCL699SP003-E1	"	0945	SOIL	"	"	"	1	X	X								"
NBCL037SP011-E1	"	1008	SOIL	"	"	"	1	X	X								"
NBCL037SP010-E1	"	1028	SOIL	"	"	"	1	X	X								"
NBCL699SP004-E1	"	1037	SOIL	"	"	"	1	X	X								"
NBCL037SP013-E1	"	1045	SOIL	"	"	"	1	X	X								"
NBCL037SP012-E1	"	1100	SOIL	"	"	"	1	X	X								"
NBCL037SP009-E1	"	1115	SOIL	"	"	"	1	X	X								"
NBCL699SP008-E1	"	1129	SOIL	"	"	"	1	X	X								"

RELINQUISHED BY: SIGNATURE <u>Denise McConnell</u> PRINTED <u>Denise McConnell</u> COMPANY <u>E/A&amp;H</u> REASON <u>ANALYSIS</u>	DATE <u>7/8/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149723</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO LEVEL 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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01/08/97 15:20 IEL 141/300 ENSAFE ALLEN HUD -> CHAKSAFE 01/02/03

01/08/97 15:25 TEL 7477306 ENSAFE ALLEN HUS CHAKSAFE US/US



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4REL2/SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEROY  
 ADDRESS ZONE L TELEPHONE NO: 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Denise McConnell

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	METALS	CN				
1	X	X				DDO LEVEL 2
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL699SP009-E1	7-8-97	1332	SOIL	1-4oz GLASS	4°	NONE
NBCL037SP016-E1	"	1345	SOIL	1-4oz GLASS	4°	NONE
NBCL037SP014-E1	"	1356	SOIL	"	"	"
NBCL037SP015-E1	"	1410	SOIL	"	"	"
NBCL699SP005-E1	"	1423	SOIL	"	"	"

*Denise McConnell 7/8/97*

RELINQUISHED BY: SIGNATURE <u>Denise McConnell</u> PRINTED <u>Denise McConnell</u> COMPANY <u>E/A&amp;H</u> REASON <u>ANALYSIS</u>	DATE <u>7/8/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149723</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DDO LEVEL 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 3

CTO-TASK: 2912-09410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0629  
 PROJECT NAME/NUMBER 2912-09410 FAX. NO. 803-886-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2	X					DQG LEVEL 2
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"
1	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VEAK
					TEMP.	CHEMICAL		
X 037GP018-E1	7/8/97	8:50	H <sub>2</sub> O	40 ml	4	HCL	2	X
X 037GP019-E1	7/8/97	9:15	H <sub>2</sub> O	40 ml	4	HCL	2	X
X 037GP020-E1	7/8/97	9:45	H <sub>2</sub> O	40 ml	4	HCL	2	X
X 037GP022-E1	7/8/97	10:45	H <sub>2</sub> O	40 ml	4	HCL	2	X
X 699GP003-E1	7/8/97	11:20	H <sub>2</sub> O	40 ml	4	HCL	2	X
X 037GP025-E1	7/8/97	1:25	H <sub>2</sub> O	40 ml	4	HCL	2	X
X 037GP021-E1	7/8/97	2:30	H <sub>2</sub> O	40 ml	4	HCL	2	X
X 037TP021-E1	7/8/97	2:45	H <sub>2</sub> O	40 ml	4	HCL	1	X

*Wendell Rawls 7-8-97*

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7-8-97</u> TIME <u>2:50</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TOM O'NEAL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/8/97</u> TIME <u>2:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--	---	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO: TARGET</u> <u>Mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803 886-0107  
 SAMPLERS: (SIGNATURE) Kenny Bero

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						DQO LEVEL 2
1						"
1						"
1						"
1						"
1						"
1						"
1						"
1						"
1						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS									
					TEMP.	CHEMICAL										
X 037SP005-E1	7-8-97	0831	SOIL	2 oz JAR	4	NONE	1	X								
X 699SP002-E1	7-8-97	0845	"	" "	"	"	1	X								
X 699SP003-E1	7-8-97	0945	"	" "	"	"	1	X								
X 037SP011-E1	7-8-97	1009	"	" "	"	"	1	X								
X 037SP010-E1	7-8-97	1029	"	" "	"	"	1	X								
X 699SP004-E1	7-8-97	1039	"	" "	"	"	1	X								
X 037SP013-E1	7-8-97	1045	"	" "	"	"	1	X								
X 037SP012-E1	7-8-97	1058	"	" "	"	"	1	X								
X 037SP009-E1	7-8-97	1115	"	" "	"	"	1	X								
X 699SP008-E1	7-8-97	1132	"	" "	"	"	1	X								

RELINQUISHED BY: SIGNATURE <u>Kenny Bero</u> PRINTED <u>Kenny Bero</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/8</u> TIME <u>1450</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Name]</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/6</u> TIME <u>7:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>MOBILE LAB</u>	_____	



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE 2 TELEPHONE NO. 803-814-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Harry Brown

NO. OF CONTAINERS	ANALYSIS REQUIRED							REMARKS
1	X							DGO LEVEL 2
1	X							"
1	X							"
1	X							"
1	X							"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS											
					TEMP.	CHEMICAL												
699SP009-E1	7-8-97	1331	SOIL	2 oz Jar	4	None	1	X										
037SP016-E1	7-8-97	1347	"	" "	"	"	1	X										
037SP014-E1	7-8-97	1359	"	" "	"	"	1	X										
037SP015-E1	7-8-97	1409	"	" "	"	"	1	X										
699SP005-E1	7-8-97	1423	"	" "	"	"	1	X										

*Wendell Runkle*  
 7-8-97

RELINQUISHED BY: SIGNATURE <u>Harry Brown</u> PRINTED <u>HARRY BROWN</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/8</u> TIME <u>2:50</u>	RECEIVED BY: SIGNATURE <u>John B. Vortel</u> PRINTED <u>JOHN B. VORTEL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/8</u> TIME <u>3:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	-------------------------------------	--	-------------------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To: TARGET mobile LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

03/03

ENSAFE ALLEN HOS → CHARSAFE

07/09/97 13:00 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernon  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals					
2	X	X				DDO Level II
1		X				
2	X	X				
2	X	X				
1	X					(3/4 Full)
1	X					
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals									
					TEMP.	CHEMICAL											
NBCLO37GP026-E1	7-9-97	0705	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	2	X	X								
NBCU699GP004-E1		0725					1		X								
NBCLO37GP024-E1		0755					2	X	X								
NBCLO37GP023-E1		0848					2	X	X								
NBCLO37GP021-E1		0835					1	X									
NBCU699GP004-E1		0945					1	X									
NBCLO37GP025-E1		1020					2	X	X								

[Signature]  
7-9-97

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	7/9/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>C. Davis</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>Lab</u>	TIME 1700	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>DDO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849179701</u>	<u>* H<sub>2</sub>O (Metals); NaOH (CW)</u>	
SPECIAL INSTRUCTION: _____	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

01/03

ENSAF E ALLEN HOS -> CHARSAFE

07/09/97 13:00 TEL 7477306



NAVY CLEAN  
ENSAF/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4RELZISWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Denise McConnell

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	METALS	CN			
1	X	X			DQO LEVEL 2
1	X	X			"
1	X	X			"
1	X	X			"
1	X	X			"
1	X	X			"
1	X	X			"
1	X	X			"
1	X	X			"
1	X	X			"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
NBCL037SP017-E1	7-9-97	0725	SOIL	1-4oz GLASS	4°	NONE	1	X	X			
NBCL699SP006-E1	7-9-97	0805	SOIL	1-4oz GLASS	4°	NONE	1	X	X			
NBCL699SP010-E1	7-9-97	0842	SOIL	1-4oz GLASS	4°	NONE	1	X	X			
NBCL699SP011-E1	7-9-97	0858	SOIL	1-4oz GLASS	4°	NONE	1	X	X			
NBCL699SP007-E1	7-9-97	0817	SOIL	1-4oz GLASS	4°	NONE	1	X	X			
NBCL699SP012-E1	"	0917	"	"	"	"	1	X	X			
NBCL699SP014-E1	"	0931	"	"	"	"	1	X	X			
NBCL699SP013-E1	"	0943	"	"	"	"	1	X	X			
NBCL699SP016-E1	"	1002	"	"	"	"	1	X	X			
NBCL699SP015-E1	"	1038	"	"	"	"	1	X	X			

RELINQUISHED BY: SIGNATURE <u>Denise McConnell</u> PRINTED <u>Denise McConnell</u> COMPANY <u>E/A&amp;H</u> REASON <u>ANALYSIS</u>	DATE <u>7/9/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149701</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO LEVEL 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY: (INITIALS/DATE)

CLNCDOR1







**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

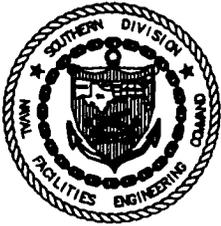
CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-886-0107  
 SAMPLERS: (SIGNATURE) Randy Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						DGR LEVEL 2
1						"
1						"
1						"
1						"
1						"
1						"
1						"
1						"
1						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
037SP017-E1	7-9-97	0730	SOIL	2 oz Jar	4	NONE	1 X
699SP006-E1	7-9-97	0806	"	" "	"	"	1 X
699SP007-E1	7-9-97	0816	"	" "	4	"	1 X
699SP010-E1	7-9-97	0842	"	" "	"	"	1 X
699SP011-E1	7-9-97	0904	"	" "	"	"	1 X
699SP012-E1	7-9-97	0920	"	" "	"	"	1 X
699SP014-E1	7-9-97	0926	"	" "	"	"	1 X
699SP013-E1	7-9-97	0947	"	" "	4	"	1 X
699SP016-E1	7-9-97	0959	"	" "	"	"	1 X
699SP015-E1	7-9-97	1035	"	" "	"	"	1 X

RELINQUISHED BY: SIGNATURE <u>Randy Beard</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/9</u> TIME <u>12:30</u>	RECEIVED BY: SIGNATURE <u>John Blumstein</u> PRINTED <u>JOHN BLUMSTEIN</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/9</u> TIME <u>12:40</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS 8912-08410 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 207E 2 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Kenny Brown

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
<u>VPA</u>					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS												
					TEMP.	CHEMICAL													
<u>037SPO18-E1</u>	<u>7-9-97</u>	<u>1200</u>	<u>SOIL</u>	<u>2oz Jar</u>	<u>4</u>	<u>NONE</u>	<u>1</u>	<u>X</u>											<u>DDO LEVEL 2</u>
<u>Wendell Kumb</u> <u>7-9-97</u>																			

RELINQUISHED BY: SIGNATURE <u>Kenny Brown</u> PRINTED <u>Kenny Brown</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/9</u> TIME <u>12:36</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TOMMY DIVINCE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/9</u> TIME <u>12:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO: TARGET  
MOBILE LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

02/02

CHARSAFE

07/10/97 15:29 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 RELZISWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Denise McConnell

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		METALS	CN			
<del>NBCL699SPO17-EI</del>	<del>7-10-97</del>	<del>1043</del>	<del>SOIL</del>	<del>1-4oz GLASS</del>	<del>4°</del>	<del>NONE</del>	<del>1</del>	<del>X</del>	<del>X</del>			<del>D60 LEVEL 2 PM</del>
NBCL699SPO18-EI	7-10-97	1105	SOIL	1-4oz GLASS	4°	NONE	1	X	X			D60 LEVEL 2
NBCL699SPO19-EI	7-10-97	1122	SOIL	"	4°	"	1	X	X			"
NBCL699SPO20-EI	7-10-97	1306	SOIL	"	4°	"	1	X	X			"
NPCLO37SPO19-EI	7-10-97	1430	SOIL	"	4°	"	1	X	X			"
<del>Denise McConnell</del> <del>7.10.97</del>												

RELINQUISHED BY: SIGNATURE <u>Denise McConnell</u> PRINTED <u>Denise McConnell</u> COMPANY <u>E/A&amp;H</u> REASON <u>ANALYSIS</u>	DATE <u>7/10/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>5578274494</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>D60 LEVEL 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCOCRI



**NAVY CLEAN**  
 ENSAF/ALLEN & HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOLY  
 ADDRESS ZONE L TELEPHONE NO. 803-984-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-986-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOA						DDO LEVEL 2
						"
						"
						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
699SP018-E1	7-10-97	1103	SOIL	2 02 SM	4	NONE	1	X						
699SP019-E1	7-10-97	1122	"	" "	"	"	1	X						
699SP020-E1	7-10-97	1301	"	" "	"	"	1	X						
037SP019-E1	7-10-97	1426	"	" "	"	"	1	X						

*Wendell Pauls*  
 7-10-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/10</u> TIME <u>3:10</u>	RECEIVED BY: SIGNATURE <u>John Bunker</u> PRINTED <u>JOHN BUNKER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/10</u> TIME <u>3:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

07/10/97 15:29 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE 01/02



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 212-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 212-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
					TEMP.	CHEMICAL		Metals (MMS)	CU (ALOH)		
NCCL696P003-E1	7-10-97	1035	H <sub>2</sub> O	1 Liter (Polys)	4°C	*	2	X	X		DQO Level II
NCCL0376P030-E1		1100					2	X	X		
NCCL0370P031-E1		1115					2	X	X		
NCCL0376P006-E1		1425					2	X	X		
NCCL696P007-E1		1445					2	X	X		
<del>Charlie Vernoy 7-10-97</del>											

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7/10/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>5578274494</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals); NaOH (CU)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE 2 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						DOG LEV L 2
2						"
2						"
2						"
2						"
2						"
2						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
X 6996P005-E1	7/10/97	9:40	H <sub>2</sub> O	40 ML	4	HCL	2	X	DOG LEV L 2
X 6996P008-E1	7/10/97	10:40	H <sub>2</sub> O	40 ML	4	HCL	2	X	"
X 0376P030-E1	7/10/97	11:00	H <sub>2</sub> O	40 ML	4	HCL	2	X	"
X 0376P031-E1	7/10/97	11:15	H <sub>2</sub> O	40 ML	4	HCL	2	X	"
X 6996P006-E1	7/10/97	2:30	H <sub>2</sub> O	40 ML	4	HCL	2	X	"
X 6996P007-E1	7/10/97	2:45	H <sub>2</sub> O	40 ML	4	HCL	2	X	"
X 6997P007-E1	7/10/97	2:50	H <sub>2</sub> O	40 ML	4	HCL	2	X	"

*Wendell Rawls*  
 7-10-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/10/97</u> TIME <u>3:10</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUORSTEL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/10/97</u> TIME <u>3:10</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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01/02

CHARSAFE

07/11/97 13:54 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTD-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernon  
TELEPHONE NO. (403) 334-0029  
FAX NO. (333) 356-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals (HMs)	CA (As, Pb)				
1	X					DQO Level II (Limited Volume)
1	X					
2	X	X				
2	X	X				
1	X					
1	X					
1	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals (HMs)	CA (As, Pb)				
					TEMP.	CHEMICAL							
→ NBCL6376P027-E1	7-11-97	0705	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	1	X					
NBCL6996P009-E1		0810					1	X					
NBCL6996P011-E1		0905					2	X	X				
NBCL6996P005-E1		0935					2	X	X				
NBCL6996P013-E1		1005					1	X					
NBCL6996P013-E1		1120					1	X					
NBCL6996P014-E1		1212					1	X					

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>E. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7/11/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149653</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HMs (HMs) ; As, Pb (CA)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: P04 per 21 Swr

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Vernay  
ADDRESS: Zone L TELEPHONE NO.: (803) 884-0529  
PROJECT NAME/NUMBER: 2912-08410 FAX. NO.: 803 856-0107  
SAMPLERS: (SIGNATURE) Sarah D. Baird

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS	
					TEMP.	CHEMICAL								
NBCL699SP023-E1	7/11/97	0707	Soil	1qt. jar	4°C		1	X	X					Doc Level II
NBCL699SP024-E1		0753												
NBCL699SP021-E1		0845												
NBCL699SP030-E1		0855												
NBCL699SP031-E1		0924												
NBCL699SP029-E1		0955												
NBCL699SP028-E1		1103												
NBCL699SP022-E1		1113												
NBCL699SP024-E1		1125												
NBCL699SP023-E1		1132												

RELINQUISHED BY: SIGNATURE <u>S. Baird</u> PRINTED <u>S. Baird</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE 7/11/97 TIME 1700	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
--	---------------------------------	---	--------------	---	--------------	---	--------------

METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO. 4849149653  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_





NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

Amended 7/29/97  
CHAIN OF CUSTODY RECORD

PAGE 2 OF 3

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED								REMARKS	
1	X									DGD LEVEL 2
2	X									"
2	X									"
2	X									"
2	X									"
2	X									"
2	X									"
2	X									"
2	X									"
2	X									"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VDK
					TEMP.	CHEMICAL		
697GP029-E1	7/11/97	7:26	H <sub>2</sub> O	40 ml	4	HCL	1	X
699GP010-E1	7/11/97	8:00	H <sub>2</sub> O	40 ml	4	HCL	2	X
699GP009-E1	7/11/97	8:10	H <sub>2</sub> O	40 ml	4	HCL	2	X
699GP011-E1	7/11/97	9:55	H <sub>2</sub> O	40 ml	4	HCL	2	X
699GP013-E1	7/11/97	10:10	H <sub>2</sub> O	40 ml	4	HCL	2	X
699GP014-E1	7/11/97	10:36	H <sub>2</sub> O	40 ml	4	HCL	2	X
699GP012-E1	7/11/97	12:00	H <sub>2</sub> O	40 ml	4	HCL	2	X
699GP035-E1	7/11/97	11:59	H <sub>2</sub> O	40 ml	4	HCL	2	X
697GP016-E1	7/11/97	12:00	H <sub>2</sub> O	40 ml	4	HCL	2	X
699GP036-E1	7/11/97	11:55	H <sub>2</sub> O	40 ml	4	HCL	2	X

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7-11-97</u> TIME <u>12:40</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B LORSTEN</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/11</u> TIME <u>97</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--	---	--	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO: TARGET</u> <u>mobile LAB</u>	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
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(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 3 OF 3

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0025  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brad

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
VDA												DQO Level 2
												"
												"
												"
												"
												"
												"
												"
												"
												"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS											
					TEMP.	CHEMICAL												
699SP028-E1	7-11-97	0707	SOIL	202 Jar	4	NONE	1											DQO Level 2
699SP027-E1	7-11-97	0951	"	" "	"	"	1											"
699SP021-E1	7-11-97	0845	"	" "	"	"	2											"
699SP030-E1	7-11-97	0855	"	" "	"	"	1											"
699SP031-E1	7-11-97	0917	"	" "	"	"	1											"
699SP029-E1	7-11-97	0958	"	" "	"	"	1											"
699SP028-E1	7-11-97	1059	"	" "	"	"	1											"
699SP022-E1	7-11-97	1108	"	" "	"	"	1											"
699SP024-E1	7-11-97	1122	"	" "	"	"	1											"
699SP023-E1	7-11-97	1136	"	" "	"	"	1											"

RELINQUISHED BY SIGNATURE <u>Randy Brad</u> PRINTED <u>RANDY BRAD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/11</u> TIME <u>1240</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Hand Delivered</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. _____	_____	<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>TO TARGET</u>	_____	<input type="checkbox"/> STORED (90 DAYS MAX)
<u>MOBILE LAB</u>	_____	<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
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 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4RELZLSWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE 1 TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Denise M DL

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	METALS	CN				
1	X	X				DQO LEVEL 2
1	X	X				"
1	X	X				"
1	X	X				"
1	X	X				"
2	X	X				"
1	X					"
2	X	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	METALS	CN									
					TEMP.	CHEMICAL												
✓ NBCL699SP027-E1	7.12.97	0830	SOIL	1-4oz GLASS	4°	NONE	1	X	X									
✓ NBCL699SP026-E1	7.12.97	0840	SOIL	1-4oz GLASS	4°	NONE	1	X	X									
✓ NBCL699SP025-E1	7.12.97	0850	SOIL	1-4oz GLASS	4°	NONE	1	X	X									
✓ NBCL037SP021-E1	7.12.97	0906	SOIL	1-4oz GLASS	4°	NONE	1	X	X									
✓ NBCL699SP034-E1	7.12.97	0950	SOIL	1-4oz GLASS	4°	NONE	1	X	X									
✓ NBCL699GP039-E1	7.12.97	1057	WATER	2-1l Poly	4°	X	1	X										
✓ NBCL037GP018-E1	7.12.97	1119	H <sub>2</sub> O	2-1l Poly	4°	X	2	X	X									
✓ NBCL699GP039-E1	7.12.97	1129	H <sub>2</sub> O	1-1l Poly	4°	X	1	X										
<del>NBCL037GP017-E1</del>	<del>7.12.97</del>		<del>H<sub>2</sub>O</del>	<del>1-1l Poly</del>	<del>4°</del>	<del>X</del>												
✓ NBCL699GP037-E1	7.12.97	1149	H <sub>2</sub> O	2-1l Poly	4°	X	2	X	X									

RELINQUISHED BY: SIGNATURE <u>Denise M</u> PRINTED <u>Denise McConnell</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>7/12/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149675</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO LEVEL 2</u> <u>* METALS - HNO<sub>3</sub>; Cu - NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO 4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Verray  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

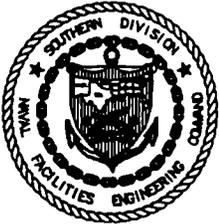
NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals (HNO <sub>3</sub> )	PU (NaOH)				
1	X					DQD Level II
1	X					
2	X	X				
1	X	X				
2	X	X				
1	X					
1	X		X		(Limited Volume)	
1	X				(Limited Volume)	

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL							
✓ NBCL699GP009-E1	7-12-97	0800	H <sub>2</sub> O	1L/1K (Poly)	4°C	*	1	X					
✓ NBCL699GP014-E1		0907					1	X					
✓ NBCL699GP035-E1		1015					2	X	X				
✓ NBCL699GP036 <sup>RD</sup> -E1		1000					1	X	X				
✓ NBCL0376P032-E1		1125					2	X	X				
✓ NBCL0376P016-E1		1145					1	X					
• NBAL0376P021-E1	7-10-97	1325					1	X	X				(Limited Volume)
• NBCL699GP010-E1	7-12-97	0750					1	X					(Limited Volume)

[Signature]  
7-12-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>7/14/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149675</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals); NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA'S					
2	X					DDO LEVEL 2
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X 6996P039-E1	7-12-97	1054	H2O	40 ml	4	NONE
<del>6996P018-RB</del>						
X 037GP018AE1	7-12-97	1107	H2O	40 ml	4	NONE
X 037GP017AE1	7-12-97	1137	"	" "	"	"
X 6996P037-E1	7-12-97	1143	"	" "	"	"
X 6996P042-E1	7-12-97	1158	"	" "	"	"
X 6997P042-E1	7-12-97		"	" "	"	"

Wendell Hawks  
7-12-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>KANDY BARRS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/12</u> TIME <u>12:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUCASITTA</u> COMPANY <u>TALCOR</u> REASON <u>LAB</u>	DATE <u>7/16</u> TIME <u>9:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---------------------------------------	---	--------------------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: TO TARGET  
MOBILE LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
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 (901) 383-9115

CHAIN OF CUSTODY RECORD

Amended 7/16/97

PAGE 2 OF 3

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON

PROJECT MANAGER CHARLIE VERNON

ADDRESS ZONE C

TELEPHONE NO. 803-884-~~8829~~ WP

PROJECT NAME/NUMBER 2912-08410

FAX NO. 803-856-0107

SAMPLERS: (SIGNATURE) Randy Brown

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1	X					DOD LEVEL 2
1	X					"
1	X					"
1	X					"
1	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS								
					TEMP.	CHEMICAL									
699SP027-E1	7-12-97	0830	SOIL	2 oz Jar	4	None	1	X							
699SP026-E1	7-12-97	0837	"	" "	"	"	1	X							
699SP025-E1	7-12-97	0848	"	" "	"	"	1	X							
699SP021-E1	7-12-97	0905	"	" "	"	"	1	X							
699SP034-E1	7-12-97	0917	"	" "	"	"	1	X							

Wendell Remley  
 7-12-97

RELINQUISHED BY:  
 SIGNATURE Randy Brown  
 PRINTED RANDY BROWN  
 COMPANY TARGET  
 REASON LAB

DATE 7/12  
 RECEIVED BY:  
 SIGNATURE Jenny B. V. Stet  
 PRINTED JENNY B. V. STET  
 COMPANY TARGET  
 REASON LAB

DATE 7/12  
 RELINQUISHED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET MOBILE LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Amended 7/16/97



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: POARELZISWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Denise McConnell

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	METALS	CN				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	METALS	CN							
					TEMP.	CHEMICAL										
✓ NBCLD37GP017A-EI	7.13.97	0755	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								DQO LEVEL 2
✓ NBCL699GP042-EI	7.13.97	0816	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								"
✓ NBCL699GP044-EI	7.13.97	0834	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								"
✓ NBCL699GP045-EI	7.13.97	0842	H <sub>2</sub> O	2-12 POLY	4°	*	2	X	X							"
✓ NBCL699GP047-EI	7.13.97	0852	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								"
✓ NBCLD37GP017A-EI	7.13.97	0902	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								"
✓ NBCL699GP038-EI	7.13.97	0910	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								"
✓ NBCL699GP044-EI	7.13.97	0920	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								"
✓ NBCL699GP047-EI	7.13.97	1004	H <sub>2</sub> O	1-12 POLY	4°	*	1	X								"
Denise McConnell 7.13.97																

RELINQUISHED BY: SIGNATURE <u>Denise McConnell</u> PRINTED <u>Denise McConnell</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>7/13/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149675</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO Level 2</u> <u>* METALS-HNO<sub>3</sub>; Cn- NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Amended 7/16/97



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 11 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO 4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernon  
TELEPHONE NO. (823) 884-0029  
FAX NO. (823) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HACH)	CN (MORH)			
1	X				DQO level II
1	X				
1	X				(Limited Volume)
2	X	X			
1	X				
1	X				(Limited Volume)
1	X				
2	X	X			
1	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
59 NBCL0376P032-E1	7/13/97	0800	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	1	X			
NBCL6996P036-E1		0830					1	X			
NBCL0376P16A-E1		0837					1	X			(Limited Volume)
NBCL6996P015-E1		0910					2	X	X		
NBCL0376P033-E1		0925					1	X			
NBCL6996P040-E1		0935					1	X			
NBCL6996P040-E1		1013					1	X			(Limited Volume)
NBCL6996P041-E1		1020					1	X			
NBCL0376P034-E1		1040					2	X	X		
59 NBCL0376P019A-E1		1050					1	X			

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7/16/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FAX  
SHIPMENT NO. 4849149675  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* H<sub>2</sub>O (Metals); NaOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) RANDY BRAND

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						DAO LEVEL 2
2						"
2						"
2						"
2						"
1						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
6996P038-E1	7-13-97	0803	H2O	40 ml	4	NONE
6996P044-E1	7-13-97	0821	"	" "	"	"
6996P045-E1	7-13-97	0826	"	" "	"	"
6996P047-E1	7-13-97	0840	"	" "	"	"
<del>6996P021A-E1</del>	7-13-97	0934	"	" "	"	"
037TP021A-E1	7-13-97	1105	"	" "	"	"

*Randy Brand 7-13-97*

RELINQUISHED BY: SIGNATURE <u>RANDY BRAND</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAG</u>	DATE <u>7/13</u> TIME <u>110</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BURSTEN</u> COMPANY <u>TARGET</u> REASON <u>LAG</u>	DATE <u>7/13</u> TIME <u>11:28</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>MOBILE LAG</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Amended 7/16/97



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4RET 21SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Denise McConnell

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	METALS	CN			
1	X				DQO Level 2
1	X				"
1	X				"
2	X	X			"
1	X				"
1	X				"
1	X				"
1	X				"
1	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	METALS	CN	REMARKS
					TEMP.	CHEMICAL				
NBCL037GPM17A-E1	7.13.97	0755	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		DQO Level 2
NBCL699GP042-E1	7.13.97	0816	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		"
NBCL699GP044-E1	7.13.97	0834	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		"
NBCL699GP045-E1	7.13.97	0842	H <sub>2</sub> O	2-12 POLY	4°	*	2	X	X	"
NBCL699GP047-E1	7.13.97	0852	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		"
NBCL037GPM17A-E1	7.13.97	0902	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		"
NBCL699GP038-E1	7.13.97	0910	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		"
NBCL699GP044-E1	7.13.97	0920	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		"
NBCL699GP047-E1	7.13.97	1004	H <sub>2</sub> O	1-12 POLY	4°	*	1	X		"

RELINQUISHED BY: SIGNATURE <u>Denise McConnell</u> PRINTED <u>Denise McConnell</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>7/13/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149675</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO Level 2</u> <u>* METALS-HNO<sub>3</sub>; Ch - NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Amended 7/11/97

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO 4 REL 2L SWL



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT Naval Base Charleston

PROJECT MANAGER Charlie Vernoy

ADDRESS Zone L

TELEPHONE NO. (823) 884-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. (823) 856-0107

SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HMs)	Cu (MeOH)			
1	X				DQO level II
1	X				
1	X				(Limited Volume)
2	X	X			
1	X				
1	X				(Limited Volume)
1	X				
2	X	X			
1	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals (HMs)	Cu (MeOH)									
					TEMP.	CHEMICAL												
59 NBCL0376P020-E1	7/13/97	0800	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	1	X										
- NBCL6996P036-E1		0830					1	X										
✓ NBCL0376P16A-E1		0837					1	X										(Limited Volume)
✓ NBCL6996P015-E1		0910					2	X	X									
• NBCL0376P033-E1		0925					1	X										
✓ NBCL6996P040-E1		0935					1	X	X									
✓ NBCL6996P040-E1		1013					1	X										(Limited Volume)
✓ NBCL6996P041-E1		1020					1	X										
✓ NBCL0376P034-E1		1040					2	X	X									
59 NBCL0376P019A-E1		1050					1	X										

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7/14/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO. <u>4849149675</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* H<sub>2</sub>O (Metals); NaOH (Cu)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 Bel ZISWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernay  
 ADDRESS Zone 1 TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HMB3)	CN (ALOH)			
1	X				D&D Level II  ← 037GPO27E1 - Metal ENTERED W/CN ON 7/11/97  (Limited Volume)
1	X				
1	X				
1	X				
1	X				
1	X				
1	X				
1	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals (HMB3)	CN (ALOH)			
					TEMP.	CHEMICAL						
037GPO27-E1	7-14-97	0830	H2O	1 Liter (poly)	4°C	*	1	X				
037GPO29-E1		0840					1	X				
037GPO42-E1		0855					1	X				
037GPO43-E1		0930					1	X				
037GPO38-E1		0950					1	X				
037GPO21A-E1		1050					1	X				
037GPO10-E1		1055					1	X				
037GPO20A-E1		1105					1	X				
037GPO41-E1		1115					1	X				
037GPO33-E1		1415					1	X				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Sarah L. Baird</u> COMPANY <u>ENSAFE</u> REASON <u>Lab</u>	DATE <u>7/14/97</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____
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METHOD OF SHIPMENT: <u>Fallex</u>	COMMENTS: <u>D&amp;D Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849491275</u>		
SPECIAL INSTRUCTION: _____		





**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 3

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
<u>2</u>						<u>PRO LEVEL 2</u>
<u>2</u>						
<u>1</u>						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
<u>699GP043-E1</u>	<u>7-14-97</u>	<u>9:26</u>	<u>H<sub>2</sub>O</u>	<u>40 mL</u>	<u>4</u>	<u>HCL</u>	<u>2</u>	<u>X</u>	<u>PRO LEVEL 2</u>
<u>699GPO50-E1</u>	<u>7-14-97</u>	<u>1447</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>2</u>		
<u>699TPO50-E1</u>	<u>7-14-97</u>	<u>1448</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>		

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7-14-97</u> TIME	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>DAN BUDISTEN</u> COMPANY <u>LAB</u> REASON <u>LAB</u>	DATE <u>7/14/97</u> TIME <u>4:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME
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METHOD OF SHIPMENT: VALID DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: TO TARGET  
MOBILE LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						DQO Level 2
2						
2						
2						RB
2						
2						
2						
2						
2						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA'S								
					TEMP.	CHEMICAL										
X 699GP048-E1	7-14-97	0920	H <sub>2</sub> O	40 ml	4	HCL	2									DQO Level 2
✓ 699GP046-E1	7-14-97	0930	"	"	"	"	2									
✓ 699GP049-E1	7-14-97	0935	"	"	"	"	2									
<del>699GP050-E1</del>	<del>7-14-97</del>	<del>0940</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>2</del>									
✓ 699GP052-E1	7-14-97	1000	"	"	"	"	2									
X 699GP051-E1	7-14-97	1035	"	"	"	"	2									
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000							2									
✓ 0376P022-E1	7-14-97	1122	"	"	"	"	2									
✓ 0376P023-E1	7-14-97	1442	"	"	"	"	2									
✓ 699GP053-E1	7-14-97	1522	"	"	"	"	2									
✓ 699GP054-E1	7-14-97	1538	"	"	"	"	2									

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/14</u> TIME	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Name]</u> COMPANY <u>LAB</u> REASON	DATE <u>7/14</u> TIME <u>4:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE
--	-----------------------------	---	--	---	------	---	------

METHOD OF SHIPMENT: Hand Delivered COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: to target  
Mobile Lab

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 3 OF 3

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
1												DDO LEVEL 2
1												
1												
1												
1												
1												
1												
1												
1												
1												

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
699SP035-E1	7-14-97	1048	SOIL	202 JAR	4	NONE	1
699SP036-E1	7-14-97	1059	"	" "	"	"	1
037SP022-E1	7-14-97	1110	"	" "	"	"	1
699SP037-E1	7-14-97	1133	"	" "	"	"	1
699SP038-E1	7-14-97	1152	"	" "	"	"	1
037SP023-E1	7-14-97	1458	"	" "	"	"	1
699SP039-E1	7-14-97	1508	"	" "	"	"	1
699SP040-E1	7-14-97	1518	"	" "	"	"	1
699SP041-E1	7-14-97	1530	"	" "	"	"	1
699EP041-E1	7-14-97	16:11	"	" "	"	"	1

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/14</u> TIME	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUONICCONTI</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/14</u> TIME <u>9:2</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME
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METHOD OF SHIPMENT: <u>Hand Delivered</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>to TARGET</u> <u>Mobile Lab</u>	_____	

Amendment 7/16/97 & 7/23/97



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 884-0029  
FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO <sub>3</sub> )	Cu (NaOH)			
1	X				DQO Level II
1	X				
1	X				(limited volume)
2	X	X			
1	X				(limited volume)
2	X	X			037GP23AE1
2	X	X			699GP053E1
1	X				037GP24AE1

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL699GP043-E1	7-15-97	1020	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
NBCL699GP046-E1		1105				
NBCL699GP046-E1		1310				
NBCL037GP21A-E1		1325				
NBCL699GP048-E1		1400				
NBCL699GP049-E1		1415				
NBCL699GP054-E1		1355				
NBCL699GP055-E1		1415				
NBCL699GP053-E1		1449				
NBCL699GP054-E1		1440				

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	7/15/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>E. Davis</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>Lab</u>	TIME 1700	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>FedEx</u>	COMMENTS: <u>* HNO<sub>3</sub> (Metals); NaOH (Cu)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>4849149631</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: _____		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

699GP053E1#

02/03

ENSAFE ALLEN HOS →→→ CHARSAFE

07/15/97 16:31 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SW6

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernay  
TELEPHONE NO. (803) 884-0029  
FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (H <sub>2</sub> O <sub>2</sub> )	CN (NaOH)			
1	X				DDO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NA016996P049-E1	7-15-97	1530	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	1	X	
<del>Classified 7-15-97</del>									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDAVIS</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>7/15/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: FedEx  
SHIPMENT NO. 4449149631  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* #DDO<sub>2</sub> (Metals); NaOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCOCR1





NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: PO4REL21SWL  
BPA/SO: PO4REL21SWL

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	METALS	CN			
					<u>DQD LEVEL 2</u>

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
<u>NBCL037GP024-E1</u>	<u>7.16.97</u>	<u>0913</u>	<u>H<sub>2</sub>O</u>	<u>1-12 POLY</u>	<u>4°</u>	<u>X</u>	<u>1</u>	<u>X</u>		
<u>NBCL037GP022-E1</u>	<u>7.16.97</u>	<u>1105</u>	<u>H<sub>2</sub>O</u>	<u>1-12 POLY</u>	<u>4°</u>	<u>X</u>	<u>1</u>	<u>X</u>		
<u>NBCL699GP054-E1</u>	<u>7.16.97</u>	<u>1110</u>	<u>H<sub>2</sub>O</u>	<u>1-12 Poly</u>	<u>4°</u>	<u>*</u>	<u>1</u>	<u>X</u>		
<u>[Signature]</u> <u>7.16.97</u>										

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDAVIS</u> COMPANY <u>ENSAFE</u> REASON <u>LAB</u>	DATE <u>7/16/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>4849149020</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>X HNO3 (METALS)</u> <u>NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	--	---



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: 204 RFL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone 1  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 456-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HDD)	CN (MOT)			
1	X				DDO Level II
1		X			
1	X				
1		X			
1	X				
1		X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NRCL0376P029-E1	7-21-97	0900	H2O	1 Liter (Poly)	Ice	*
NRCL0376P012-E1		0940				
NRCL0376P054-E1		1005				
NRCL0376P061-E1		1025				
NRCL0376P227-E1		1050				
<del>NRCL0376P054-E1</del>		<del>1420</del>				

[Signature]  
 7-21-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Charlie Vernoy</u> COMPANY <u>Ensafe</u> REASON <u>Log</u>	DATE 7/21/97 TIME 7:00	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4849149583  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* HDD (Metals); M.O.H (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 DEL 21 SWL

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOSY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		METAL	CN			
NBCL699SP042-E1	7-21-97	0915	Soil	1-4" GLASS	4°C	NONE	1	X	X			D90 LEVEL 2
NBCL699SP043-E1	"	0935	"	"	"	"	1	X	X			"
NBCL699SP044-E1	"	1030	"	"	"	"	1	X	X			"
<del>_____</del>												

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>7-21-97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>	TIME: <u>0915</u>	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____
PRINTED: <u>Jack Matthews</u>	TIME: <u>0915</u>	PRINTED: _____	TIME: _____	PRINTED: _____	TIME: _____	PRINTED: _____	TIME: _____
COMPANY: <u>E/A/H</u>	REASON: <u>Analysis</u>	COMPANY: _____	REASON: _____	COMPANY: _____	REASON: _____	COMPANY: _____	REASON: _____

METHOD OF SHIPMENT: Box  
 SHIPMENT NO. 4499/44585  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 COMMENTS: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/21/91 10:21 TEL 141300 ENSAFE ALLEN BUS + CHANSAFE 01/21/91



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Banks

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DRO LEVEL 2
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS									
					TEMP.	CHEMICAL										
699GPO62-E1	7-21-97	10:30	H <sub>2</sub> O	40 mL	4	HCL	2	X								
699GPO56-E1	7-21-97	1:30	H <sub>2</sub> O	40 mL	4	HCL	2	X								
699GPO55-E1	7-21-97	1:50	H <sub>2</sub> O	40 mL	4	HCL	2	X								
699GPO57-E1	7-21-97	2:35	H <sub>2</sub> O	40 mL	4	HCL	2	X								
699GPO60-E1	7-21-97	2:55	H <sub>2</sub> O	40 mL	4	HCL	2	X								
699GPO61-E1	7-21-97	3:05	H <sub>2</sub> O	40 mL	4	HCL	2	X								
037GPO37-E1	7-21-97	3:15	H <sub>2</sub> O	40 mL	4	HCL	2	X								
699GPO58-E1	7-21-97	3:30	H <sub>2</sub> O	40 mL	4	HCL	2	X								
037GPO36-E1	7-21-97	3:35	H <sub>2</sub> O	40 mL	4	HCL	2	X								
037GPO40-E1	7-21-97	3:45	H <sub>2</sub> O	40 mL	4	HCL	2	X								

RELINQUISHED BY: SIGNATURE <u>Wendell Banks</u> PRINTED <u>Wendell Banks</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7-21-97</u> TIME <u>4:50</u>	RECEIVED BY: SIGNATURE <u>J. B. BUNSTER</u> PRINTED <u>TARGET</u> COMPANY <u>LAB</u> REASON _____	DATE <u>7/27</u> TIME <u>4:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To: TARGET  
Mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 4  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	1	2	3	4	
1 X					DQS LEVEL 2
1 X					"
1 X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
699SP042-E1	7-21-97	0921	SOIL	202 Jar	4'	NONE
699SP043-E1	7-21-97	0941	"	202 Jar	4'	NONE
699SP044-E1	7-21-97	1032	"	" "	"	"

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/21</u> TIME <u>4:50</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>BENJAMIN STEL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/4/97</u> TIME <u>4:10</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--------------------------------------	--	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: TO TARGET mobile LAB  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Amende 7/28/97



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Kauls

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	TEMP.	CHEMICAL	PH	OTHER	
1 X					DGO LEVEL 2
1 X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
037TP040-E1	7-21-97	4:00	H <sub>2</sub> O	40 ml	4	HCL
037EP040-E1	7-21-97	4:00	H <sub>2</sub> O	40 ml	4	HCL

85

Wendell Kauls  
7-21-97

RELINQUISHED BY: SIGNATURE <u>Wendell Kauls</u> PRINTED <u>Wendell Kauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/21/97</u> TIME <u>4:50</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUONICCONTI</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/21/97</u> TIME <u>4:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To TARGET mobile LAB</u>	_____	



**NAVY CLEAN**  
 ENSAFE/ALLEN & HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08420

COC #: \_\_\_\_\_

BPA/SO: PO# Re 121

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08420  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernay  
 TELEPHONE NO. 803-884-0029  
 FAX NO. 803-856-6107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Cu	Metals			
1	X	X			DOLL Level 2 ↓ <u>[Signature]</u>

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCN037SP026-E1	7/22/97	0910	Soil	1 gal jar	4°C	
NBCN037SP027-E1		0935				
NBCN037SP028-E1		1015				
NBCN037SP028-E1		1030				
NBCN037SP045-E1		1120				
NBCN099SP046-E1		1140				
NBCN099SP047-E1		1430				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Sarah L. Baird</u> COMPANY <u>Ensafe</u> REASON <u>lab</u>	DATE <u>7/22/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	---	---	--------------------------------	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149572</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-----------------------------------	---

01/26/91 10.10 TEL 141000 ENSAFE ALLEN BOC 777 VANDARFE 003



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 3

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT: Naval Base Charleston  
 ADDRESS: Zone L  
 PROJECT NAME/NUMBER: 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER: Charlie Vernoy  
 TELEPHONE NO.: (803) 854-6029  
 FAX NO.: (803) 856-8107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (H&H)	Metals (COC)	PCBs	DDO Level II	
1	X				
1	X				
2	X	X			
2	X	X			
2	X	X			
1	X				
2	X	X			
1	X				
2	X	X			
1	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals (H&H)	Metals (COC)	PCBs	DDO Level II
					TEMP.	CHEMICAL					
X NBCL699GPO55-E1	7-22-97	0830	H <sub>2</sub> O	1L:1e+ (Polys)	4°C	*	1	X			
X NBCL699GPO56-E1		0840					1	X			
X NBCL037GPO37-E1		0850					2	X	X		
X NBCL699GPO58-E1		0910					2	X	X		
X NBCL037GPO36-E1		0935					2	X	X		
X NBCL699GPO57-E1		0945					1	X			
X NBCL699GPO61-E1		1010					2	X	X		
X NBCL699GPO59-E1		1020					1	X			
X NBCL699GPO60-E1		1035					2	X	X		
X NBCL037GPO41-E1		1055					1	X			

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE: <u>[Signature]</u>		SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>C Davis</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>EnSafe</u>	TIME	COMPANY: _____	TIME	COMPANY: _____	TIME	COMPANY: _____	TIME
REASON: <u>Lab</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>* H&amp;H (Metals), Ni, OA (COC)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO.: <u>4949149572</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: _____		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCOCR1

01/22/91 10:10 101 141000

ENSAFE ALLEN BUS 777 CHARLOTTE

0104



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SK11

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 284-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (Cd, Pb, Cu)	Calc (Al, Fe)			
2	X	X			DQO Level II
1	X				
1	X				
1	X				
1	X	X			
2	X	X			
1	X				
1	X				
1	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X NBCL6996P063-E1	7-22-97	1120	H <sub>2</sub> O	1 Liter (Relu)	4°C	*
X NBCL0376P040-E1		1140				
X NBCL6996P062-E1		1312				
X NBCL6996P055-E1		1330				
X NBCL0376P042-E1		1410				
X NBCL6996P064-E1		1420				
X NBCL6996P059-E1		1425				
X NBCL6996P056-E1		1455				
X NBCL6996P057-E1		1510				
X NBCL6996P060-E1		1505				

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	7/22/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>C. Dennis</u>	57	PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>	TIME	COMPANY _____	TIME	COMPANY _____	TIME	COMPANY _____	TIME
REASON <u>Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>FedEx</u>	COMMENTS: <u>* HNO<sub>3</sub> (w/relu); NICH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849149572</u>		
SPECIAL INSTRUCTION: _____		

01/22/97 10:10 TEL 941/500 ENSAFE ALLEN HOS CHARSFAE 01



**NAVY CLEAN**  
 ENSAFE/ALLEN & HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 212-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PORT REL 21 SWL

CLIENT: Naval Base Charleston  
 ADDRESS: Zone L  
 PROJECT NAME/NUMBER: 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER: Charles Kernan  
 TELEPHONE NO.: (803) 884-0027  
 FAX NO.: (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CN				
1	X					DOL-ens/IT

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN				
					TEMP.	CHEMICAL							
NBC 699C/OCG-E1	7-22-97	1520	H <sub>2</sub> O	Water (Polys)	4°C	*	1	X					
<del>[Signature]</del> 7-22-97													

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>C. Davis</u> COMPANY: <u>EnSafe</u> REASON: <u>Lab</u>	DATE: <u>7-22-97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: FedEx  
 SHIPMENT NO.: 4849149572  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* HNO<sub>3</sub> (Metals); NaOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





Amended 7/29/97 JS



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 291208410  
COC #:  
BPA/SO: PC4 Rel 21SWL

CLIENT: Naval Base Charleston, S.C. PROJECT MANAGER: Charlie Vernoy  
ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
PROJECT NAME/NUMBER: 291208410 FAX NO.: 803-856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	H <sub>2</sub> O (H <sub>2</sub> O)	H <sub>2</sub> O (H <sub>2</sub> O)	CH <sub>2</sub> Cl <sub>2</sub> (CH <sub>2</sub> Cl <sub>2</sub> )	CH <sub>2</sub> Cl <sub>2</sub> (CH <sub>2</sub> Cl <sub>2</sub> )	
					DOOR level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	H <sub>2</sub> O (H <sub>2</sub> O)	H <sub>2</sub> O (H <sub>2</sub> O)	CH <sub>2</sub> Cl <sub>2</sub> (CH <sub>2</sub> Cl <sub>2</sub> )	CH <sub>2</sub> Cl <sub>2</sub> (CH <sub>2</sub> Cl <sub>2</sub> )	REMARKS
					TEMP.	CHEMICAL						
✓ NBCL6996P028-E1	7-23-97	0820	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	2	X	X			6996P065E1
✓ NBCL0376P039-E1	7-23-97	0835	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	2	X	X			
✓ NBCL0376P042-E1	7-23-97	0855	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	2	X				
✓ NBCL0376P040-E1	7-23-97	0930	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	1	X				
✓ NBCL6996P016-E1		0955					1		X			
✓ NBCL6996P017-E1		0955					2	X	X			
✓ NBCL6996P019-E1		1040					1		X	X		
✓ NBCL0376P043-E1		1030					2	X	X			
✓ NBCL0376P044-E1		1110					2	X	X			
✓ NBCL0376P041-E1		1305					1	X				

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE: <u>[Signature]</u>	7-23-97	SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>CDW/S</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>E/A&amp;H</u>	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <u>shipped to Lab</u>	TIME: <u>1700</u>	REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: Fed Ex COMMENTS: \* H<sub>2</sub>O (H<sub>2</sub>O); CH<sub>2</sub>Cl<sub>2</sub> (CN) AFTER ANALYSIS, SAMPLES ARE TO BE:  
SHIPMENT NO. 4849147550  
SPECIAL INSTRUCTION: \_\_\_\_\_  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

07/23/97 15:37 TEL 7477306 ENSAFE ALLEN HOS -> CHARSAFE 08/03/03



NAVY CLEAN  
ENSAFE/ALLEN & HOBBS  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: POY REL 21 SWI

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verray  
ADDRESS Zone L TELEPHONE NO. (803) 484-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 456-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO <sub>3</sub> )				
1	X	X	X	X	DROGEL II
1	X	X	X	X	

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
✓ NBAL09968016-EL	7.23.97	1350	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	1	X	
✓ NBAL09968019-EL	1	1417	1	1	1		1	X	
<del>[Large Signature]</del> 7.23.97									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7.23.97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO. 4249149550  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* HNO<sub>3</sub> (Metals); AcOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/20/97 10:01 JBL 141000 ENSAFD ALLEN BUS 777 CHARLOTTE 01/20/97



**NAVY CLEAN**  
 ENSAFE/ALLEN & HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08420  
 COC #: \_\_\_\_\_  
 BPA/SO: 704 Re 121

CLIENT NAVAIR Base Charleston PROJECT MANAGER Charlie Verroy  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2112-08420 FAX NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	C <sub>1</sub>	C <sub>2</sub>	Metals				
1	X	X					DO @ Level 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL037SP03-E1	7/23/97	0820	Soil	1-gal. jar	4°C	
NBCL099SP048-E1		0845				
NBCL099SP049-E1		0945				
NBCL099SP050-E1		1000				
NBCL099SP051-E1		1015				
NBCL037SP03-E1		1405				

[Signature]

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Seah J. Baird</u> COMPANY <u>Ensafe</u> REASON <u>lab</u>	DATE 7/23/97 TIME 11:00	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fedex</u> SHIPMENT NO. <u>484914750</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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01/20/97 10:31 DEL 14/1000 ENVOLE ALLEN 100 777 UNAVOAL





**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE 4 TELEPHONE NO. 803-894-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-6167  
SAMPLERS: (SIGNATURE) Wendell Rawls

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS	
					TEMP.	CHEMICAL								
0376P045-E1	7/23/97	2:06	4	40 ml	4	HCL	2	X						DOO LEVEL 2
6996P024-E1	7/23/97	2:47	4	40 ml	4	HCL	2	X						"
6996P025-E1	7/23/97	2:47	4	40 ml	4	HCL	2	X						"
699TP025-E1	7/23/97	3:00	4	40 ml	4	HCL	1	X						"
<p><i>Wendell Rawls</i> 7-23-97</p>														

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7-23-97</u> TIME <u>3:20</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TRIST BUNYER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/23/97</u> TIME <u>3:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To: TARGET  
Mobile LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE 2 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Burns

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
1	X											DOD LEVEL 2
1	X											"
1	X											"
1	X											"
1	X											"
1	X											"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS								
					TEMP.	CHEMICAL									
037SP030-E1	7-23-97	0834	SOIL	202 Jar	4	NINE	1	X							
699SP048-E1	7-23-97	0853	"	" "	"	"	1	X							
699SP049-E1	7-23-97	0947	"	" "	"	"	1	X							
699SP050-E1	7-23-97	1004	"	" "	"	"	1	X							
699SP051-E1	7-23-97	1020	"	" "	"	"	1	X							
037SP031-E1	7-23-97	1405	"	" "	"	"	1	X							

*Wendell Rouse*  
 7-23-97

RELINQUISHED BY: SIGNATURE <u>Randy Burns</u> PRINTED <u>RANDY BURNS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/23</u> TIME <u>3:20</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John B. Burns</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/23</u> TIME <u>97</u> TIME <u>3:10</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>Mobile LAB</u>	_____	

Amend 7/29/97 JRS

PAGE 1 OF 1

CTO-TASK: 2912-08420

COC #: \_\_\_\_\_

BPA/SO: PC4 R212



NAVY CLEAN  
ENSAFE/ALLEN & HOSHAL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Verroy  
 ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
 PROJECT NAME/NUMBER: 2912-08420 FAX NO.: 803-856-0182  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Co	Metals					
1	X	X					DOD Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Co	Metals				
					TEMP.	CHEMICAL							
NBCL 695P052-E1 695P053-E1	7/24/97	1010	Soil	1-gal jar	4°C	None	1	X	X				
NBCL 695P035-E1		1020											
NBCL 695P054-E1		1035											
NBCL 695P055-E1		1055											
NBCL 695P056-E1		1335											
NBCL 695P057-E1		1400											
NBCL 695P058-E1		1445											

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>Sarah L. Baker</u> COMPANY: <u>Ensafe</u> REASON: <u>Lib</u>	DATE: <u>7/31/97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO.: <u>4049149524</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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07/24/97 16:43 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE 03/04



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2  
CTO-TASK: 2112-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2112-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 384-0029  
FAX NO. (803) 356-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	H <sub>2</sub> O (H <sub>2</sub> O)				
1	X	X			DDO Level II
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	H <sub>2</sub> O (H <sub>2</sub> O)	REMARKS			
					TEMP.	CHEMICAL						
X NBCL699GPO21-E1	7-24-97	0825	H <sub>2</sub> O	1 Liter (Pol.w)	49	*	1	X	X			DDO Level II
X NBCL699GPO22-E1		0840					2	X	X			
X NBCL699GPO23-E1		0850					2	X	X			
X NBCL037GPO45-E1		0900					2	X	X			
X NBCL699GPO24-E1		0925					2	X	X			
X NBCL699GPO25-E1		0950					2	X	X			
X NBCL699GPO26-E1		1100					2	X	X			
X NBCL037GPO47-E1		1250					2	X	X			
X NBCL699GPO28-E1		1315					2	X	X			
X NBCL037GPO46-E1		1340					2	X	X			

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDavis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE
	TIME		TIME		TIME		TIME

METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149524</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* H<sub>2</sub>O<sub>2</sub> (Merck); NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	--	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN & HOSHAL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410

COC #:

BPA/SO: PCY REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Verkley  
TELEPHONE NO. (803) 854-0029  
FAX NO. (803) 856-0107

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
<u>4</u> <u>NAFL6996A027-E1</u>	<u>7.24.97</u>	<u>1400</u>	<u>H<sub>2</sub>O</u>	<u>1 Liter (Poly)</u>	<u>4°C</u>	<u>*</u>	<u>2</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>DBORH/IT</u>
<u>X</u> <u>NAFL6996A032-E1</u>		<u>1545</u>					<u>2</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>X</u> <u>NAFL6996A018-E1</u>		<u>1450</u>					<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>(limited Volume)</u>
<u>X</u> <u>NAFL6996A021-E1</u>		<u>1435</u>					<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>(limited Volume)</u>
<u>[Signature]</u> <u>7.24.97</u>												

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Chris</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>7.24.97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO. 4849149524  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* H<sub>2</sub>O (Metals); NaOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE 2 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0167  
 SAMPLERS: (SIGNATURE) Wendell Pauls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	1	2	3	4	5	

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VIALS										
					TEMP.	CHEMICAL												
6996P006-E1	7/24/97	10:10	H2O	40 ml	4	HCL	2	X										DDO LEVEL 2
6996P027-E1	7/24/97	10:20	H2O	40 ml	4	HCL	2	X										"
6996P028-E1	7/24/97	10:30	H2O	40 ml	4	HCL	2	X										"
0376P046-E1	7/24/97	10:40	H2O	40 ml	4	HCL	2	X										"
0376P047-E1	7/24/97	10:45	H2O	40 ml	4	HCL	2	X										"
6996P031-E1	7/24/97	3:20	H2O	40 ml	4	HCL	2	X										"
6996P032-E1	7/24/97	3:25	H2O	40 ml	4	HCL	2	X										"
6996P032-E1	7/24/97	3:30	H2O	40 ml	4	HCL	2	X										"

*Wendell Pauls 7-29-97*

RELINQUISHED BY: SIGNATURE <u>Wendell Pauls</u> PRINTED <u>Wendell Pauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7-24-97</u> TIME <u>4:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BLONST</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29</u> TIME <u>9:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO: TARGET</u> <u>mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	-----------------------------------	---



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE BRACLESTON PROJECT MANAGER CHARLIE VERNDY  
ADDRESS ZONE L TELEPHONE NO. 803 884-0029  
PROJECT NAME/NUMBER 2912 08410 FAX. NO. 803-886-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VDA						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS										
					TEMP.	CHEMICAL											
X 699SPO52-E1	7-24-97	0959	SOIL	2 OZ JAR	4	NONE	1	X									DOO LEVEL 2
X 699SPO53-E1	7-24-97	1025	"	" "	"	"	1	X									"
X 699SPO54-E1	7-24-97	1039	"	" "	"	"	1	X									"
X 699SPO55-E1	7-24-97	1050	"	" "	"	"	1	X									"
X 699SPO56-E1	7-24-97	1331	"	" "	"	"	1	X									"
X 699SPO57-E1	7-24-97	1356	"	" "	"	"	1	X									"
X 699SPO58-E1	7-24-97	1445	"	" "	"	"	1	X									"
<i>Randell Paulo</i> 7-24-97																	

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/24</u> TIME <u>4:30</u>	RECEIVED BY: SIGNATURE <u>John Blum</u> PRINTED <u>JOHN BLUM</u> COMPANY <u>TATUM</u> REASON <u>LAB</u>	DATE <u>7/24</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: TO TARGET  
mod: 12 LABS

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFEE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08420

COC #: \_\_\_\_\_

BPA/SO: P14 R01 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS FONE L TELEPHONE NO. 803-854-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Sam J. Baird

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED					REMARKS	
					TEMP.	CHEMICAL	NO. OF CONTAINERS	1	2	3	4		5
<del>699SP059E1</del>	<del>7/25/97</del>	<del>110</del>	<del>Soil</del>	<del>1. gal. jar</del>	<del>4°C</del>	<del>NON</del>	<del>1</del>	<del>X</del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del>DO Level 2</del>
<del>699SP061E1</del>	<del></del>	<del>1345</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
<p>699SP059E1 699SP061E1</p> <p>7-25-97 Sam J. Baird</p>													

RELINQUISHED BY: SIGNATURE <u>Sam J. Baird</u> PRINTED <u>Sam J. Baird</u> COMPANY <u>Ensafe</u> REASON <u>lab</u>	DATE <u>7/25/97</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed CX  
 SHIPMENT NO. 4849149513  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHAL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone 1  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vermoy  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Asst (HNO3)	Cu (HNO3)			
2 X X					D2O Level II
2 X X					
2 X X					
2 X X					
1 X					
2 X X					
2 X X					
2 X X					
1 X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NPCL0376P031-E1	7-25-97	0915	H2O	1 Liter (Poly)	4°C	*
NPCL0376P032-E1		0940				
NPCL0376P030A-E1		1000				
NPCL0376P034-E1		1025				
NPCL0376P035-E1		1050				
NPCL0376P032-E1		1105				
NPCL0376P034-E1		1130				
NPCL0376P031-E1		1350				
NPCL0376P030-E1		1420				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>G. DAVIS</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>7-25-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4249149515</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO3 (Notes); U2O4 (C.D.)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Kaula

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
2 X							300 LEVEL 2
2 X							"
2 X							"
2 X							"
2 X							"
2 X							"
2 X							"
1 X							"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
6996P029-E1	7-25-97	9:40	H <sub>2</sub> O	40 mL	4	HCL	2	X				
6996P030A-E1	7-25-97	10:05	H <sub>2</sub> O	40 mL	4	HCL	2	X				
0376P049-E1	7-25-97	10:30	H <sub>2</sub> O	40 mL	4	HCL	2	X				
0376P052-E1	7-25-97	11:10	H <sub>2</sub> O	40 mL	4	HCL	2	X				
0376P054-E1	7-25-97	11:30	H <sub>2</sub> O	40 mL	4	HCL	2	X				
0376P051-E1	7-25-97	2:05	H <sub>2</sub> O	40 mL	4	HCL	2	X				
0376P050-E1	7-25-97	2:25	H <sub>2</sub> O	40 mL	4	HCL	2	X				
037TP050-E1	7-25-97	2:30	H <sub>2</sub> O	40 mL	4	HCL	1	X				

*Wendell Kaula*

RELINQUISHED BY: SIGNATURE <u>Wendell Kaula</u> PRINTED <u>Wendell Kaula</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/25/97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TORW &amp; VORSTEL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/25/97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED _____ COMPANY _____ REASON _____	DATE <u>7-25-97</u> TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To TARGET</u> <u>MON TO LAB</u>	_____	



NAVY CLEAN  
ENSAF/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Kauls

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
G99SPO59-E1	7/25/97	11:11	So.1	2oz JAR	4	None	1	X				DDO LEVEL 2
G99SPO61-E1	7/25/97	13:45	So.1	2oz JAR	4	None	1	X				"
<p><i>Wendell Kauls</i> 7-25-97</p>												

RELINQUISHED BY: SIGNATURE <u>Wendell Kauls</u> PRINTED <u>Wendell Kauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/25/97</u> TIME <u>9:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TAYLOR</u> COMPANY <u>LAB</u> REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO TARGET mobile LAB</u>	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: POZ Rel ZISWL

CLIENT NAVAL Base Charleston PROJECT MANAGER Charlie Verney  
ADDRESS Zone L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO <sub>3</sub> )	NO <sub>3</sub> (NaOH)			
1	X				DOO level II (Limited Volume)
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
WBCL6996P018-E1	7-26-97	0807	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
NBCL0376P048-E1	7-26-97	0830	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
WBCL0376P053-E1		0855				
WBCL0376P033-E1		0910				
WBCL0376P070-E1		0940				
WBCL0376P054-E1		1005				
WBCL0376P055-E1		1025				
WBCL0376P062-E1		1050				
WBCL0376P056-E1		1125				
WBCL0376P071-E1		1140				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>E/A &amp; H</u> REASON <u>Lab Analysis</u>	DATE <u>7-29-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex SHIPMENT NO. 494949  
SPECIAL INSTRUCTION: \_\_\_\_\_  
COMMENTS: \* HNO<sub>3</sub> (Metals); NaOH (C.O.)  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

07/28/97 16:39 TEL 7477306 ENSAFE ALLEN HUS CHARSAFE 07

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 20 SWL



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT: Naval Base Charleston -  
 ADDRESS: Zone L  
 PROJECT NAME/NUMBER: 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER: Charlie Kenney  
 TELEPHONE NO.: (903) 284-0029  
 FAX NO.: (903) 256-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO <sub>3</sub> )	CN (NaOH)			
2	X	X			D20 Level II
2	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals (HNO <sub>3</sub> )	CN (NaOH)			REMARKS
					TEMP.	CHEMICAL						
NBCL0996P072-E1	7/20/47	1155	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	2	X	X			D20 Level II
NBCL0996P068-E1		1227					2	X	X			
NBCL0996P069-E1		1250					2	X	X			

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>C. Davis</u> COMPANY: <u>EnSafe</u> REASON: <u>Lab</u>	DATE: <u>7/20/47</u> TIME: <u>1250</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO.: 484749491  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* HNO<sub>3</sub> (Merck); NaOH (CW)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/28/91 16:39 TEL 747/306 ENSAFE ALLEN HUD ->-> CHARSAFPE 18100



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08420

COC #: \_\_\_\_\_

BPA/SO: P04 Rel 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Fona L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) SMI 208

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1	X	X			NEW Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NBCL6995P062-E1	7/24/97	0920	Soil	1 qt. jar	4°C	None	1	X X	NEW Level II
NBCL6995P063-E1		0915							
NBCL6995P064-E1		0945							
NBCL6995P065-E1		1005							
NBCL6995P066-E1		1:20							
<del>5-27-97 Soil</del>									

RELINQUISHED BY: SIGNATURE <u>Sarah L. Bird</u> PRINTED <u>Sarah L. Bird</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE 7/24/97 97 TIME 1700	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Fed ex  
SHIPMENT NO. 4849149491  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 3

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-984-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-956-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Y-PAK	ANALYSIS REQUIRED					REMARKS	
					TEMP.	CHEMICAL									
037GP048-E1	7/26/97	9:30	H <sub>2</sub> O	40 mL	4	HCL	2	X							DRG LEVEL 2
037GP053-E1	7/26/97	9:30	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
699GP033-E1	7/26/97	9:15	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
699GP070-E1	7/26/97	9:40	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
699GP034-E1	7/26/97	10:10	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
037GP055-E1	7/26/97	10:30	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
699GP067-E1	7/26/97	10:30	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
037GP056-E1	7/26/97	11:25	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
699GP071-E1	7/26/97	11:45	H <sub>2</sub> O	40 mL	4	HCL	2	X							"
699GP072-E1	7/26/97	11:55	H <sub>2</sub> O	40 mL	4	HCL	2	X							"

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/26/97</u> TIME <u>1:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TORIN B. CARSTEN</u> COMPANY <u>TRICOTEC</u> REASON <u>LAB</u>	DATE <u>7/26/97</u> TIME <u>1:15</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>MOBILE LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-----------------------------------	--

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARIS VERNON  
 ADDRESS ZONE 6 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rowles

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2	X				DOD LEVEL
2	X				"
2	X				TRIP BLK

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
699GP068-E1	7/26/97	12:30	H <sub>2</sub> O	40ml	4	HCL	2	X				
699GP069-E1	7/26/97	12:50	H <sub>2</sub> O	40ml	4	HCL	2	X				
699T1069-E1	7/26/97	12:50	H <sub>2</sub> O	40ml		HCL	2	X				

*Wendell Rowles*  
*7-26-97*

RELINQUISHED BY: SIGNATURE <u>Wendell Rowles</u> PRINTED <u>Wendell Rowles</u> COMPANY <u>TARGET</u> REASON <u>LABS</u>	DATE <u>7/26/97</u> TIME <u>1:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUURSTO</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/26/97</u> TIME <u>1:15</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
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CHAIN OF CUSTODY RECORD

PAGE 3 OF 3

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLE VERNOY  
 ADDRESS ZONE L TELEPHONE NO. 803-984-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0167  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOA						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA											
					TEMP.	CHEMICAL													
699SP062-E1	7-26-97	0829	SOIL	2 OZ Jar	4	NONE	1	X											DRQ LEVEL 2
699SP063-E1	7-26-97	0920	"	" "	"	"	1	X											"
699SP064-E1	7-26-97	0942	"	" "	"	"	1	X											"
699SP065-E1	7-26-97	1009	"	" "	"	"	1	X											"
699SP066-E1	7-26-97	1021	"	" "	"	"	1	X											"
<i>Handwritten signature: J. J. [unclear]</i> <i>7-26-97</i>																			

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/26</u> TIME <u>1:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TOM BUERGE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/16</u> TIME <u>1:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>WALN DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>11; TARGET; mobile LAB</u>	_____	



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
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CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #:

BPA/SO: PO4 REL 21 SWL

CLIENT: Naval Base Charleston  
ADDRESS: Zone L  
PROJECT NAME/NUMBER: 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER: Charlie Vernoy  
TELEPHONE NO.: (803) 854-0029  
FAX NO.: (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	H <sub>2</sub> O	H <sub>2</sub> O <sub>2</sub>	NaOH	NaCl	
2	X	X	X	X	Doo level II
2	X	X	X	X	
2	X	X	X	X	
2	X	X	X	X	
2	X	X	X	X	
2	X	X	X	X	
2	X	X	X	X	

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
WBU037GPO73-E	7.27.97	0850	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
WBU037GPO58-E		0908				
WBU037GPO57-E		0925				
WBU037GPO59-E		0945				
WBU037GPO44-E		1010				
WBU037GPO75-E		1030				
WBU037GPO60-E		1045				

[Signature]  
7.27.97

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>C Davis</u> COMPANY: <u>Ensafe</u> REASON: <u>LAD</u>	DATE: <u>7.23.97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: FEL Ex  
SHIPMENT NO.: 484914949  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* H<sub>2</sub>O<sub>2</sub> (40ml); NaOH (2N)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/28/97 10:38 TEL 9/1/00 ENSAFE ALLEN HUD 333 CHARLSTN



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08420

COC #: \_\_\_\_\_

BPA/SO: P04 Rel 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone 1 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. 803-886-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Cd	Cr	Fe	Pb	Zn	
1	X	X				DOO Level 1

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBC449SP067-F1	7/27/97	0840	Soil	1 gal. jar	4°C	NONE

*[Handwritten signature and date: 5.27.97]*

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Sarah L. Baird</u> COMPANY <u>Ensafe</u> REASON <u>lab</u>	DATE <u>7/27/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>red ex</u> SHIPMENT NO. <u>4849149491</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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01/20/97 10:39 TEL 141300 ENSAFE ALLEN BUS 777 CHARLOTT



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Banks

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	1	2	3	4	5	
2 X						TOP LEVEL 2
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"
1 X						TRIP BLANK

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	YEARS							
					TEMP.	CHEMICAL									
6996P073-E1	7-27-97	8:45	H <sub>2</sub> O	40 mL	4	HCL	2	X							
0376P058-E1	7-27-97	9:05	H <sub>2</sub> O	40 mL	4	HCL	2	X							
0376P057-E1	7-27-97	9:20	H <sub>2</sub> O	40 mL	4	HCL	2	X							
0376P059-E1	7-27-97	9:40	H <sub>2</sub> O	40 mL	4	HCL	2	X							
6996P074-E1	7-27-97	10:05	H <sub>2</sub> O	40 mL	4	HCL	2	X							
6996P075-E1	7-27-97	10:25	H <sub>2</sub> O	40 mL	4	HCL	2	X							
0376P060-E1	7-27-97	10:45	H <sub>2</sub> O	40 mL	4	HCL	2	X							
0376P060-E1	7-27-97	11:00	H <sub>2</sub> O	40 mL	4	HCL	1	X							

RELINQUISHED BY: SIGNATURE <u>Wendell Banks</u> PRINTED <u>Wendell Banks</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/27/97</u> TIME <u>12:00</u>	RECEIVED BY: SIGNATURE <u>John B. Vorstee</u> PRINTED <u>John B. Vorstee</u> COMPANY <u>TAROFET</u> REASON <u>LAB</u>	DATE <u>7/27/97</u> TIME <u>12:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET  
MOBILE LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE 2 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Pauls

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
699SP067-E1	7/27/97	8:35	soil	2oz JAR	4	N/A	1 X					DOO LEVEL 2
<p><i>Wendell Pauls</i>  <u>7-27-97</u></p>												

RELINQUISHED BY: SIGNATURE <u>Wendell Pauls</u> PRINTED <u>Wendell Pauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/27/97</u> TIME <u>12:00</u>	RECEIVED BY: SIGNATURE <u>John Burkston</u> PRINTED <u>JOHN BURKSTON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/27/97</u> TIME <u>12:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Hand Delivered</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To TARGET mobile LAB</u>	_____	

Amende 7/29/97



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-84120  
COC #: \_\_\_\_\_  
BPA/SO: P04 Rel 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vermy  
ADDRESS Zone L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. 803-856-0102  
SAMPLERS: (SIGNATURE) Sam JRO

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1	X	X			DOO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
V13CLO37SP032-E1	7/29/97	0943	Soil	1-gal. jar	4°C	None
NBCL699SP69-E1		1005				
NBCL037169034-E1		1050				
NBCL037SP030-E1		1110				
NBCL037SP033-E1		1130				
NBCL032SP035-E1		1325				

RELINQUISHED BY: SIGNATURE <u>Sam JRO</u> PRINTED <u>Sam L. Rued</u> COMPANY <u>Ensafe</u> REASON <u>lab</u>	DATE <u>7/29/97</u> TIME <u>97</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fedex  
SHIPMENT NO. 9849149491  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/28/97 10:39 TEL 141/300 ENSAFE ALLEN HUD \*\*\* CHARLSTON 0100



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone 2  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Christie Venable  
TELEPHONE NO. (903) 984-0029  
FAX NO. (903) 986-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (H-V)	CP (N:OH)			
2	X	X			Decont Level II
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals (H-V)	CP (N:OH)				
					TEMP.	CHEMICAL							
NBCL69968076-E1	7-25-97	0840	1L20	1L. Ev (Poly)	4°C	*	2	X	X				
NBCL69968077-E1		0925					2	X	X				
NBCL69968078-E1		0950					2	X	X				
NBCL69968081-E1		1015					2	X	X				
NBCL69968082-E1		1055					2	X	X				
NBCL0376P062-E1		1100					2	X	X				
NBCL0376P082-E1		1330					2	X	X				
NBCL0376P065-E1		1410					2	X	X				
NBCL0376P063-E1		1435					2	X	X				
NBCL0376P064-E1		1510					2	X	X				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>7-25-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149491</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HAZ (Metals); Non-CU</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCCCR1

01/28/97 10:39 TEL 141/300

ENSAFE ALLEN BUS 333 CHARCATE



**NAVY CLEAN**  
 ENSAFE/ALLEN & HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410

COC #:

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Kernoy  
 TELEPHONE NO. (803) 484-0029  
 FAX NO. (803) 956-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HUCB)	CD (HUCB)	CD (HUCB)	CD (HUCB)	
2	X	X			DGC Hewlett

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NRL6A93D79-E1	7.28.97	1535	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	2	X X	DGC Hewlett
<del>[Signature]</del> 7.28.97									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE <u>7/28/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149491</u> SPECIAL INSTRUCTION:	COMMENTS: <u>* H<sub>2</sub>O<sub>2</sub> (Metals); NaOH (C.V.)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	---	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCOCR1

U1/20/91 10:39 TEL 14/1300

ENSAFE ALLEN BUD 777 UNANNOUNCED

BU 00

Amended

8/4/97 JS



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: PO4 REL 21  
BPA/SO: PO4 REL 21

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-6107  
SAMPLERS: (SIGNATURE) RANDY BRAND

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1					DOD LEVEL 2
1					"
1					"
1					"
1					"
1					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
0375P032-E1	7-28-97	0946	SOIL	2 oz JAR	4	NONE	1	X	DOD LEVEL 2
699SP064-E1	7-28-97	1007	"	" "	"	"	1	X	"
0375P034-E1	7-28-97	1045	"	" "	"	"	1	X	"
0375P036-E1	7-28-97	1107	"	" "	"	"	1	X	"
0375P033-E1	7-28-97	1130	"	" "	"	"	1	X	"
0375P035-E1	7-28-97	1324	"	" "	"	"	1	X	"

NBCU  
NBCU

undelivered  
7-28-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/28</u> TIME <u>4:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUNSTER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/28</u> TIME <u>9:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO: TARGET  
mobile LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Amended 8/5/97



NAVY CLEAN  
ENSAF/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE 1 TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-886-0107  
SAMPLERS: (SIGNATURE) Wendell Rauls

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2	X				DDP LEVEL 2
1	X				"
1	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
6996079-E1	7/28/97	15:40	H <sub>2</sub> O	40 ml	4	HCl
6996079-E1	"	15:50	H <sub>2</sub> O	40 ml	4	HCl
6997079-E1	"	15:51	H <sub>2</sub> O	40 ml	4	HCl

*Wendell Rauls*  
7-28-97

RELINQUISHED BY:  
SIGNATURE Wendell Rauls  
PRINTED Wendell Rauls  
COMPANY TARGET  
REASON LAB

RECEIVED BY:  
SIGNATURE [Signature]  
PRINTED JOHN BUONSTECCO  
COMPANY TARGET LAB  
REASON \_\_\_\_\_

RELINQUISHED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

RECEIVED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

METHOD OF SHIPMENT: HAND DELIVERED  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To TARGET mobile LAB

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 3 OF 3

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE 2 TELEPHONE NO. 803 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Rando

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
2	X						DOO LEVEL 2
2	X						"
2	X						"
2	X						"
2	X						"
2	X						"
2	X						"
2	X						"
2	X						"
2	X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VIALS										
					TEMP.	CHEMICAL												
NBCU 0376P061-E1	7/29/97	10:20	H <sub>2</sub> O	40 mL	4	HCL	2	X										
0376P062-E1	"	11:00	H <sub>2</sub> O	40 mL	4	HCL	2	X										
0376P063-E1	"	14:55	H <sub>2</sub> O	40 mL	4	HCL	2	X										
0376P065-E1	"	14:15	H <sub>2</sub> O	40 mL	4	HCL	2	X										
0376P068-E1	"	15:15	H <sub>2</sub> O	40 mL	4	HCL	2	X										
6996P076-E1	"	0900	H <sub>2</sub> O	40 mL	4	HCL	2	X										
6996P077-E1	"	12:00	H <sub>2</sub> O	40 mL	4	HCL	2	X										
6996P078-E1	"	0925	H <sub>2</sub> O	40 mL	4	HCL	2	X										
6996P081-E1	"	11:05	H <sub>2</sub> O	40 mL	4	HCL	2	X										
NBCU 6996P082-E1	"	13:40	H <sub>2</sub> O	40 mL	4	HCL	2	X										

RELINQUISHED BY: SIGNATURE <u>Wendell Rando</u> PRINTED <u>Wendell Rando</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29/97</u> TIME <u>11:30</u>	RECEIVED BY: SIGNATURE <u>John B. Umets</u> PRINTED <u>JOHN B. UMETS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29</u> TIME <u>9:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 934-0029  
FAX NO. (803) 956-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals (HACH)	Metals (MECH)				
1	X	X				DQO Level II
2	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NRC10376P071-E1	7-29-97	1455	H2O	1 Liter (Polu)	4°C	*
NRC10376P073-E1		1510				
NRC10376P071-E1		1530				
<del>Sampled by [Signature] 7-29-97</del>						

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDavis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7-29-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4349149465</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HACH (Metals); HACH (pH)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	---	---



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
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### CHAIN OF CUSTODY RECORD

PAGE 1 OF 20

CTO-TASK: 2912-08420  
COC #: \_\_\_\_\_  
BPA/SO: 204 Re1 Z1

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Vermoy  
ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
PROJECT NAME/NUMBER: 2912-08420 FAX. NO.: 803-856-0107  
SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
* NBCL695PTA-E1	7/12/97	0820	Soil	1 qt. jar	4°C	None	1	X	X			
NBCL037SP03-E1		0845										
NBCL037SP08-E1		0855										
NBCL037SP09-E1		1020										
NBCL037SP041-E1		1040										
NBCL037SP043-E1		1140										
<i>[Handwritten signature and notes across the table]</i>												

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>Sarah L Baird</u> COMPANY: <u>ENSAFE</u> REASON: <u>W/S</u>	DATE: <u>7/29/97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO.: 4849149465  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* Might have free product.

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/04

ENSAFE ALLEN HOS -> CHARSAFE

07/29/97 16:17 TEL 7477306



NAVY CLEAN  
ENS SAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernon  
ADDRESS Zone L TELEPHONE NO. (803) 854-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	C.N.			
1	X	X			D&D Level II
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
<del>NBC10375PO42-E1</del>	<del>7.29.97</del>	<del>1200</del>	<del>Soil</del>	<del>4oz (Sar)</del>	<del>4°C</del>	<del>-</del>	<del>1</del>	<del>X</del>	<del>X</del>	<del></del>
NBC10375PO40E1	7.29.97	1025	1	1	1		1	X	X	
NBC10375PO42-E1	7.29.97	1200	Soil	4oz (Sar)	4°C	-	1	X	X	

*[Handwritten signature]*  
7.29.97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>Ensaf</u> REASON <u>Lab</u>	DATE <u>7.29.97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4949149465</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>*D&amp;D Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
 ENSAFE/ALLEN & HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 3

CTO-TASK: 2912-08410

COC #: ~~101 1011 SWL~~

BPA/SO: TARGET LAB

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-886-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2	X				DRO LEVEL 2
2	X				"
2	X				"
2	X				"
2	X				"
2	X				"
2	X				"
2	X				"
2	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
✓ NBC16996P083-E1	7.29.97	0835	H <sub>2</sub> O	40mL (glass)	4°	HCL	2	X	DRO LEVEL 2
✓ NBC10376P064-E1		1030					2	X	"
✓ NBC16996P080-E1		0920					2	X	"
✓ NBC10376P066-E1		1020					2	X	"
✓ NBC10376P069-E1		1115					2	X	"
✓ NBC10376P067-E1		1135					2	X	"
✓ NBC16996P085-E1		1320					2	X	"
✓ NBC16996P084-E1		1350					2	X	"
✓ NBC10376P070-E1		1413					2	X	"
✓ NBC10376P072-E1		1435					2	X	"

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29/97</u> TIME <u>3:45</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TOMAS VONSTEIN</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/19/97</u> TIME <u>4:40</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>IT AND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TARGET mobile LAB</u>	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 2 OF 3

CTO-TASK: 2912-08410  
COC #: Target Lab  
BPA/SO: Target Lab

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES VERNON  
ADDRESS ZONE 2 TELEPHONE NO. 803 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
<u>NOA</u>						<u>DDO LEVEL 2</u>
						<u>1</u>
						<u>1</u>

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
<del>NRCL0376P073E1</del>	<del>1515</del>									
<u>NRCL0376P073E1</u>	<u>7-29-97</u>	<u>1515</u>	<u>H<sub>2</sub>O</u>	<u>40ml (glass)</u>	<u>4°C</u>	<u>HCL</u>	<u>2X</u>			
<u>NRCL0376P073E1</u>	<u>7-29-97</u>	<u>8:35</u>	<u>H<sub>2</sub>O</u>	<u>40ML</u>	<u>4</u>	<u>HCL</u>	<u>1X</u>			

Charles Vernon  
7-29-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>TARGET LAB</u> REASON <u>LAB</u>	DATE <u>7-29-97</u> TIME <u>3:45</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John B. Vonstre</u> COMPANY <u>TARGET LAB</u> REASON <u>LAB</u>	DATE <u>7/29/97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: PARCEL DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To: TARGET mobile LAB  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-886-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VDA						DOO LEVEL 2
						"
						"
						"
						"
						"
						"
						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION								
					TEMP.	CHEMICAL							
6995P42A-E1	7-29-97	0829	SOIL	2 oz Jar	4	NONE	1	X					
037SP037-E1	7-29-97	0846	"	" "	"	"	1	X					
037SP038-E1	7-29-97	0901	"	" "	"	"	1	X					
037SP039-E1	7-29-97	1012	"	" "	"	"	1	X					
037SP040-E1	7-29-97	1022	"	" "	"	"	1	X					
037SP041-E1	7-29-97	1038	"	" "	"	"	1	X					
037SP043-E1	7-29-97	1148	"	" "	"	"	1	X					
037SP042-E1	7-29-97	1159	"	" "	"	"	1	X					

*Wendell Rando*  
 7-29-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29</u> TIME <u>1537</u>	RECEIVED BY: SIGNATURE <u>J. B. Sims</u> PRINTED <u>JOHN BUCHSINC</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29</u> TIME <u>9:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>MOBILE LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Amended '97 JRS



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08-110  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON  
ADDRESS ZONE L  
PROJECT NAME/NUMBER 291208410  
SAMPLERS: (SIGNATURE) R BRAND

PROJECT MANAGER CHARLIE VERNOY  
TELEPHONE NO. 803-884-0029  
FAX NO. 803-856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	1	2	3	4	
8260-100A					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
699GP82AE1	7/29/97	2:15	H2O	40ml VOA		HCl	2	X						DGO LEVEL 2
<p>Wendell Ramey 7-29-97</p>														

RELINQUISHED BY: SIGNATURE _____ PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29/97</u> TIME <u>16:00</u>	RECEIVED BY: SIGNATURE _____ PRINTED <u>JOHN W. HASTON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/29/97</u> TIME <u>14:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	--	--	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To Mobile Lab</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SW

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charles Vernoy  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HAs)	CN (NaOH)			
2	X	X			DQO Level II
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			(Product)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0376P078-E	7.30.97	0820	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
NBCL0376P079-E		0825				
NBCL0376P074-E		0900				
NBCL0376P075-E		0915				
NBCL0376P076-E		0940				
NBCL0376P077-E		1000				
NBCL699GP020-E		1047				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>EnSafe Labs</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7.30.97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>484914454</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals); NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-0840  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAIRBASE CHARLESTON  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-0840  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER CHARLIE Veenby  
TELEPHONE NO. (803) 884-0879  
FAX NO. (803) 856-0701

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
VOA					Effervescent
					!!
					Effervescent
					Hot!

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS								
					TEMP.	CHEMICAL									
* NBCL0376P078-E1	7.30.97	0830	H2O	40 mL (glass)	4°C	HCL	2	X							
* NBCL0376P079-E1		0840					2	X							
* NBCL0376P071-E1		0850					2	X							
* NBCL0376P074-E1		0916					2	X							
* NBCL0376P075-E1		0920					2	X							
* NBCL0376P076-E1		0945					2	X							
* NBCL0376P077-E1		1008					2	X							
* NBCL0376P020-E1		1100					2	X							

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Day's</u> COMPANY <u>EPA</u> REASON <u>LAB</u>	DATE <u>7/30/97</u> TIME <u>11:50</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TOM BUONSTER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/30/97</u> TIME <u>11:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET MOBILE LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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02/02

CHARSAFE

TEL 7477306

08/05/97 16:14



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PC 4 REL 21 SOL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 854-0029  
 FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO <sub>3</sub> )	CU (NaOH)			
2	X	X			DQC Level II
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL696P0867E1	8-5-97	1015	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
NBCL0376P040E1		1050				
NBCL876P081E1		1130				
NBCL696P089E1		1327				
NBCL696P088E1		1400				
NBCL696P087E1		1440				
NBCL0376P082E1		1510				

[Signature]  
8-5-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>8-5-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4849149410  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: X HNO<sub>3</sub> (Metals); NaOH (Cu)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Verbovy  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-9107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	TRIP				
2	X					DDO LVL 2 ↓
2	X					
2	X					
2	X					
2	X					
2	X					
1		X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	TRIP							
					TEMP.	CHEMICAL										
NRCL0916P086-E1	8.5.97	1037	H2O	40mL (glass)	4°C	HCL	2	X								
NRCL0376P080-E1		1100					2	X								
NRCL0376P081-E1		1140					2	X								
NRCL0916P089-E1		1340					2	X								
NRCL0916P086-E1		1425					2	X								
NRCL0376P082-E1		1520					2	X								
NRCL0376P082-E1		TRIP					1		X							

Collected  
8.5.97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. DAVIS</u> COMPANY <u>ETAH LAB</u> REASON <u>LAB</u>	DATE <u>8.5.97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>DONALD W. VONSTEL</u> COMPANY <u>TALCOR LAB</u> REASON <u>LAB</u>	DATE <u>8.5.97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Amended 8/6/97

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: PO4 R&L 21 SWL  
 BPA/SO: PO4 R&L 21 SWL



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES V. ANDY  
 ADDRESS ZONE L TELEPHONE NO. (803) 834 0027  
 PROJECT NAME/NUMBER 2912 08410 FAX NO. (803) 856 0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Cu	Pb	Mn	Zn	Fe	Other	
1	X	X					PQDLVL II
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
037 SP046-E1	8/5/97	10:15	SOIL	4oz Glass Jar	40	
699 SP269-E1		11:10	SOIL	4oz Glass Jar	6	
699 SP070-E1		13:15	SOIL	1		
037 SP047-E1		13:35				
137 SP048-E1		13:45				
137 SP049-E1		14:20				
699 SP071-E1		14:35				
699 SP072-E1		14:55				
699 SP073-E1		15:10				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>RICHARD BLANIE</u> COMPANY <u>ENSAFE</u> REASON <u>LMS</u>	DATE <u>8/5/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FOEX COMMENTS: PQDLVL II AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849144410  
 SPECIAL INSTRUCTION: \_\_\_\_\_  DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

08/05/97 10:14 TEL 141/308 ENSAFE ALLEN HOS CHARLESTON 08/01/97



01/02

CHARSAFE

08/06/97 16:23 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: POY REL-21 SWL

CLIENT: Naval Base Charleston  
ADDRESS: Zone L  
PROJECT NAME/NUMBER: 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER: Charlie Vernoy  
TELEPHONE NO.: (803) 984-0029  
FAX NO.: (803) 956-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals (HNO <sub>3</sub> )	Cd (NaOH)				
2	X	X				DQO Level II
2	X	X				
2	X	X				
2	X	X				
2	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NB010376P083E1	8.6.97	0840	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
NB010376P084E1		0940				
NB010376P085E1		1010				
NB010376P086E1		1050				
NB010376P088E1		1415				
NB016996P090E1		1515				

[Signature]  
8.6.97

RELINQUISHED BY:  
SIGNATURE: [Signature]  
PRINTED: C. Davis  
COMPANY: Ensafe  
REASON: Lab

DATE: 8.6.97  
RECEIVED BY:  
SIGNATURE: \_\_\_\_\_  
PRINTED: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
REASON: \_\_\_\_\_

DATE: \_\_\_\_\_  
RECEIVED BY:  
SIGNATURE: \_\_\_\_\_  
PRINTED: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
REASON: \_\_\_\_\_

DATE: \_\_\_\_\_  
RECEIVED BY:  
SIGNATURE: \_\_\_\_\_  
PRINTED: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
REASON: \_\_\_\_\_

METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO.: 4849149 384  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* HNO<sub>3</sub> (Metals); NaOH (Cd)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCDRI



NAVY CLEAN  
ENSAF/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-0840  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER CYRIL VERNOY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2 X					DDO LVL 2
2 X					
2 X					
2 X					Effervescent
2 X					Effervescent
2 X					Effervescent
2 X					Effervescent

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
NBCL699GPO87E1	8-6-97	0836	H2O	40 mL (glass)	4°C	HCL	2 X
NBCL0376PO83E1		0903					2 X
NBCL0376PO84E1		0945					2 X
NBCL0376PO85E1		1030					2 X
NBCL0376PO86E1		1110					2 X
NBCL0376PO88E1		1440					2 X
NBCL699GPO90E1		1530					2 X

[Signature] 8-6-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>ETA14</u> REASON <u>LAB</u>	DATE 8-6 97 TIME 4:00	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John Donsiac</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE 8-6 97 TIME 4:20	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Hand Delivered</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To Target Lab</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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02/02

CHARSAFE

ENSAFE ALLEN HOS

TEL 7477306

16:23

08/06/97



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912 08410

COC #: \_\_\_\_\_

BPA/SO: P04 REL 21 SWL

CLIENT: NAVAL BASE CHARLESTON PROJECT MANAGER: CHARLIE VENNOR  
ADDRESS: ZONE L TELEPHONE NO.: 803 854 0029  
PROJECT NAME/NUMBER: 2912 08410 FAX NO.: 803 856 0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
1	X	X					D20 Level II
1	X	X					Limited Volume
1	X	X					
1	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
699 SP074-E1	8/6/97	0845	SOIL	4oz Jar	4°C	
699 SP075-E1		0905				
699 SP076-E1		1025				
737 SP050-E1		1410				

~~[Signature]~~  
8/6/97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Richard Blank</u> COMPANY <u>ENSAFE</u> REASON <u>LAB</u>	DATE <u>8/6/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Box</u> SHIPMENT NO. <u>184 9149 354</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCDORI

Amend # 8/12/97 *JS*

PAGE 1 OF 1  
 CTO-TASK: 2912-0840  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERBY  
 ADDRESS ZONE C TELEPHONE NO. (803) 854-1029  
 PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Karoy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						100 LEVEL 2
1						
1						
1						
1						TRIP BLANK ↓

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
699SP074-E1	8-6-97	0848	SOIL	2oz JAR	4	NONE	1 X
699SP075-E1	8-6-97	0907	"	" "	"	"	1 X
699SP076-E1	8-6-97	1024	"	" "	"	"	1 X
037SP050-E1	8-6-97	1412	"	" "	"	"	1 X
037TP050-E1	8-6-97	1430	H <sub>2</sub> O	40 ml	"	"	1 X

*John M. ... 8.6.97*

RELINQUISHED BY: SIGNATURE <u>Karoy Brand</u> PRINTED <u>Karoy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/12/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John Guonster</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/16/97</u> TIME <u>1500</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To Target Lab  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/03

CHARSAFE

08/07/97 16:03 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-~~88420~~08410  
COC #: \_\_\_\_\_  
BPA/SO: P.O. 4 Rel 21 SWL

CLIENT: Naval Base Charleston

PROJECT MANAGER: Charlie Verna

ADDRESS: Zone 2

TELEPHONE NO.: 803-884-0029

PROJECT NAME/NUMBER: 2912-~~88420~~08410 GG

FAX NO.: 803-856-0107

SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL	NO. OF CONTAINERS	Metals	CO			
NBCL/699SP077E	8-7-97	0927	soil	4oz glass	4°C	None	1	X	X			DO 9 level 2
NBCL/037SP051E1		1032					1	X	X			
NBCL/037SP052E1		1046					1	X	X			
NBCL/037SP053E1		1105					1	X	X			
NBCL/037SP054E1		1409					1	X	X			
NBCL/037SP055E1		1428					1	X	X			
NBCL/037SP056E1		1445					1	X	X			

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Greg Goodrum</u> COMPANY <u>ENSAFE</u> REASON <u>Analysis</u>	DATE <u>8-7-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>EAFT</u> SHIPMENT NO. <u>4849149373</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-----------------------------------	---



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

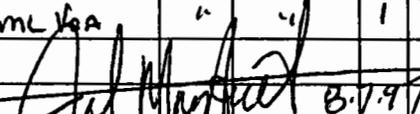
CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE KENNY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Kandy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOA						DQO LVL 2 ↓

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
699SP077-E1	8-7-97	0422	SOIL	2 OZ JAR	4	NONE	1	X						
037SP051-E1	8-7-97	1032	"	" "	"	"	1	X						
037SP052-E1	8-7-97	1046	"	" "	"	"	1	X						
037SP053-E1	8-7-97	1105	"	" "	"	"	1	X						
037SP054-E1	8-7-97	1409	"	" "	"	"	1	X						
037SP055-E1	8-7-97	1428	"	" "	"	"	1	X						
037SP056-E1	8-7-97	1445	"	" "	"	"	1	X						
037TP056-E1	8-7-97	1530	H <sub>2</sub> O	40ML VOA	"	"	1	X						
 8-7-97														

RELINQUISHED BY: SIGNATURE <u>Kandy Brand</u> PRINTED <u>KANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/7</u> TIME <u>1530</u>	RECEIVED BY: SIGNATURE <u>John B. Vorse</u> PRINTED <u>JOHN B. VORSE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/7</u> TIME <u>92</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	-------------------------------------	--	-----------------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: Hand Delivered  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To Target Lab.  
 COMMENTS: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

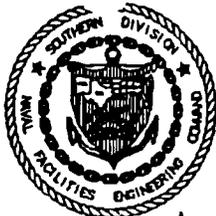
08/02/03

ENSAFEE ALLEN HUS ->>> CHAKSAFE

TEL 7477306

16:03

08/07/97



NAVY CLEAN  
ENSAFEE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 RIEL 21 Sub

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Verney  
TELEPHONE NO. (803) 854-0027  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO <sub>3</sub> )	CD (NaOH)			
1	X	X			D20 Level II
2	X	X			
1	X	X			
1	X	X			
1	X	X			
2	X	X			
1	X	X			
2	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
✓ NBCL0376P090E1	8.7.97	0950	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
✓ NBCL0376P091E1		0930				
✓ NBCL0376P091E1		1000				
✓ NBCL0376P092E1		1010				
✓ NBCL0376P091E1		1020				
✓ NBCL0376P092E1		1030				
✓ NBCL0376P093E1		1050				
✓ NBCL0376P090E1		1125				
✓ NBCL0376P094E1		1400				
✓ NBCL0376P091E1		1425				

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	8.7.97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>C Davis</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>Ensafe</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>Lab</u>	TIME <u>1420</u>	REASON _____	TIME _____	REASON _____	TIME _____	REASON _____	TIME _____

METHOD OF SHIPMENT: FedEx  
SHIPMENT NO. 494917373  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* HNO<sub>3</sub> (Metals); NaOH (CD)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFÉ/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 384-0029  
FAX NO. (803) 456-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO3)	CN (H2OH)			
2	X	X			DGO Level II
1	X				
2	X	X			
2	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
✓ NREL0376PO94E	8.7.97	1430	H2O	1 Liter (Poly)	4°C	*
✓ NREL6991PO91E		1435				
✓ NREL6991PO92E		1502				
✓ NREL6991PO93E		1510				

[Signature]  
8.7.97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. DAVIS</u> COMPANY <u>ENSAFÉ</u> REASON <u>Lab</u>	DATE <u>8.7.97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO. 4849149373  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* HNO3 (Metals); INDIF (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-0840  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VANDY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						APD - LEVEL 2 ↓ ↓
2 X						
2 X						
2 X						
2 X						
2 X						
2 X						
2 X						
2 X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
NBCL0376P089 E1	8-7-97	0940	H2O	40ml (glass)	4°C	HCL	2 X
NBCL0376P091 E1		1030					2 X
NBCL0376P092 E1		1045					2 X
NBCL0376P093 E1		1105					2 X
NBCL0376P090 E1		1135					2 X
NBCL699GP094 E1		1410					2 X
NBCL0376P094 E1		1440					2 X
NBCL699GP091 E1		1450					2 X
NBCL699GP092 E1		1515					2 X
NBCL699GP093 E1		1525					2 X

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDAVIS</u> COMPANY <u>ELM4</u> REASON <u>LAB</u>	DATE <u>8-7-97</u> TIME <u>3:50</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B. VANDY</u> COMPANY <u>TALOG+</u> REASON <u>LAB</u>	DATE <u>8/7-97</u> TIME <u>3:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: LAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGER LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/01

CHARSAFE

08/08/97 16:50 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO 4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) C. Davis

PROJECT MANAGER Charlie Verney  
TELEPHONE NO. (803) 834-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals (HAMB)	CN (NACH)				
2	X	X				DQO Level II    Limited Volume
2	X	X				
2	X	X				
2	X	X				
1	X					
2	X	X				
1	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NA10376P095E1	8.8.97	0837	H <sub>2</sub> O	1 liter (Poly)	4°C	*
NA10376P096E1		0850				
NA10376P097E1		0945				
NA10376P098E1		0950				
NA10376P099E1		1020				
NA10376P100E1		1120				
NA10376P103E1		1555				

Analysed  
8.8.97

RELINQUISHED BY: SIGNATURE <u>C. Davis</u> PRINTED <u>C. Davis</u> COMPANY <u>En Safe</u> REASON <u>Labs</u>	DATE 8.8.97 TIME 1700	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO. 4849149362  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* H<sub>2</sub>O<sub>3</sub> (Metals); NaOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCDCR



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 7

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON

PROJECT MANAGER CHARLIE VERNON

ADDRESS ZONE L

TELEPHONE NO. (803) 884-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. (803) 856-0107

SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
VDA					DQO LVL 2 ↓

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
NBCL0376P0916E1	8.8.97	0930	H2O	40mL (glass)	4°C	HCL	2 X
NBCL0376P0915E1		0940					2 X
NBCL0376P0917E1		1004					2 X
NBCL0376P0918E1		1010					2 X
NBCL0376P0918E1		1530					2 X

[Signature]  
 8.8.97

RELINQUISHED BY:  
 SIGNATURE [Signature]  
 PRINTED C. DAVIS  
 COMPANY ETAH LAB  
 REASON LAB

DATE 8/8/97  
 RECEIVED BY:  
 SIGNATURE [Signature]  
 PRINTED JOHN BUNSTEN  
 COMPANY TARGET LAB  
 REASON LAB

DATE \_\_\_\_\_  
 RELINQUISHED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHAL  
 (901) 363-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 Rel21 SWL

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Varnoy  
 ADDRESS: Zone L TELEPHONE NO.: 803-884-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX. NO.: 803-856-0107  
 SAMPLERS: (SIGNATURE) Mary Bearden

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
					TEMP.	CHEMICAL		Metals	Cd		
NBCL1504SP011 B1	8-9-97	1022	Soil	4 oz glass	4°C	None	1	X	X		DA O Level 2
NBCL1504SP012 B1		1039					1	X	X		
NBCL1504SP013 B1		1040					1	X	X		
NBCL1504SP014 B1		1050					1	X	X		
NBCL1504SP006 C1		1120					1	X	X		
NBCL1504SP010 A1		1148					1	X	X		
NBCL1504SP001 E1		1215					1	X	X		
NBCL1504SP002 E1		1225					1	X	X		

RELINQUISHED BY: SIGNATURE <u>Mary Bearden</u> PRINTED <u>Mary Bearden</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-9-97</u> TIME <u>1100</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fedex COMMENTS: DA O Level 2  
 SHIPMENT NO. 4849149351  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

00/11/97 10:40 TEL 141000 ENSAFE ALLEN BUS 777 VERNADALE 00/02/97



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-0040  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-0040 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brann

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
VDA					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS									
					TEMP.	CHEMICAL										
5043P001-E1	1215	8997	SOIL	2oz Jar	4	NONE	1	X								800 LVL 2
5045P002-E1	1225	89-97	"	" "	"	"	1	X								"
504TP002E1	1225	8/9/97	HW	40ml VOA			1	X								"
<i>John Murphy 8.9.97</i>																

RELINQUISHED BY: SIGNATURE <u>Randy Brann</u> PRINTED <u>Randy Brann</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE <u>John Murphy</u> PRINTED <u>JOHN MURPHY</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/9</u> TIME <u>1300</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	-------------------------------------	--	-------------------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: SHIPMENT NO. <u>HAND DELIVERED</u> SPECIAL INSTRUCTION: <u>To TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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03/04

CHARSAFE

08/11/97 16:18 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernon  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals (HUL)	Metals (HUL)	Metals (HUL)	Metals (HUL)	Metals (HUL)	
1	X					D20 Level II
1	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
X NBCL037CP097E	8.9.97	0835	H2O	1 Liter (Poly)	4°C	*	1 X
X NBCL037CP103E		0945					1 X
<del>[Signature] 8.9.97</del>							

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE <u>8.11.97</u> TIME <u>5:00</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849140351</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* H2O, (Metals); N.C.H (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	--	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCOCRI



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-00410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES VEZDY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
NBC10376P087E1	8.9.97	0910	H2O	40mL (glass)	4°C	HCL	2X					DGOLV 2
NBC10376P103E1		1000					2X					
<del>[Signature] 8.9.97</del>												

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDWIS</u> COMPANY <u>ETAH</u> REASON <u>LAB</u>	DATE <u>8.9.97</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHNSON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8.9.97</u> TIME <u>1300</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/03

CHARSAFE

08/12/97 16:01 TEL 7477306

Ame id 8/14/97



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: P.O. 4 Rel 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Varned  
ADDRESS Zone L TELEPHONE NO. 803-224-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-850-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Ca				
1	X	X				DQ 0 Level 2
1	X	X				
1	X	X				
1	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL1504SP001E1	8-12-97	0830	soil	4oz glass	4°	None
NBCL1504SP002E1	8-12-97	1015				
NBCL1504SP003E1	8-12-97	1049				
NBCL1699SP079E1	8-12-97	1112				
NBCL1699SP080E1	8-12-97	1125				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Greg Beadum</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-12-97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex COMMENTS: DQ 0 Level 2  
 SHIPMENT NO. 4849149336  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Amended  
8114197 *[Signature]*



**NAVY CLEAN**  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER CHARLIE V  
ADDRESS ZENEL TELEPHONE NO. (803)884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803)856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1	X					DQO LVL 2 ↓
1	X					
1	X					
1	X					
1	X					
1	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
504SP091-E1	8-12-96	0836	SOIL	2 oz JAL	4	NONE	1	X	DQO LVL 2 ↓
504SP092-E1	8-12-96	1015	"	" "	"	"	1	X	
504SP003-E1	8-12-96	1043	"	" "	"	"	1	X	
699SP079-E1	8-12-96	1107	"	" "	"	"	1	X	
699SP080-E1	8-12-96	1122	"	" "	"	"	1	X	
699TP080-E1	8-12-96	1200	H2O	40 mL	4	NONE	1	X	

*[Signature]*  
8/12/97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/12</u> TIME <u>4:10</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN DUNSTON</u> COMPANY <u>TALBOT</u> REASON <u>LAB</u>	DATE <u>8/12</u> TIME <u>9:27</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Hand Delivered  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To Talbot Lab

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

02/03

CHARSAFE

08/12/97 16:01 TEL 7477306

Am. Fed 8/14/97

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 Reel 21 SWL



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(901) 383-9115

### CHAIN OF CUSTODY RECORD

CLIENT NAVAL BASE Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) Greg Goodrum

PROJECT MANAGER Charlie Verry  
TELEPHONE NO. 803-884-0024  
FAX NO. 803-856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals - HNO <sub>3</sub>	CN - NaOH				
2	X	X				DQ Level 2
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals - HNO <sub>3</sub>	CN - NaOH							
					TEMP.	CHEMICAL										
NBCL1699CP096EM	8/12/97	1249	H <sub>2</sub> O	100 Poly	4°C	*	2	X	X							
NBCL1699CP097E1		1311					2	X	X							

RELINQUISHED BY: SIGNATURE <u>Greg Goodrum</u> PRINTED <u>Greg Goodrum</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE 8-12-97 TIME 1700	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed-Ex</u> SHIPMENT NO. <u>4849149336</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* Metals - HNO<sub>3</sub></u> <u>CN - NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCDORI



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER CAROL VEROY  
 ADDRESS ZONE L TELEPHONE NO. (803)884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803)956-0007  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2	F				DDO LVL 2
2	F				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NRCL\699GP096E1	8/29/97	1252	W	40ml VOA	4"	HCL
NRCL\699GP097E1	8/12/97	1311	W	40ml VOA		

[Signature]  
8.12.97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Greg Goodrum</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8.12.97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John B. Vero</u> COMPANY <u>TIMBER</u> REASON <u>WB</u>	DATE <u>8.12.97</u> TIME <u>330</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVER TO  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TARGET LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**Subzone F  
Soil Boring**



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) T E Ryan

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS
	VOAS	Metal Cyanide	SVA Res/PPB, H <sub>2</sub> O <sub>2</sub>	VDA	SVA	Post I/POR	metals	Cyanide	Merks		
4	2	1	1								
10				2	2	2	1	1	1	2	
10				2	2	2	1	1	1	2	
1	1										
2			2								

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBC\504SB002F1	6/30/97	1330	soil	2oz + 4oz	4°C	NONE
NBC\504DW002F1		1025	H <sub>2</sub> O	40ml vial, 1L Poly LAMBER		*
NBC\504EW002F1		1050	H <sub>2</sub> O	↓	↓	↓
NBC\504TB002F1	↓	—	soil	2oz	↓	NONE
NBC\504TW002F1	↓	—	H <sub>2</sub> O	40ml vial	↓	HCL

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>T E Ryan</u>	6/30/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>T E RYAN</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>CEERD</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>PREP FOR SHIP</u>	TIME <u>1620</u>	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: FedEx COMMENTS: All samples save D003 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849151672  
 SPECIAL INSTRUCTION: SWL  DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

\* VDA = HCL  
 Met = HNO<sub>3</sub>  
 CN = NaOH

06/30/97 16:30 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE 02/02



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernon  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Hunsicker

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	Metal, Cyanide	Syn. Pesticides	Herbicides	
4	2	1	1		*
4	2	1	1		*
4	2	1	1		
4	2	1	1		
4	2	1	1		
2	2				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL 504SB001F1	7/1/97	1000	soil	2oz + 4oz	4°C	NONE
NBCL 504SB003F1		0915				
NBCL 504SB004F1		1110				
NBCL 504SB005F1		1350				
NBCL 504SB005F2		1425				
NBCL 504TB005F2				2oz		

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>J.A. Hunsicker</u>	7/1/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>J. A. Hunsicker</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>DOT</u>	TIME	COMPANY _____	TIME	COMPANY _____	TIME	COMPANY _____	TIME
REASON <u>prep for ship</u>	1550	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: FedEx  
 SHIPMENT NO. 4849151661  
 SPECIAL INSTRUCTION: SWL

COMMENTS: ALL SAMPLES ARE DQ03  
\* Diesel odor, unable to obtain 2nd interval sample due to free product.

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

02/03

CHARSAFE

TEL 7477306

07/02/97 16:35



NAVY CLEAN  
ENSAFE/ALLEN&HOSHAL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTD-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.D. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J.A. Hunsberger

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	Metal/Cyanide	SWAP	HEAVY METALS	
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VDA	Metal/Cyanide	SWAP	HEAVY METALS	REMARKS
					TEMP.	CHEMICAL						
NBC15045B006F1	7/2/97	0825	soil	202, 402	4°C	none	4	2	1	1		
NBC15045B006F2		0840					4	2	1	1		
NBC15045B006F2		0840					4	2	1	1		
NBC15045B007F1		0915					4	2	1	1		
NBC15045B007F2		0935					4	2	1	1		
NBC15045B008F1		1010					4	2	1	1		
NBC15045B008F2		1030					4	2	1	1		
NBC15045B009F1		1100					4	2	1	1		
NBC15045B009F2		1120					4	2	1	1		
NBC15045B010F1		1300					4	2	1	1		

RELINQUISHED BY: SIGNATURE <u>J.A. Hunsberger</u> PRINTED <u>J.A. Hunsberger</u> COMPANY <u>DET</u> REASON <u>preparation</u>	DATE <u>7/2/97</u> TIME <u>1545</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849151650</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>All samples are DQD3.</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLN00CR1

03/03

CHARSAFE

TEL 7477306

07/02/97 16:35



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

# CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.D. 4 REL. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) J. P. Honyewitt

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL	NO. OF CONTAINERS	VDA	Metal Cyanide	SVOC	
NBCL1504SB010F2	7/2/97	1308	Soil	20z, 40z	4°C	none	4	2	1	1	
NBCL1504SB011F1		1340					4	2	1	1	
NBCL1504SB011F2		1355					4	2	1	1	
NBCL1504TB006F2		—		20z			1	1			
<u>J. P. Honyewitt</u>											

RELINQUISHED BY: SIGNATURE <u>J. P. Honyewitt</u> PRINTED <u>J. P. Honyewitt</u> COMPANY <u>DET</u> REASON <u>prep for ship</u>	DATE <u>7/2/97</u> TIME <u>1545</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx COMMENTS: ALL SAMPLES ARE DOOS AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849151650  
 SPECIAL INSTRUCTION: SWL

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCCRI

**Subzone F**  
**DPT**



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernon  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0840 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) P. C. U. Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CN				
1	X	X				DQO Level II
1	X	X				
1	X	X				
1	X	X				
2	X	X				
2	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0375P001-F1	5/29/97	0952	soil	8oz glass	4°C	—
NBCL0375P002-F1		1049	↓	↓	↓	—
NBCL0375P003-F1		1100	↓	↓	↓	—
NBCL0375P004-F1		1118	↓	↓	↓	—
NBCL0375P005-F1		1140	↓	↓	↓	—
NBCL0376P001-F1		1115	water	2-1L poly		HNO <sub>3</sub> , NaOH
NBCL0376P002-F1		1145	↓	↓	↓	↓
NBCL0376P003-F1		1400	↓	↓	↓	↓
NBCL0375P010-F1		1436	soil	8oz glass	↓	—
<del>NBCL0375P013-F1</del>		<del>1448</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>—</del>

RELINQUISHED BY: SIGNATURE <u>P. C. U. Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>E/A &amp; H</u> REASON <u>shipment</u>	DATE <u>5/29</u> <u>1997</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed ex</u> SHIPMENT NO. <u>1516555876</u> SPECIAL INSTRUCTION: <u>Southwest labs</u>	COMMENTS: <u>DQO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. (403) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) P. CL Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	metals	CN			
2	X	X			DQO Level II
1	X	X			
1	X	X			
2	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0376P004-F1	5/29/97	1415	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH
NBCL0375P012-F1		1519	soil	8 oz glass		-
NBCL0375P013-F1		1534	soil	8 oz glass		-
NBCL0376P014-F1		1545	water	2-1L poly		HNO <sub>3</sub> , NaOH
NBCL0375P014-F1		1538	soil	8 oz glass		-
<del>NBCL0376P014-F1</del>		X	X	X	X	X

PCM

RELINQUISHED BY: SIGNATURE <u>P. CL Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>EIA&amp;H</u> REASON <u>shipment</u>	DATE <u>5/29/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>1516555876</u> SPECIAL INSTRUCTION: <u>Southwest 1465</u>	COMMENTS: <u>DQO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verney  
 ADDRESS Zone TELEPHONE NO. \_\_\_\_\_  
 PROJECT NAME/NUMBER 2962-08410 FAX NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Kerry Brant

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
<u>2</u>						
<u>2</u>						
<u>2</u>						
<u>2</u>						
<u>2</u>						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<u>037GP001-F1</u>	<u>5-29-97</u>	<u>11:15</u>	<u>H<sub>2</sub>O</u>	<u>40 ML</u>	<u>4</u>	<u>HCL</u>
<u>037GP002-F1</u>	<u>5-29-97</u>	<u>11:45</u>	<u>H<sub>2</sub>O</u>	<u>40 ML</u>	<u>4</u>	<u>HCL</u>
<u>037GP003-F1</u>	<u>5-29-97</u>	<u>2:00</u>	<u>H<sub>2</sub>O</u>	<u>40 ML</u>	<u>4</u>	<u>HCL</u>
<u>037GP004-F1</u>	<u>5-29-97</u>	<u>2:15</u>	<u>H<sub>2</sub>O</u>	<u>40 ML</u>	<u>4</u>	<u>HCL</u>
<u>037GP014-F1</u>	<u>5-29-97</u>	<u>3:45</u>	<u>H<sub>2</sub>O</u>	<u>40 ML</u>	<u>4</u>	<u>HCL</u>

RELINQUISHED BY: SIGNATURE <u>Kerry Brant</u> PRINTED <u>Kerry Brant</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>29 MAY 97</u> TIME <u>1630</u>	RECEIVED BY: SIGNATURE <u>John S. Vins</u> PRINTED <u>JOHN S VINS SFC</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>29 MAY 97</u> TIME <u>1630</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verway  
 ADDRESS Zone 2 TELEPHONE NO. \_\_\_\_\_  
 PROJECT NAME/NUMBER 2912 08410 FAX NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	1	2	3	4	5	6	7	8	9	10		
1												
1												
1												
1												
1												
1												
1												
1												
1												
2												

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS		
					TEMP.	CHEMICAL		1	2	3	4	5	6	7	8	9	10			
037SP001-F1	29-5-97	0951	SOIL	2 oz JAR	4	NONE	1													
037SP002-F1	29-5-97	1049	"	"	"	"	1													
037SP003-F1	29-5-97	1100	"	"	"	"	1													
037SP004-F1	29-5-97	1118	"	"	"	"	1													
037SP005-F1	29-5-97	1140	"	"	"	"	1													
037SP010-F1	29-5-97	1436	"	"	"	"	1													
037SP013-F1	29-5-97	1448	"	"	"	"	1													
037SP012-F1	29-5-97	1519	"	"	"	"	1													
037SP014-F1	29-5-97	1538	"	"	"	"	1													
037SP014-F1	29-5-97	1630	W	40 ml VOA	4	"	2													

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>29 MAY 97</u> TIME <u>1630</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B. VULFEL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>29 MAY 97</u> TIME <u>1813</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-0840  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REC 21 SWL

*AMENDED CHAIN OF CUSTODY - 6.5.97*

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEENOY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0840 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Jack Mansfield

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	1	2	3	4	5	6	7	8	9	10		
2	X	X										DDO Level 2
1	X	X										"
2	X	X										"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBC0376P015-F1	5.31.97	0850	H <sub>2</sub> O	2-1/2 Poly	4°C	HNO <sub>3</sub> , NaOH
NBC0375P017-F1	5.31.97	0845	Soil	4oz Glass	"	None
NBC0376P024-F1	5.31.97	1000	H <sub>2</sub> O	2-1/2 Poly	"	HNO <sub>3</sub> , NaOH

*Jack Mansfield*  
*6.5.97*

RELINQUISHED BY: SIGNATURE <u>Jack Mansfield</u> PRINTED <u>JACK MANSFIELD</u> COMPANY <u>ETAH</u> REASON <u>LAB</u>	DATE <u>6.3.97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>48491518142</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>DDO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
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 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 7 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER CHARLIE KEENEY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						DOO Level L

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
037SP017-F1	31-5-97	08	SOIL	202 Jar	4	None	1	X				

*John O. V. [Signature]*  
 5-31-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LOD</u>	DATE <u>31 May 97</u> TIME <u>1630</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John O. V.</u> COMPANY <u>TARGET</u> REASON <u>LMS</u>	DATE <u>5/31</u> TIME <u>97</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. To Target Lab  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER







**NAVY CLEAN**  
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1  
 CTO-TASK: 2912-08410  
 CDC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS ZONE L TELEPHONE NO. (803) 984-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1	X				Level 2
1	X				"
1	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
0370 037SP007-F1	3 JUNE 97	1544	SOIL	2 OZ JAR	4	NONE	1	X				
037SP015-F1	3 JUNE 97	1345	"	" "	"	"	1	X				
037SP016-F1	3/6/97	1425	"	" "	"	"	1	X				

*Handwritten signature and date:*  
 6.3.97

RELINQUISHED BY: SIGNATURE <u>Randy Beard</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>3 JUNE 97</u> TIME <u>1730</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Signature]</u> COMPANY <u>PARLET</u> REASON <u>LAB</u>	DATE <u>3 June 97</u> TIME <u>17:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: SHIPMENT NO. <u>HAND DELIVERED</u> SPECIAL INSTRUCTION: <u>TO TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: Z912-0840  
COC #: \_\_\_\_\_  
BFA/SO: P04 REL CT SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Varnoy  
ADDRESS Zone L TELEPHONE NO. (803) 584-0029  
PROJECT NAME/NUMBER Z912-0840 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) G. C. L. Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	metals	CN			
2	X	X			
1		X			
2	X	X			
1	X				
2	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	metals	CN				
					TEMP.	CHEMICAL							
NBCL0376P006-FI	6/4/97	0850	water	2-1L poly	4°C	HNO <sub>3</sub> , NaOH	2	X	X				
NBCL0376P007-FI	"	0915		1-1L poly		NaOH	1		X				
NBCL0376P007A-FI	"	0930		2-1L poly		HNO <sub>3</sub> , NaOH	2	X	X				
NBCL0376P007-FI	"	1320		1-1L poly		HNO <sub>3</sub>	1	X					
NBCL0376P008-FI	"	1350		2-1L poly		HNO <sub>3</sub> , NaOH	2	X	X				
NBCL0375P011-FI	"	0959	soil	8oz glass		-	1	X	X				
NBCL0375P008-FI	"	0945				-	1	X	X				
NBCL0375P007-FI	6/3/97	1544				-	1	X	X				
NBCL0375P009-FI	6/4/97	0904				-	1	X	X				
NBCL0375P006-FI	6/4/97	0830				-	1	X	X				

RELINQUISHED BY: SIGNATURE <u>G. C. L. Mason</u> PRINTED <u>Chuck Mason</u> COMPANY <u>E/A&amp;H</u> REASON <u>shipment</u>	DATE <u>6/4/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fecl 8x</u> SHIPMENT NO. <u>484915856</u> SPECIAL INSTRUCTION: <u>South West 16.55</u>	COMMENTS: <u>DO Z</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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06/04/97 15:54 TEL 7477306 ENSAFE ALLEN HOS



**NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410  
 CDC #: \_\_\_\_\_  
 BPA/SO: P04 R24 SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEENOY  
 ADDRESS Zone C TELEPHONE NO. (803) 854-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0067  
 SAMPLERS: (SIGNATURE) C. C. Mason

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
metals CN							

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS									
					TEMP.	CHEMICAL										
✓ NBCLO376P009-F1	6/4/97	1410	Water	2-1L poly	4°C	HNO <sub>3</sub> / NaOH	2	X	X							DDO Level 2
✓ NBCLO376P010-F1	↓	1430	↓	↓	↓	↓	2	X	X							"
✓ NBCLO376P011-F1	↓	1445	↓	↓	↓	↓	2	X	X							"
NBCLO375P018-F1	6/4/97	1200	Soil	8 oz glass	4°C	—	2	X	X							"
NBCLO375P019-F1	"	1428	"	"	"	—	1	X	X							"
NBCLO375P020-F1	"	1435	"	"	"	None	1	X	X							"
NBCLO375P021-F1	"	1458	"	"	"	None	1	X	X							"

*Gal [Signature]* 6/4/97

RELINQUISHED BY: SIGNATURE <u>C. C. Mason</u> PRINTED <u>Charlie Mason</u> COMPANY <u>E/A&amp;H</u> REASON <u>Shipment</u>	DATE <u>6/4</u> <u>1997</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849157850</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>DDO 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
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(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-0840

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERDY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0840 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1	X				DRS-Level L
1	X				"
1	X				"
1	X				"
1	X				"
1	X				"
1	X				"
1	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS				
					TEMP.	CHEMICAL					
037SP009-F1	6-3-97	0904	SOIL	2 OZ JAR	4	NONE	1	X			
037SP006-F1	6-4-97	0831	"	" "	"	"	1	X			
037SP008-F1	6-4-97	0940	"	" "	"	"	1	X			
037SP011-F1	6-4-97	0959	"	" "	"	"	1	X			
037SP019-F1	6-4-97	1428	"	" "	"	"	1	X			
037SP020-F1	6-4-97	1435	"	" "	"	"	1	X			
037SP031-F1	6-4-97	1458	"	" "	"	"	1	X			
037SP018-F1	6-4-97	1155	"	" "	"	"	1	X			

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/4/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JERRY VERN</u> COMPANY <u>TRACEL</u> REASON <u>LAB</u>	DATE <u>6/4/97</u> TIME <u>1602</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: to TARGET LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
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 (901) 393-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER CHARLIE VOENOV  
 ADDRESS Zone L TELEPHONE NO. (803) 834-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						DRO LEVEL 2
2						"
2						"
2						"
2						"
2						"
2						"
2						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VIALS	REMARKS
					TEMP.	CHEMICAL			
0376P006-F1	6-4-97	8:50	H <sub>2</sub> O	40 ML	4	HCL	2		DRO LEVEL 2
0376P007-F1	6-4-97	9:15	H <sub>2</sub> O	40 ML	4	HCL	2		"
0376P007A-F1	6-4-97	10:30	H <sub>2</sub> O	40 ML	4	HCL	2		"
0376P008-F1	6-4-97	1:50	H <sub>2</sub> O	40 ML	4	HCL	2		"
0376P009-F1	6-4-97	2:10	H <sub>2</sub> O	40 ML	4	HCL	2		"
0376P010-F1	6-4-97	2:30	H <sub>2</sub> O	40 ML	4	HCL	2		"
0376P011-F1	6-4-97	2:45	H <sub>2</sub> O	40 ML	4	HCL	2		"
<i>Jul Mansfield</i> 6-4-97									

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/4/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TIMOTHY VOENOV</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/4/97</u> TIME <u>1600</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Hand Delivered</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: P04 Rev 21 SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VETANDY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Jack Mayfield

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	METALS	Ca										
2	X	X										DQO LEVEL 2
2	X	X										" " "
2	X	X										" " "
1	X											" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	METALS	Ca									
					TEMP.	CHEMICAL												
NBCL0376P005-FI	6.5.97	0815	H2O	2-1 l Poly	4°	*	2	X	X									
NBCL0376P012-FI	6.5.97	0845 <sup>PM</sup>	"	"	"	"	2	X	X									
NBCL0376P013-FI	6.5.97	0934	"	"	"	"	2	X	X									
NBCL0376P024-FI	6.5.97	1123	"	"	"	"	1	X										

*Jack Mayfield*  
6.5.97

RELINQUISHED BY: <u>Jack Mayfield</u>	DATE: <u>6.5.97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>Jack Mayfield</u>	TIME: <u>1621</u>	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____
PRINTED: <u>JACK MAYFIELD</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>EIA:4</u>		COMPANY: _____		COMPANY: _____		COMPANY: _____	
REASON: <u>LAB</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: <u>FDX</u>	COMMENTS: <u>* HNO3 NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>4849151045</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>SWL</u>		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER



NAVY CLEAN ENSAFE/ALLEN&HOSHALL (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT: NAVAL BASE CHARLESTON PROJECT MANAGER: CHARLIE VEINJOY  
ADDRESS: ZONE L TELEPHONE NO.: (803)884-0029  
PROJECT NAME/NUMBER: 2912-08410 FAX NO.: (803)884-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS VOC'S	ANALYSIS REQUIRED					REMARKS
2						
2						
2						
2						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
0376P005-F1	6-5-97	0815	H2O	40 ML	4	HCL
0376P012-F1	6-5-97	0844	H2O	40 ML	4	"
0376P013-F1	6-5-97	0934	"	" "	"	"
<del>0376P025-F1</del>	<del>6-5-97</del>		<del>"</del>	<del>" "</del>	<del>"</del>	<del>"</del>
<del>0376P024-F1</del>	<del>6-5-97</del>		<del>"</del>	<del>" "</del>	<del>"</del>	<del>"</del>

*Paul Marshall*  
6-5-97

RELINQUISHED BY: SIGNATURE: <u>Randy Brand</u> PRINTED: <u>RANDY BRAND</u> COMPANY: <u>TARGET</u> REASON: <u>LAB</u>	DATE: <u>6/5/97</u> TIME: <u>1148</u>	RECEIVED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>JERRY BURST</u> COMPANY: <u>TARGET</u> REASON: <u>LAB</u>	DATE: <u>6/5/97</u> TIME: <u>1200</u>	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
--	--	--	--	---	----------------------------	---	----------------------------

METHOD OF SHIPMENT: Hand Delivered  
SHIPMENT NO.: \_\_\_\_\_  
SPECIAL INSTRUCTION: To Target Lab

COMMENTS: DIC Level 2

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) \_\_\_\_\_

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL		Metals	CN				
NBCLD376P024-F1	6/8/97	1100	H <sub>2</sub> O	1 LITER POLY	40C	*	1	X					LEVEL II DDO
NBCLC376P025-F1	"	1125	"	"	"	"	2	X	X				" " "

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. DAVIS</u> COMPANY <u>Ensafe</u> REASON _____	DATE <u>6/10/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals), NaOH (CN)</u> <u>DDO level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	---	---



NAVY CLEAN  
 ENSAFE/ALLEN & HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO 4 REL 21 SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS FONEL TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Cal				
2	X	X				DDG Level 2 " " " " " "
2	X	X				
2	X	X				
2	X	X				
1	X					
2	X	X				
2	X	X				
2	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	Cal							
					TEMP.	CHEMICAL										
- NBCLD376P026-F1	6.9.97	0925	H <sub>2</sub> O	2-1.8 Poly	4"	*	2	X	X							
- NBCLD376P027-F1	"	0948	"	"	"	"	2	X	X							
- NBCLD376P028-F1	"	1012	"	"	"	"	2	X	X							
- NBCLD376P030-F1	"	1050	"	"	"	"	2	X	X							
- NBCLD376P029-F1	"	1315	"	"	"	"	1	X								
- NBCLD376P029-F1	"	1405	"	"	"	"	1	X								
- NBCLD376P031-F1	"	1440	"	"	"	"	2	X	X							
- NBCLD376P032-F1	"	1500	"	"	"	"	2	X	X							
- NBCLD376P033-F1	"	1520	"	"	"	"	2	X	X							
- NBCLD376P033-F1	"	1540	"	"	"	"	2	X	X							

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>		SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>DAN BRADFORD</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>ENSAFE</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>SHIP TO LAB</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: FEDEX COMMENTS: \* HNO<sub>3</sub>, NaOH

SHIPMENT NO. \_\_\_\_\_

SPECIAL INSTRUCTION: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:

- DISPOSED OF
- STORED (90 DAYS MAX)
- STORED OVER 90 DAYS
- RETURNED TO CUSTOMER



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						Top Level 2
2						" "
2						" "
2						" "
2						" "
2						" "
2						" "
2						" "
2						" "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
0376P026-F1	6-9-97	7:30	H2O	40 ML	4	HCL
0376P027-F1	6-9-97	7:58	H2O	40 ML	4	HCL
0376P028-F1	6-9-97	10:12	H2O	40 ML	4	HCL
0376P030-F1	6-9-97	11:15	H2O	40 ML	4	HCL
0376P029-F1	6-9-97	2:30	H2O	40 ML	4	HCL
0376P031-F1	6-9-97	2:50	H2O	40 ML	4	HCL
0376P032-F1	6-9-97	3:00	H2O	40 ML	4	HCL
0376P033-F1	6-9-97	3:20	H2O	40 ML	4	HCL
0376P023-F1	6-9-97	3:45	H2O	40 ML	4	HCL

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>9 JUNE 97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>BUONSTEEL</u> COMPANY <u>PROPER</u> REASON <u>LAB</u>	DATE <u>9 Jun 97</u> TIME <u>1600</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAD DELIVERED TO</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TARGET MOBILE LAB.</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
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 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 EPA/SO: PC4 REL 21

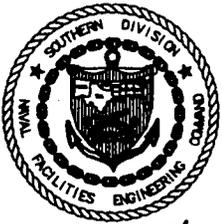
CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
1	X	X			DQO Level II
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0375PO24-F1	06-04-97	1351	soil	4oz (slush)	4°C	
NBCL0375PO22-F1		1436	soil			
NBCL0375PO23-F1		1452				
NBCL0375PO27-F1		1515				
<del>NFE CD 6-9-97</del>						

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Sample</u>	DATE <u>6/4/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx COMMENTS: DQO Level II  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-0840

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON

PROJECT MANAGER CHARLIE VERNOY

ADDRESS ZONE L

TELEPHONE NO. (803) 884-0029

PROJECT NAME/NUMBER 2912-0840

FAX NO. (803) 856-0107

SAMPLERS: (SIGNATURE) Randy Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						DQO Level 2
1						"
1						"
1						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS									
					TEMP.	CHEMICAL										
037SP024-F1	6-9-97	1351	SOIL	2 02 JAR	4	NONE	1	X								
037SP022-F1	6-9-97	1457	SOIL	2 02 JAR	4	NONE	1	X								
037SP023-F1	6-9-97	1451	SOIL	2 02 JAR	4	NONE	1	X								
037SP027-F1	6-9-97	1515	"	" "	"	"	1	X								

RELINQUISHED BY:  
 SIGNATURE Randy Beard  
 PRINTED Randy Beard  
 COMPANY TARGET  
 REASON LAB

DATE 9 JUNE 97  
 RECEIVED BY:  
 SIGNATURE [Signature]  
 PRINTED JATH S VONS REC  
 COMPANY TARGET  
 REASON LAB

DATE 9 Jun 97  
 RELINQUISHED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET MOBILE LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

06/10/97 17:27 TEL 7477306 ENSAFE ALLEN HOS →→→ CHARSAFE 02

Environmental and Safety Designs, Inc.



5724 SUMMER TREES DR. MEMPHIS, TN. 38134 #1-800-588-7962  
 CINCINNATI, OH. CHARLESTON, SC. JACKSON, TN. KNOXVILLE, TN.  
 NASHVILLE, TN. NORFOLK, VA. PENSACOLA, FL. RALEIGH, NC.

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
 BPA/SO: POLY REL Z1 SWL

PAGE 1 OF 2

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410

PROJECT MANAGER Charlie Varnoy  
 TELEPHONE NO. (803) 854-0029  
 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	METALS	CN										
2	X	X										DRO LEVEL II  FREE PRODUCT (LOW) IN SOL.
2	X	X										
2	X	X										
1		X										
1	X											
2	X	X										
2	X	X										
2	X	X										
2	X	X										

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	METALS	CN							
					TEMP.	CHEMICAL										
NBCL0376P036-F1	6/10/97	0820	H <sub>2</sub> O	1-LITER Poly	4°C	*	2	X	X							
NBCL0376P038-F1	"	0840	"	"	"	"	2	X	X							
NBCL0376P037-F1	"	0900	"	"	"	"	2	X	X							
NBCL0376P039-F1	"	0925	"	"	"	"	1		X							
"	"	0940	"	"	"	"	1	X								
NBCL0376P035-F1	"	1005	"	"	"	"	2	X	X							
NBCL0376P040-F1	"	1030	"	"	"	"	2	X	X							
NBCL0376P041-F1	"	1110	"	"	"	"	2	X	X							
NBCL0376P042-F1	"	1138	"	"	"	"	2	X	X							
NBCL0376P043-F1	"	1325	"	"	"	"	2	X	X							

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON _____	DATE <u>6/10/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HND<sub>2</sub> (METALS), NNDH (CN)</u> <u>DRO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	---	--

Environmental and Safety Designs, Inc.



5724 SUMMER TREES DR. MEMPHIS, TN 38134 #1-800-588-7962  
 CINCINNATI, OH, CHARLESTON, SC, JACKSON, TN, KNOXVILLE, TN  
 NASHVILLE, TN, NORFOLK, VA, PENSACOLA, FL, RALEIGH, NC.

CHAIN OF CUSTODY RECORD

PAGE 2<sup>nd</sup> OF 2<sup>nd</sup>

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2412-03410

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 854-0029  
 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	CN					
1	X	X					D&D LEVEL II
1	X	X					" " "
2	X	X					" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN									
					TEMP.	CHEMICAL												
NBCL037SP028-FI	6/10/97	1100	SOIL	4oz GLASS	4°C	-	1	X	X									
NBCL699SP002-FI	"	1355	"	"	"	-	1	X	X									
<del>NBCL6374-D3</del>																		
NBCL6996P004-FI	"	1545	H <sub>2</sub> O	1-LITER Poly	4°C	HNO <sub>3</sub> (Met) NaOH (CN)	2	X	X									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDavis</u> COMPANY <u>Ensafe</u> REASON _____	DATE <u>6/10/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>fed. Ex.</u>	COMMENTS: <u>D&amp;D level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	1	2	3	4	5	
2						
2						
2						
2						
2						
2						
2						
2						
2						
2						
2						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOLUME	REMARKS
					TEMP.	CHEMICAL			
037GPO36-F1	6-10-97	8:17	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO38-F1	6-10-97	8:40	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO37-F1	6-10-97	9:05	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO39-F1	6-10-97	9:20	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO35-F1	6-10-97	10:15	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO40-F1	6-10-97	10:50	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO41-F1	6-10-97	11:20	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO42-F1	6-10-97	11:45	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO43-F1	6-10-97	1:35	H <sub>2</sub> O	40 mL	4	HCL	2		
037GPO04-F1	6-10-97	3:52	H <sub>2</sub> O	40 mL	4	HCL	2		

RELINQUISHED BY: SIGNATURE <u>Wendell Lewis</u> PRINTED <u>Wendell Lewis</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-10-97</u> TIME <u>4:20</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B. VENOY</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/10</u> TIME <u>17</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
--	---	--	--	---	--------------	---	--------------

METHOD OF SHIPMENT: HAND DELIVERED TO TARGET COMMENTS: SAMPLE 037GPO40-F1 HAD Floating FREE product  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-0840  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERANDY  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-0840 FAX NO. (803) 856-6107  
 SAMPLERS: (SIGNATURE) Kathy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						DDO LEVEL 2
1						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
0375P028-F1	6-10-97	1100	SOIL	2 OZ JAR	4	NONE	1	X						
6995P002-F1	6-10-97	1355	"	" "	"	"	1	X						" "

RELINQUISHED BY: SIGNATURE <u>Kathy Brand</u> PRINTED <u>KATHY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/10/97</u> TIME <u>1620</u>	RECEIVED BY: SIGNATURE <u>JHB</u> PRINTED _____ COMPANY _____ REASON _____	DATE <u>6/10/97</u> TIME <u>1620</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT LAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET MOBILE LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN & HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernou  
 TELEPHONE NO. (403) 884-0029  
 FAX. NO. (403) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
1	X	X			DDO Level II
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCLO37SP029-FI	6-11-97	0823	Soil	4oz (glass)	4°C	
NBCL699SP001-FI		0855				
NBCL037SP031-FI		0947				
NBCL037SP033-FI		1025				
NBCL037SP030-FI		1400				
NBCL699SP006-FI		1445				
NBCL699SP007-FI		1515				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>L. Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>6/11/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4979151780</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DDO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-------------------------------	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) CAW 7/7/97



NAVY CLEAN  
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(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-6107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						DRO LEVEL 2
1						
1						
1						
1						
1						
1						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
037SP029-F1	6-11-97	0823	SOIL	2 oz Jar	4	NONE	1					
699SP001-F1	6-11-97	0855	SOIL	" "	"	"	1					
037SP031-F1	6-11-97	0947	"	" "	"	"	1					
037SP035-F1	6-11-97	1025	"	" "	"	"	1					
037SP030-F1	6-11-97	1400	"	" "	"	"	1					
699SP006-F1	6-11-97	1445	"	" "	"	"	1					
699SP007-F1	6-11-97	1515	"	" "	"	"	1					
Wendell C. Reams 6-11-97												

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/11/97</u> TIME <u>2:45</u>	RECEIVED BY: SIGNATURE <u>J. B. Umm</u> PRINTED <u>J. B. Umm</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/11/97</u> TIME <u>3:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: TO TARGET MOBILE LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



5724 SUMMER TREES DR. MEMPHIS, TN 38134 #1-800-588-7962  
 CINCINNATI, OH. CHARLESTON, SC. JACKSON, TN. KNOXVILLE, TN.  
 NASHVILLE, TN. NORFOLK, VA. PENSACOLA, FL. RALEIGH, NC.

CHAIN OF CUSTODY RECORD

C/O-TASK: 2912-08410  
 BPA/SO: POT REL 21 SWL

PAGE 2 OF 2

CLIENT NAVA BASE (CHARLESTON) PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS 2912-08410-ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	C/N				
1	X					DRO LEVEL II
2	X	X				" " "
2	X	X				" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL6996P011-F1	6/11/97	1439	H <sub>2</sub> O	1-Liter Poly	4°C	X
NBCL6996P014-F1	"	1500	"	"	"	"
NBCL6996P015-F1	"	1520	"	"	"	"

[Signature]  
 6-11-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u>	DATE <u>6-11-97</u>	RECEIVED BY: SIGNATURE _____	DATE _____
PRINTED <u>Drew Behrford</u>	TIME _____	PRINTED _____	TIME _____
COMPANY <u>En Safe</u>	REASON <u>LAB</u>	COMPANY _____	REASON _____

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>* H<sub>2</sub>O (Metals); NaCl (C/N)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>4349151786</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: _____		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

OK 7/7/97





5724 SUMMER TREES DR. MEMPHIS, TN 38134 #1-800-588-7962  
 CINCINNATI, OH. CHARLESTON, SC. JACKSON, TN. KNOXVILLE, TN.  
 NASHVILLE, TN. NORFOLK, VA. PENSACOLA, FL. RALEIGH, NC.

CHAIN OF CUSTODY RECORD

CTD-TASK 2912-02...  
 BPA/SD: POY REL 21 SWL

PAGE 1 OF 2

CLIENT NAVAL BASE CHARLESTON  
 ADDRESS ZONE L  
 PROJECT NAME/NUMBER Don Raff

PROJECT MANAGER CHARLIE VERNON  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Don Raff

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS
	Metals	CN									

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN	ANALYSIS REQUIRED										REMARKS		
					TEMP.	CHEMICAL																
NBCL0376P045-F1	6/11/97	0825	H <sub>2</sub> O	1-LITER Poly	40C	*	2	X	X													DGC LEVEL II
NBCL6994P005-F1	"	0840	"	" " "	"	"	2	X	X													" " "
NBCL6994P006-F1	"	0900	"	" " "	"	"	2	X	X													" " "
NBCL6996P003-F1	"	0920	"	" " "	"	"	2	X	X													" " "
NBCL6996P001-F1	"	0942	"	" " "	"	"	2	X	X													" " "
NBCL6996P002-F1	"	1000	"	" " "	"	"	2	X	X													" " "
NBCL6996P007-F1	"	1100	"	" " "	"	"	2	X	X													" " "
NBCL6996P016-F1	"	1335	"	" " "	"	"	2	X	X													" " "
NBCL0376P047-F1	"	1400	"	" " "	"	"	2	X	X													" " "
NBCL6996P011-F1	"	1420	"	" " "	"	"	1	X	X													" " "

RELINQUISHED BY: SIGNATURE <u>Don Raff</u> PRINTED <u>DON BRADFORD</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE <u>6-11-97</u> TIME <u>1625</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO. <u>48491517810</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals), NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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Ofs 7/7/97

08/11/97 10:20 IEL 1411300 ENSAFE ALLEN HUD





**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL Z1 SWL

CLIENT NAVAIR BASE CHARLESTON  
 ADDRESS ZONE L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER CHARLIE VERNOY  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	CN					
2	X	X					DQO LEVEL II
2	X	X					" " "
2	X	X					" " "
2	X	X					" " "
2	X	X					" " "
2	X	X					" " "
1	X						" " "
1	X						" " "
1	X						" " "
1	X						" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN									
					TEMP.	CHEMICAL												
NBCL6996P013-F1	6/12/97	0815	H <sub>2</sub> O	1-Liter Poly	4°C	*	2	X	X									
NBCL0376P048-F1	"	0850	"	" " "	"	"	2	X	X									
NBCL6996P002-F1	"	0915	"	" " "	"	"	2	X	X									
NBCL6996P010-F1	"	1005	"	" " "	"	"	2	X	X									
NBCL0376P049-F1	"	1035	"	" " "	"	"	2	X	X									
NBCL0376P044-F1	"	1055	"	" " "	"	"	2	X	X									
NBCL0376P034-F1	"	1121	"	" " "	"	"	1	X										
"	"	1125	"	" " "	"	"	1	X										
NBCL6996P012-F1	"	1140	"	" " "	"	"	1	X										
"	"	1412	"	" " "	"	"	1	X										

RELINQUISHED BY: <u>[Signature]</u> SIGNATURE PRINTED <u>Don Bedford</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/12/97</u> TIME <u>1420</u>	RECEIVED BY: _____ SIGNATURE PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: _____ SIGNATURE PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: _____ SIGNATURE PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849147285</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals), NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	NETALS	CN				
2	X	X				DOO LEVEL II
2	X	X				" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	NETALS	CN	REMARKS
					TEMP.	CHEMICAL				
NBCL0376POS2-F1	6/12/97	1505	H <sub>2</sub> O	1-LITER Poly	4°C	*	2	X	X	DOO LEVEL II
NBCL0376POS1-F1	"	1525	"	" " "	"	"	2	X	X	" " "

[Signature]  
6-12-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Don Balfanz</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6-12-97</u> TIME <u>170</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4949149385</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals), NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: 212-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 REL 21 SWL

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Vernich  
 ADDRESS: Zone L TELEPHONE NO.: (803) 884-0029  
 PROJECT NAME/NUMBER: 212-08410 FAX NO.: (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
					D&D Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN				
					TEMP.	CHEMICAL							
- NBCL037SP032-F1	6/12/97	0822	Soil	4oz (glass)	4C	-	1	X	X				
- NBCL699SP003-F1	6/12/97	0915	Soil				1	X	X				
- NBCL699SP004-F1		0936					1	X	X				
- NBCL699SP005-F1		1000					1	X	X				
- NBCL037SP025-F1		1047					1	X	X				
- NBCL037SP026-F1		1057					1	X	X				
- NBCL037SP034-F1		1327					1	X	X				
- NBCL037SP037-F1		1339					1	X	X				
- NBCL037SP038-F1		1350					1	X	X				
- NBCL037SP034-F1		1417					1	X	X				

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>C. Davis</u> COMPANY: <u>EnSafe</u> REASON: <u>Lab</u>	DATE: <u>6/12/97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO.: <u>4849149885</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>D&amp;D Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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04  
ENSAFE ALLEN HOS  
06/13/97 17:54 TEL 7477306

PAGE 1 OF 2  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_



**NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-984-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-956-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
<u>VDA</u>						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS											
					TEMP.	CHEMICAL												
<u>0375P032-F1</u>	<u>6-12-97</u>	<u>0822</u>	<u>SOIL</u>	<u>2 OZ JAR</u>	<u>4</u>	<u>NONE</u>	<u>1</u>	<u>X</u>										<u>DAO LEVEL 2</u>
<u>699SP003-F1</u>	<u>6-12-97</u>	<u>0915</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>
<u>699SP004-F1</u>	<u>6-12-97</u>	<u>0936</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>
<u>699SP005-F1</u>	<u>6-12-97</u>	<u>1000</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>
<u>0375P025-F1</u>	<u>6-12-97</u>	<u>1044</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>
<u>0375P026-F1</u>	<u>6-12-97</u>	<u>1057</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>										<u>"</u>
<u>0375P036-F1</u>	<u>6-12-97</u>	<u>1327</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>
<u>0375P037-F1</u>	<u>6-12-97</u>	<u>1337</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>
<u>0375P038-F1</u>	<u>6-12-97</u>	<u>1350</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>
<u>0375P042-F1</u>	<u>6-12-97</u>	<u>1406</u>	<u>"</u>	<u>" "</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>										<u>"</u>

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/12/97</u> TIME <u>3:55</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUNN</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/12/97</u> TIME <u>3:17</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>Mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTD-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS Zone L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED							REMARKS
1	X							DRO LEVEL 2
1	X							"
1	X							TRIP BLANK

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Vials								
					TEMP.	CHEMICAL										
0375P041-F1	6-12-97	1417	SOIL	2 62 Jar	4	NONE	1	X								
0375P039-F1	6-12-97	1505	"	" "	"	"	1	X								
037TP039-F1	6-12-97	1505	H2O	40 mL	"	HCL	1	X								

[Signature]  
6-12-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>KANDY BOND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/12/97</u> TIME <u>1555</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>DAN B VONST</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/12/97</u> TIME <u>1545</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCCRI

06/13/97 16:41 TEL 7477306 ENSAFE ALLEN HOS →→→ CHARSAFE 03



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_  
 BRN/SC: PAIRL 21 SWL

CLIENT CHARLESTON NAVAL BASE PROJECT MANAGER CHARLIE VEENY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL		Metals	CN				
- NBCL699GPO09-F1	6/13/97	1145	H70	1-LITER Poly	4°C	*	1		X				DDO LEVEL II
II	"	1326	"	" " "	"	"	1	X					" " "
- NBCL0374PO50-F1	"	1355	"	" " "	"	"	2	X	X				" " "
<del>[Signature] 6-13-97</del>													

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>D.W. BEASLEY</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx  
 SHIPMENT NO. 4809149814  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: OK HNCy (Metals), NCOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES VERNON  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Wendell Rauls

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
X 6996P009-F1	6-13-97	1:50	H <sub>2</sub> O	40 ml	4	HCL	2	X	DRO LEVEL 2
X 6376P050-F1	6-13-97	2:10	H <sub>2</sub> O	40 ml	4	HCL	2	X	"
<i>Wendell Rauls</i> <i>6-13-97</i>									

RELINQUISHED BY: SIGNATURE <u>Wendell Rauls</u> PRINTED <u>WENDELL RAULS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-13-97</u> TIME <u>1:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>DAVID BUCKLER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/13/97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Hand DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO: TARGET</u> <u>mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	-----------------------------------	---

06/13/97 16:41 TEL 7477306 ENSAFE ALLEN HOS →→→ CHARSAFE 04



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-03410  
CDC #: \_\_\_\_\_  
BFA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. (803) 384-0029  
PROJECT NAME/NUMBER 2912-03410 FAX NO. (803) 356-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	C/V				
1	X	X				DQD Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
NBCLO375PO40-F1	6-13-97	1135	3:1	4oz(Glass)	4C	-				

*[Handwritten signature]*  
6-12-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/13/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149874</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQD Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-0841D  
 COC #: \_\_\_\_\_  
 BPA/SO: P64 REL ZL SWL

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE VEENY  
 ADDRESS ZONE 1 TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-0841D FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Don Bf

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	1	2	3	4	
<u>Metals</u>					<u>All Samples Level II DGD</u>
<u>CN</u>					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	1	2	3	4
					TEMP.	CHEMICAL					
<u>NBCL0374POS6-F1</u>	<u>6/16/97</u>	<u>0925</u>	<u>H<sub>2</sub>O</u>	<u>1-LITER Poly</u>	<u>PC</u>	<u>*</u>	<u>2</u>	<u>X</u>	<u>X</u>		
<u>NBCL0374POS7-F1</u>	<u>"</u>	<u>0940</u>	<u>"</u>	<u>" " "</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>	<u>X</u>		
<u>NBCL0374POS5-F1</u>	<u>"</u>	<u>1000</u>	<u>"</u>	<u>" " "</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>	<u>X</u>		
<u>NBCL0374POS4-F1</u>	<u>"</u>	<u>1012</u>	<u>"</u>	<u>" " "</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>	<u>X</u>		
<u>NBCL0374POS3-F1</u>	<u>"</u>	<u>1030</u>	<u>"</u>	<u>" " "</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>	<u>X</u>		
<u>NBCL6996PO17-F1</u>	<u>"</u>	<u>1340</u>	<u>"</u>	<u>" " "</u>	<u>"</u>	<u>"</u>	<u>2</u>	<u>X</u>	<u>X</u>		

Don Bf  
6-16-97

RELINQUISHED BY: <u>Don Bf</u>	DATE <u>6/16</u>	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>Don Bf</u>		SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>Don Bf</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>	TIME <u>1600</u>	COMPANY _____	TIME	COMPANY _____	TIME	COMPANY _____	TIME
REASON <u>Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fedex</u>	COMMENTS: <u>All Samples DGD Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>4849149863</u>	<u>* HNO<sub>3</sub> (Metals), NaOH (CN)</u>	<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: _____		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

JM



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

# CHAIN OF CUSTODY RECORD

PAGE 1 OF 3

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES VERNON  
ADDRESS ZONE C TELEPHONE NO. 803 984-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803 956-0107  
SAMPLERS: (SIGNATURE) Wendell Rando

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1 X						DQO LEVEL 2
1 X						"
1 X						"
1 X						"
1 X						"
1 X						"
1 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
0376P056-F1	6-16-97	9:40	H2O	40ml	4	HCL	1 X		DQO LEVEL 2
0376P057-F1	6-16-97	9:50	H2O	40ml	4	HCL	1 X		"
0376P058-F1	6-16-97	10:05	H2O	40ml	21	HCL	1 X		"
6376P054-F1	6-16-97	10:20	H2O	40ml	4	HCL	1 X		"
0376P053-F1	6-16-97	10:40	H2O	40ml	4	HCL	1 X		"
6996P017-F1	6-16-97	1:45	H2O	40ml	4	HCL	1 X		"
6997P017-F1	6-16-97	2:00	H2O	40ml	4	HCL	1 X		"

Wendell Rando  
6-16-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rando</u> PRINTED <u>Wendell Rando</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-16-97</u> TIME <u>2:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JAN BUONICCONTI</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-16-97</u> TIME <u>2:05</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO: TARGET  
Mobile LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CN				
1	X	X				DQO Level II ↓
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN	REMARKS
					TEMP.	CHEMICAL				
NBCL037SP04-F1	6-16-97	0841	Soil	4oz (glass)	4°C	—	1	X	X	DQO Level II ↓
NBCL037SP043-F1		0857					1	X	X	
NBCL037SP042-F1		0910					1	X	X	
NBCL699SP009-F1		0943					1	X	X	
NBCL037SP041-F1		0955					1	X	X	
NBCL699SP008-F1		1011					1	X	X	

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE <u>6/16/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149863</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO level II</u> _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 393-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS 2912-08410 TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER ZONE L FAX NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1					DQO LEVEL 2
1					"
1					"
1					"
1					"
1					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
037SP044-F1	6-16-97	0841	SOIL	2 OZ JAR	4	H	1	X			
037SP043-F1	6-16-97	0857	"	" "	"	"	1	X			
037SP042-F1	6-16-97	0910	"	" "	"	"	1	X			
699SP009-F1	6-16-97	0943	"	" "	"	"	1	X			
037SP041-F1	6-16-97	0955	"	" "	"	"	1	X			
699SP008-F1	6-16-97	1011	"	" "	"	"	1	X			

*Wendell Rando*  
6-16-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>6/16/97</u> TIME <u>3:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JANIS VORST</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>6/16/97</u> TIME <u>3:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To: TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
 ENSAFE/ALLEN & HOSHAL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT: Naval Base Charleston  
 ADDRESS: Zone L  
 PROJECT NAME/NUMBER: 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER: Charlie Verroy  
 TELEPHONE NO.: (803) 884-0029  
 FAX NO.: (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
1	X	X			DDO Level II
1	X	X			
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL6995P019-F1	6-29-97	1120	Soil	4oz (glass)	4°C	—
NBCL6995P020-F1		1251				
NBCL6995P017-F1		1305				
NBCL6995P018-F1		1327				
NBCL6995P016-F1		1337				

[Signature]  
 6-29-97

RELINQUISHED BY: SIGNATURE: <u>[Signature]</u> PRINTED: <u>C. Dav's</u> COMPANY: <u>EnSafe</u> REASON: <u>Lab</u>	DATE: <u>6/30/97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO.: <u>4849149760</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DDO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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08/20/97 11:11 JEL 141000 ENSAFE ALLEN BUS 777 VANDARF 0810



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 5 OF 5

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNBY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VDA						DQO LEVEL 2
						"
						"
						"
						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION								
					TEMP.	CHEMICAL							
X 699SP019-F1	6-29-97	1120	SOL	2 02 IAL	4	NONE	1	X					
X 699SP020-F1	6-29-97	1251	"	" "	"	"	1	X					
X 699SP017-F1	6-29-97	1305	"	" "	"	"	1	X					
X 699SP018-F1	6-29-97	1327	"	" "	"	"	1	X					
X 699SP016-F1	6-29-97	1337	"	" "	"	"	1	X					

*Wendell Parks*  
6-29-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/29/97</u> TIME _____	RECEIVED BY: SIGNATURE <u>John B. Vanspel</u> PRINTED <u>JOHN B VANSPEL</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/29/97</u> TIME <u>2:40</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To TARGET  
Mobile LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REZ 21562

CLIENT Naval Base Charleston

PROJECT MANAGER Charlie Verney

ADDRESS Zone L

TELEPHONE NO. 803-883-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. 803-856-0107

SAMPLERS: (SIGNATURE) John C. Clary

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
✓ NBCL 66996P 25F1	6/29/97	1055	W	Poly/1 Liter	4°C	*	2	X	X			DDO Level II
✓ NBCL 66996P 26F1	6/29/97	1230	↓	↓	↓	↓	1		X			
✓ NBCL 66996P 26F1	6/20/97	0825	↓	↓	↓	↓	1	X				
✓ NBCL 66996P 23F1	6/29/97	1410	↓	↓	↓	↓	2	X	X			
<del>John C. Clary 6/29/97</del>												

RELINQUISHED BY: SIGNATURE <u>John C. Clary</u> PRINTED <u>John C. Clary</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/30/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149760</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>*Metals preserved w/ HNO<sub>3</sub></u> <u>Cu preserved w/ NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	--	---

06/30/97 17:03 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE 03



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 5

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						DDO LEVEL 2
2						"
2						"
1						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS								
					TEMP.	CHEMICAL									
6996P025-F1	6-29-97	11:00	H <sub>2</sub> O	40ml	4	HCL	2	X							
6996P026-F1	6-29-97	2:00	H <sub>2</sub> O	40ml	4	HCL	2	X							
6996P023-F1	6-29-97	2:20	H <sub>2</sub> O	40ml	4	HCL	2	X							
699TP023-F1	6-29-97	2:30	H <sub>2</sub> O	40ml	4	HCL	1	X							

*Wendell Rawls*  
 6-29-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAS</u>	DATE <u>6-29-97</u> TIME <u>2:45</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JONAS VORSTEL</u> COMPANY <u>TARGET</u> REASON <u>LAS</u>	DATE <u>6/29/97</u> TIME <u>2:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To: TARGET mobile LAB</u>	_____	



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 7 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: P04-REL-21-SWL

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Verroy  
 ADDRESS: Zone L TELEPHONE NO.: 803-893-0629  
 PROJECT NAME/NUMBER: 2912-08410 FAX. NO.: 803-556-0107  
 SAMPLERS: (SIGNATURE): J Cooy

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Cd				
1	X					DQO Level II
1	X					
2	X	X				
2	X	X				
2	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
✓ 6996P021-F1	6/30/97	1055	W	Poly/1 liter	4°C	*	1	X	
✓ 5796P021-F1	6/30/97	1300					1	X	
✓ 0376P059-F1		1330					2	X	X
✓ 0376P060-F1		1415					2	X	X
✓ 0376P058-F1		1437					2	X	X
0376P079-F1		455	V				2	X	X

*John Cooy* 6/30/97

RELINQUISHED BY: SIGNATURE: <u>John Cooy</u> PRINTED: <u>John C Cooy</u> COMPANY: <u>EnSafe</u> REASON: <u>Lab</u>	DATE: <u>6/30/97</u> TIME: <u>1700</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO.: <u>4849149760</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* Metals preserved in HNO3</u> <u>* Cd " " " NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCOCRJ

06/30/97 17:03 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE 07



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) C Davis

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	PCU				
1	X	X				DQO Level II
1	X	X				
1	X	X				
1	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	PCU	REMARKS
					TEMP.	CHEMICAL				
NBCL699SP014-F1	6-30-97	0955	SO.1	4oz (glass)	4°C	—	1	X	X	DQO Level II
NBCL699SP012-F1		1008					1	X	X	
NBCL699SP013-F1		1015					1	X	X	
NBCL699SP011-F1		1045					1	X	X	
NBCL699SP010-F1		1450					1	X	X	

*Charlie Vernoy*  
 6-30-97

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>C Davis</u>	<u>6/30/97</u>	SIGNATURE _____	_____	SIGNATURE _____	_____	SIGNATURE _____	_____
PRINTED <u>C Davis</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Lab</u>	<u>1700</u>	REASON _____	_____	REASON _____	_____	REASON _____	_____

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>DQO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849149700</u>	_____	
SPECIAL INSTRUCTION: _____	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCDRI

08/30/97 11:03 TEL 141/306

ENSAFE ALLEN HUS --- CHARSAFE

0808



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 4  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNSON  
 ADDRESS ZONE L TELEPHONE NO. 803-984-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-956-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
VOAK					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	X													
					TEMP.	CHEMICAL															
X 6996P026-F1	6-30-97	8:45	H <sub>2</sub> O	40 mL	4	HCL	2	X													DGO LEVEL 2
X 6996P021-F1	6-30-97	11:10	H <sub>2</sub> O	40 mL	4	HCL	2	X													"
X 6996P020-F1	6-30-97	11:30	H <sub>2</sub> O	40 mL	4	HCL	2	X													"
X 0376P059-F1	6-30-97	11:20	H <sub>2</sub> O	40 mL	4	HCL	2	X													"
X 6996P027-F1	6-30-97	1:45	H <sub>2</sub> O	40 mL	4	HCL	2	X													"
X 0376P058-F1	6-30-97	2:20	H <sub>2</sub> O	40 mL	4	HCL	2	X													"
X 0376P058-F1	6-30-97	2:40	H <sub>2</sub> O	40 mL	4	HCL	2	X													"
X 0376P058-F1	6-30-97	2:55	H <sub>2</sub> O	40 mL	4	HCL	2	X													"

*Wendell Rawls*  
 6-30-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-30-97</u> TIME <u>5:30</u>	RECEIVED BY: SIGNATURE <u>John Sch...</u> PRINTED <u>JOHN SCH...</u> COMPANY <u>DRLOET</u> REASON <u>LMO</u>	DATE <u>6-30-97</u> TIME <u>3:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Garry Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1					DDO LEVEL 2
1					"
1					"
1					"
1					<del>No sample</del>
1					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
699SP014-F1	6-30-97	0955	SOIL	2 02 J2	4	NONE	1					
699SP012-F1	6-30-97	1008	"	" "	"	"	1					
699SP013-F1	6-30-97	1015	"	" "	"	"	1					
699SP011-F1	6-30-97	1045	"	" "	"	"	1					
<del>699SP010-F1</del>	<del>6-30-97</del>		<del>"</del>	<del>" "</del>	<del>"</del>	<del>"</del>	<del>1</del>					<del>No sample</del>
699SP016-F1	6-30-97	1450	"	" "	"	"	1					

*Wm delk Rantz*  
 6-30-97

RELINQUISHED BY: SIGNATURE <u>Garry Brand</u> PRINTED <u>Garry Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/30/97</u> TIME <u>3:35</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TARGET</u> COMPANY <u>LAB</u> REASON <u>LAB</u>	DATE <u>6/30/97</u> TIME <u>3:36</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. _____	_____	<input type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>TO TARGET</u>	_____	<input type="checkbox"/> STORED (90 DAYS MAX)
<u>MOBILE LAB</u>	_____	<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: POY 2021 SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLE VERNOY  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-007  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
✓ NBCL 0376P061-FI	7/1/97	1040	W	Poly/12	4pc	*	2	X	X			DDO L Z
✓ NBCL 06796P024-FI	7/1/97	1105										"
✓ NBCL 0376P062-FI	7/1/97	1135										"
✓ NBCL 0376P065-FI	7-1-97	1502	W	"	"	*	2	X	X			"
✓ NBCL 0376P066-H	"	1520	W	"	"	*	2	X	X			"

[Signature] 7-1-97

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>7/1/97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>	SIGNATURE: _____	SIGNATURE: _____	SIGNATURE: _____	SIGNATURE: _____	SIGNATURE: _____	SIGNATURE: _____	SIGNATURE: _____
PRINTED: <u>JACK MARRAS</u>	PRINTED: _____	PRINTED: _____	PRINTED: _____	PRINTED: _____	PRINTED: _____	PRINTED: _____	PRINTED: _____
COMPANY: <u>Army/S&amp;S</u>	COMPANY: _____	COMPANY: _____	COMPANY: _____	COMPANY: _____	COMPANY: _____	COMPANY: _____	COMPANY: _____
REASON: <u>Army/S&amp;S</u>	REASON: _____	REASON: _____	REASON: _____	REASON: _____	REASON: _____	REASON: _____	REASON: _____

METHOD OF SHIPMENT: POY BY  
 SHIPMENT NO. 4849149756  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 COMMENTS: \* Metals preserved w/ HNO<sub>3</sub>  
Cu preserved w/ NaOH  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Pauls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DOUBLE 2
2 X						"
2 X						"
2 X						"
2 X						"
2 X						"
1 X						"
1 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
699GP019-F1	7-1-97	10:00	H <sub>2</sub> O	40ml	4	HCL	2	X				
037GP061-F1	7-1-97	10:50	H <sub>2</sub> O	40ml	4	HCL	2	X				
699GP024-F1	7-1-97	11:05	H <sub>2</sub> O	40ml	4	HCL	2	X				
037GP062-F1	7-1-97	11:20	H <sub>2</sub> O	40ml	4	HCL	2	X				
037GP065-F1	7-1-97	3:16	H <sub>2</sub> O	40ml	4	HCL	2	X				
037GP066-F1	7-1-97	3:30	H <sub>2</sub> O	40ml	4	HCL	2	X				
037GP066-F1	7-1-97	3:35	H <sub>2</sub> O	40ml	4	HCL	1	X				
037GP066-F1	7-1-97	3:40	H <sub>2</sub> O	40ml	4	HCL	1	X				

*Wendell Pauls*

RELINQUISHED BY: SIGNATURE <u>Wendell Pauls</u> PRINTED <u>Wendell Pauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7-1-97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>John B. Vernal</u> PRINTED <u>John B. Vernal</u> COMPANY <u>TALCOX</u> REASON <u>LAB</u>	DATE <u>7-1-97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--	--	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>10 TARGET</u> <u>mobile LAB</u>	_____	



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone 1  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CAV			
1	X	X			DDO Level II
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0375P045-F1	7-1-97	1007	oil	4 oz (glass)	4°C	-
NBCL0375P046-F1		1045				
NBCL0375P047-F1		1106				
NBCL0375P048-F1		1420				

[Signature]  
 7-1-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>En Safe</u> COMPANY <u>Lab</u> REASON _____	DATE <u>7/1/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed-ex  
 SHIPMENT NO. 4849149756  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: DDO Level II

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 4 OF 5

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
VUA					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION										
					TEMP.	CHEMICAL									
X 037SP045-F1	7-1-97	1007	SOIL	2 OZ JAR	4	NONE	1								DGD LEVEL 2
Y 037SP046-F1	7-1-97	1045	SOIL	2 OZ Jar	4	NONE	1								"
X 037SP047-F1	7-1-97	1106	"	" "	"	"	1								"
037SP048-F1	7-1-97	1430	"	" "	"	"	1								"
<p><i>Wendell Banks</i> 7-1-97</p>															

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>7-1-97</u> TIME <u>3:55</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>STEVEN BLONSTEL</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>7-1-97</u> TIME <u>3:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	--	--	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 CCC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Vernoy  
 ADDRESS: Zone L TELEPHONE NO.: (803) 884-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX. NO.: (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

ANALYSIS REQUIRED		REMARKS
NO. OF CO.	Metals	
		DQO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CO.	Metals	REMARKS
					TEMP.	CHEMICAL			
<u>WBL699GP019-F1</u>	<u>7-29-97</u>	<u>1350</u>	<u>H2O</u>	<u>1 Liter (Pdy)</u>	<u>4°C</u>	<u>*</u>	<u>2</u>	<u>XX</u>	DQO Level II
<u>NBL699GP027-F1</u>	<u>1</u>	<u>1340</u>	<u>1</u>	<u>1</u>	<u>1</u>		<u>2</u>	<u>XX</u>	
<del>[Signature] 7-7-97</del>									

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE: <u>[Signature]</u>	<u>7/7/97</u>	SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>C. Davis</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>EnSafe</u>	TIME: <u>1700</u>	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <u>Lab</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: <u>FedEx</u>	COMMENTS: <u>* HNO3, NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO.: <u>4849149734</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: _____		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

01/03

CHARSAFE

07/15/97 16:31 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN & HOSHAL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 212-08410  
COC #: \_\_\_\_\_  
BPA/ISO: POL REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 212-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vennoy  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (ANAL)	TOX (NaOH)			
1	X				D.O. Chevrolet (Limited Volume)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NBCL6996P028-F1	7/15/97	1355	H <sub>2</sub> O	1 Liter (Poly)	4°C	*	1	X	D.O. Chevrolet (Limited Volume)
<del>7/15/97</del>									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>7/15/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149631</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* H<sub>2</sub>O<sub>2</sub> (Metals), NaOH (CO)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	---	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLMCDR1



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston

PROJECT MANAGER Charles Vernoy

ADDRESS Zone L

TELEPHONE NO. (803) 854-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. (803) 856-0107

SAMPLERS: (SIGNATURE) [Signature]

ANALYSIS REQUIRED		REMARKS
NO. OF CONTAINERS	ANALYSIS REQUIRED	
1	Metals (HAP) CN(CN)OH	DDO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NA16996P02-E1	7-21-92	0920	FLW	Liter (Poly)	4°C	*	1	X	DDO Level II
<del>Cancelled 7-21-92</del>									

RELINQUISHED BY: _____ SIGNATURE <u>[Signature]</u> PRINTED <u>Charles Vernoy</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7-21-92</u> TIME <u>1700</u>	RECEIVED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4649149583</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* H<sub>2</sub>O<sub>2</sub> (Metals); NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCOCR1

01/21/91 10:21 TEL 141/300 ENSAFE ALLEN HOS -> CHARDATE 08/02/03



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**CHAIN OF CUSTODY RECORD**

PAGE 4 OF 4

CTO-TASK: 2912-08416  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2 X					DOO LEVEL 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
C 6996828-F1	7-21-97	9:30	H <sub>2</sub> O	40 ml	4	HCL	2 X		DOO LEVEL 2

*Wendell Rawls*  
 7-21-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/21/97</u> TIME <u>4:50</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JERRY BURNS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>7/21/97</u> TIME <u>4:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO: TARGET</u> <u>Mobile LAB</u>	_____	

Amended 8/13/97



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**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P.C. 4 Rel 21 SWL

CLIENT NAVAL Base Charleston PROJECT MANAGER Charlie Veinoy  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Neg. [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
1	X	X			DQ 0 Level 2
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN							
					TEMP.	CHEMICAL										
NBCL 699SP015FI	8-10-97	0900	soil	4oz glass	4°C	None	1	X	X							
NBCL 699SP016FI		0935					1	X	X							
NBCL 699SP017FI		1005					1	X	X							
NBCL 699SP018FI		1029					1	X	X							
NBCL 699SP019FI		1048					1	X	X							
NBCL 699SP020FI		1110					1	X	X							
NBCL 699SP021FI		1132					1	X	X							

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Greg Gudrum</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-10-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149351</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQ 0 Level 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

Amended 8/13/97  
**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brans

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
1	X						DQO LK 2 ↓
1	X						
1	X						
1	X						
1	X						
1	X						
1	X						
1	X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
699SP015-F1	8-10-97	0900	SOIL	20Z JAR	4	NONE	1
699SP016-F1	8-10-97	0935	"	" "	"	"	1
699SP017-F1	8-10-97	0958	"	" "	"	"	1
699SP018-F1	8-10-97	1029	"	" "	"	"	1
699SP019-F1	8-10-97	1048	"	" "	"	"	1
699SP020-F1	8-10-97	1110	"	" "	"	"	1
699SP021-F1	8-10-97	1132	"	" "	"	"	1
699TP021-F1	8-10-97	1200	H <sub>2</sub> O	40 ML	"	"	1

RELINQUISHED BY: SIGNATURE <u>Randy Brans</u> PRINTED <u>RANDY BRANS</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>8/10</u> TIME <u>1200</u>	RECEIVED BY: SIGNATURE <u>John...</u> PRINTED <u>JOHN B. VIVIERE</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>8/10</u> TIME <u>1200</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET MOBILE LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
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### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-084

COC #: \_\_\_\_\_

BPA/SO: P.O. U Rel ZI SWL

CLIENT Zone L NAVY Base Charleston PROJECT MANAGER Charlie Verney  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-084 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	Cn					
2	X	X					* HNO <sub>3</sub> - Metals
2	X	X					NaOH - Cn
2	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	Cn									
					TEMP.	CHEMICAL												
NRCL\6996P037FI	8-11-97	1517	H <sub>2</sub> O	16 poly	4°	*	2	X	X									
NBCL\6996P038FI		1522					2	X	X									
NBCL\6996P040FI		1548					2	X	X									
<del>RECEIVED BY: [Signature] 8/11/97</del>																		

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Cindy Gordon</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-11-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex COMMENTS: \* HNO<sub>3</sub> (MSDS); NaOH (Cn) AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4846149351 DO NOT  DISPOSED OF  
 SPECIAL INSTRUCTION: \_\_\_\_\_  STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P.0.4 Rel 21 SWL

CLIENT NAVY Base Charleston PROJECT MANAGER Charlie Veuney  
 ADDRESS Zone L TELEPHONE NO. 803-894-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	14	15	16	17	18	
1	X	X				DQ O Level 2
1	X	X				
1	X	X				
1	X	X				
1	X	X				
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	14	15	16	17	18
					TEMP.	CHEMICAL						
NBCL1699SP022FI	8-11-97	0844	soil	4oz glass	4°C	None	1	X	X			
NBCL1699SP023FI		1029					1	X	X			
NBCL1699SP024FI		1050					1	X	X			
NBCL1699SP025FI		1129					1	X	X			
NBCL1699SP026FI		1150					1	X	X			
NBCL1699SP027FI		1348					1	X	X			
NBCL1699SP028FI		1420					1	X	X			

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Greg Goodrum</u> COMPANY <u>EnSAFE</u> REASON <u>Analysis</u>	DATE <u>8-11-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex SHIPMENT NO. 4849149351 SPECIAL INSTRUCTION: \_\_\_\_\_  
 COMMENTS: DQ O Level 2  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #:

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone 4  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 854-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals (HNU3)	CN (DROH)				
2	X	X				DQO Level II
1	X					(limited volume)
2	X	X				
2	X	X				
2	X	X				
2	X	X				
1	X					
2	X	X				
2	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X NBCL699GP29AFI	8-11-97	0845	H <sub>2</sub> O	1 Liter (Poly)	4°C	*
X NBCL699GP030FI		0950				
X NBCL699GP031FI		1010				
NBCL699GP031A FI		1050				
NBCL699GP032FI		1050				
X NBCL699GP033FI		1118				
X NBCL699GP030FI		1340				
X NBCL699GP034FI		1402				
X NBCL699GP035FI		1430				
X NBCL699GP036FI		1455				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE 8-11-97 TIME 1700	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FAX</u> SHIPMENT NO. <u>4849149351</u> SPECIAL INSTRUCTION:	COMMENTS: <u>* HNO<sub>3</sub> (Metals); NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 3  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEENBY  
ADDRESS Ft. M.L. TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Randy Brian

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
6996P037-F1	8-11-97	1517	H <sub>2</sub> O	40 ml	4	HCL	2					DOOLV 2
6996P038-F1	8-11-97	1523	"	"	"	"	2					"
6996P040-F1	8-11-97	1543	"	"	"	"	2					"
699TP040-F1	8-11-97	1600	"	"	"	"	1					"
699EP040-F1	8-11-97	1600	"	"	"	"	1					"
<i>[Signature]</i> 8-11-97												

RELINQUISHED BY: SIGNATURE <u>Randy Brian</u> PRINTED <u>Randy Brian</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/11</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B. VANCE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/11</u> TIME <u>1600</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT Hand Delivered  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To Target Lab

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 3  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT Naval Base Coronado PROJECT MANAGER Charlie Keeney  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-9107  
 SAMPLERS: (SIGNATURE) Randy Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1 X						DQD Lab 2 ↓ " " "
1 X						
1 X						
1 X						
1 X						
1 X						
1 X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
699SP022-F1	8-11-97	0844	SOIL	2 GZ Jar	4	NONE
699SP023-F1	8-11-97	1025	"	"	"	"
699SP024-F1	8-11-97	1045	"	"	"	"
699SP025-F1	8-11-97	1129	"	"	"	"
699SP026-F1	8-11-97	1145	"	"	"	"
699SP027-F1	8-11-97	1350	"	"	"	"
699SP028-F1	8-11-97	1425	"	"	"	"

*Jul W. [Signature]* 8-11-97

RELINQUISHED BY: SIGNATURE <u>Randy Beard</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/11</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>8/11</u> TIME <u>1600</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT <u>Hand Delivered</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To Target Lab</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 3 OF 3

CTO-TASK: 2912-0840  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVY BASE CHARLESTON  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-0840  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER CHARLIE VERNBY  
 TELEPHONE NO. (803)884-0029  
 FAX NO. (803)856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2	X				DPO LVL 2 ↓ " " "
2	X				
2	X				
2	X				
2	X				
2	X				
2	X				
2	X				
2	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL699GP28AF1	8-11-97	0855	H2O	40 mL	4°C	HCL
NBCL 699GP031F1		1020				
<del>NBCL 699GP031AF1</del>		<del>1057</del>				
NBCL699GP032F1		1057				
NBCL699GP033F1		1130				
NBCL699GP030F1		1347				
NBCL699GP034F1		1407				
NBCL699GP035F1		1435				
NBCL699GP036F1		1504				
NBCL699GP039F1		1525				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>EAH</u> REASON <u>LAB</u>	DATE 8-11-97 TIME 1600	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John B. Vonsiro</u> COMPANY <u>TAMU-BS</u> REASON <u>LAB</u>	DATE 8-11-97 TIME 1600	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	---------------------------------	---	---------------------------------	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: Hand Delivery  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARRANT LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston

PROJECT MANAGER Charlie Verway

ADDRESS Zone L

TELEPHONE NO. (803) 864-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. (803) 856-0107

SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS	
					TEMP.	CHEMICAL							
NBCL6996P042F1	8.12.97	0910	H2O	1 liter (Poly)	4°C	*	1		X				
NBCL6996P043F1		0935					1		X				
NBCL6996P046F1		1015					1		X				
NBCL6996P044F1		1032					1		X				
NBCL6996P045F1		1050					2	X	X				
NBCL6996P029F1		1240					1		X				Limited Volume
NBCL6996P041F1		1300					1		X				
NBCL6996P042F1		1320					1	X					
NBCL6996P043F1		1405					1	X					
NBCL6996P046F1		1515					1	X					

RELINQUISHED BY:  
 SIGNATURE [Signature]  
 PRINTED C Davis  
 COMPANY EnSafe  
 REASON Lab

DATE 8/12/97  
 RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 RELINQUISHED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4349149336  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* H<sub>2</sub>O (Metals); NaOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 212-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernouy  
TELEPHONE NO. (803) 884-0029  
FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CN				
1	X					DDO Level III

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN	REMARKS
					TEMP.	CHEMICAL				
NPCL69A6D44F1	8/12/97	1535	H <sub>2</sub> O	1 Liter (Poly)	40°	*	1	X		
<del><u>[Signature]</u> 8-12-97</del>										

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDavis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>8/12/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>48491493302</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HNO<sub>3</sub> (Metals); NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	--	---

Amel dQ 8/14/97

CTO-TASK: 2912-08410  
 COC #: PC 4 Rel 21 SWL  
 BPA/SO: PC 4 Rel 21 SWL



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT NAVAL BASE Charleston PROJECT MANAGER Charlie Kenney  
 ADDRESS Zone L TELEPHONE NO. 803-824-0029  
 PROJECT NAME/NUMBER 2917-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) A. Hoshall

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals - HNO <sub>3</sub>	CA - NaOH				
2	X	X				DQ C level 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals - HNO <sub>3</sub>	CA - NaOH				
					TEMP.	CHEMICAL							
NBCL1699GPC49F1	8-12-97	1225	H <sub>2</sub> O	1(2) poly	4°C	*	2	X	X				

RELINQUISHED BY: SIGNATURE <u>Alex Hoshall</u> PRINTED <u>Alex Hoshall</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8-12-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex COMMENTS: DQ C level 2  
 SHIPMENT NO. 4849149336  
 SPECIAL INSTRUCTION: Metals - HNO<sub>3</sub>  
CA - NaOH

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

08/12/97 16:01 TEL 7477306 ENSAFE ALLEN HOS CHARSFAE 03/03



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BRIG GUARDIAN

PROJECT MANAGER CHARLIE V

ADDRESS Foxwell

TELEPHONE NO. (803) 884-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. (803) 856-0107

SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1 X						
2 X						DOO CLK 2 ↓
2 X						
2 X						
2 X						
2 X						
2 X						
2 X						
2 X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<del>NBCL0376P041FI</del>	<del>8.12.97</del>	<del>0835</del>	<del>H2O</del>	<del>40mL (glass)</del>	<del>4°C</del>	<del>HEC</del>
+ NBCL699GPO45FI		1055				
+ NBCL699GPO29FI		1237				
+ NBCL699GPO41FI		1255				
+ NBCL699GPO42FI		1310				
+ NBCL699GPO43FI		1340				
+ NBCL699GPO48FI		1400				
+ NBCL699GPO47FI		1450				
+ NBCL699GPO46FI		1508				
+ NBCL699GPO44FI		1530				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CDavis</u> COMPANY <u>ELM4</u> REASON <u>LAB</u>	DATE <u>8/12/97</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Signature]</u> COMPANY <u>LAB</u> REASON <u>LAB</u>	DATE <u>8/12/97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered  
 SHIPMENT NO: \_\_\_\_\_  
 SPECIAL INSTRUCTION: To Target Lab

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT Naval Base Charleston PROJECT MANAGER Charlize Verdoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2						DPO W/L 2
2						"
2						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL							
NBCL\699GP049 F1	8/12/97	1231	H <sub>2</sub> O	40 ml VOA	4°	ACI	2	P					
NBCL\699GP050 F1		1455	H <sub>2</sub> O	L			2	X					
NBCL\699GP051 F1		1500	H <sub>2</sub> O	L			2	X					

[Signature]  
 8.12.97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Eric Gudrum</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>8/12/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TORIN JENSEN</u> COMPANY <u>TALBERT</u> REASON <u>LAB</u>	DATE <u>8/12/97</u> TIME <u>3:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Air  
 SHIPMENT NO. Hand Delivered  
 SPECIAL INSTRUCTION: To TALBERT LAB

COMMENTS: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vermay  
ADDRESS Zone L TELEPHONE NO. (803) 851-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals (HNO <sub>3</sub> )	CN (NaOH)			
1	X				DBO Level II
1	X				
1	X				
1	X				Limited Volume

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL699GP047FI	8.13.97	0935	H <sub>2</sub> O	1 Liter (Poly)	40C	*
NBCL699GP050FI		0948				
NBCL699GP041FI		1020				
NBCL699GP043FI		1057				

[Signature]  
8.13.97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Bob C Davis</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE <u>8.13.97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FEDEX COMMENTS: \* HNO<sub>3</sub> (Metals); NaOH (CN) AFTER ANALYSIS, SAMPLES ARE TO BE:  
SHIPMENT NO. 4849149303  
SPECIAL INSTRUCTION: \_\_\_\_\_  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAF/ALLEN&HOSHAL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21

CLIENT Naval Base Charleston

PROJECT MANAGER Charlie Vernoy

ADDRESS Zone L

TELEPHONE NO. 803-884-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. 803-856-0107

SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	Cyanide					
1	X						Limited volume
2	X	X					
1	X						
1	X						
1	X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\699GP050F1	8-15-97	0845	H <sub>2</sub> O	1L Poly	4°C	Met=HNO <sub>3</sub> CN=NaOH
NBCL\699GP051F1		0900				
NBCL\699GP029F1		0940				
NBCL\699GP043F1		1000				
NBCL\699GP047F1		1020				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B. Terpe</u> COMPANY <u>ENSAF</u> REASON <u>Ship to Lab</u>	DATE <u>8/15/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: FEDEX  
SHIPMENT NO. 4848854846  
SPECIAL INSTRUCTION: SWL

COMMENTS: DOO 3 + TICS

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone G  
Soil Boring**



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 Rel. #21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Robert B. Blythe

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	SVOA, Pest/PCB	Metals, CN		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		
4	X	X	X		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL/037SB015H1	5/16/97	1003	Soil	2-20z, 2-40z	4°C	None
NBCL/037SB015H2		1020				
NBCL/037SB005G1		1114				
NBCL/037SB005G2		1137				
NBCL/037SB001G1		1351				
NBCL/037SB001G2		1401				
NBCL/037SB001A1		1441				
NBCL/037SB002A1		1521				
NBCL/037SB001A2		1457				

33

RELINQUISHED BY: SIGNATURE <u>Robert B. Blythe</u> PRINTED <u>Robert B. Blythe</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/16/97</u> TIME <u>1615</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>0904036733</u> SPECIAL INSTRUCTION: <u>None</u>	COMMENTS: <u>All samples are DQ03.</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	--	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 REL-ZI SWL

CLIENT NAVAL BASE CHAS PROJECT MANAGER Charlie Vernon  
ADDRESS ZONE G (L) TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) RK Brewer RS Dawson

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	SVA/PEST	MEDIA/CAN		
4	2	1	1		
4	2	1	1		3
4	2	1	1		DQO A
4	2	1	1		
4	2	1	1		
1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBC10375002G1	6/10/97	1045	Soil	Zon; 4oz	48	None
00262		1050				
NBC1037CB002G2		1050				
NBC103738003G1		1100				
00461		1105				
00462		1110				
NBC1037TBC04G2	✓	—	✓	2.62	✓	✓

RS Dawson  
6.10.97

RELINQUISHED BY: SIGNATURE <u>RK Brewer</u> PRINTED <u>RK Brewer</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6.10.97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>4643769056</u> SPECIAL INSTRUCTION: <u>NONE</u>	COMMENTS: <u>ALL SAMPLES ARE DQOS UNLESS STATED IN REMARKS.</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	---	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

06/11/97 16:30 TEL 7477306 ENSAFE ALLEN HOS 01



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08420  
COC #: \_\_\_\_\_  
BPA/SG: 704REL-215WK

CLIENT NAVAL BASE CHAS PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L (G) TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) R. Dawson R.S. Dawson

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	SWA PEST	METAL/CN		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VDA	SWA PEST	METAL/CN	REMARKS
					TEMP.	CHEMICAL					
NBEL10375BC06G1	6-11-97	0810	Soil	202 & 402	4°C	NONE	4	2	1	1	
00662		0815					4	2	1	1	
00761		0818					4	2	1	1	
00762		0820					4	2	1	1	
00861		0825					4	2	1	1	
00862		0830					4	2	1	1	
00961		0840					4	2	1	1	
01061		0850					4	2	1	1	
01062		0900					4	2	1	1	
01161		0905					4	2	1	1	

RELINQUISHED BY: SIGNATURE <u>R.S. Dawson</u> PRINTED <u>R.S. Dawson</u> COMPANY <u>CEERTD</u> REASON <u>ANALYSIS</u>	DATE <u>6/11/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: FED EX  
SHIPMENT NO. 1970279113  
SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLE ARE VQ03 UNLESS STATED IN REMARK.

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08420  
CCC #: P041RELEZISWL  
BPA/SO: P041RELEZISWL

CLIENT NAVIC BASE CHAS. PROJECT MANAGER CHARLIE KERNON  
ADDRESS ZONE L (G) TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08420 FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) [Signature] [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	VQA	SYNCH TEST	METAL/CN	
4	42	1	1	
4	42	1	1	
4	42	1	1	
4	42	1	1	
1	1			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NBCLP3705801126	6/11/97	0910	Soil	2024oz	4°C	None	4	42 1 1	
↓ 0126i		0915					4	42 1 1	
NBCLP37030126i		0915					4	42 1 1	
NBCLP31580136i		0920					4	42 1 1	
↓ 0146i		0930					4	42 1 1	
NBCLP37130146i		—					1	1	
<u>[Signature]</u> 6/11/97									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>SS. JAWSON</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/11/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FED EX  
SHIPMENT NO. 170279113  
SPECIAL INSTRUCTION: None

COMMENTS: ALL SAMPLE ARE 11003 UNLESS STATED IN REMARKS.

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone G  
Groundwater**

07/25/97 16:21 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: POY REL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08440 FAX NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	SVOA	Pest/ROB	Metals/EN	
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\0376W002I1	7-25-97	0845	1120	11 Amber, 12 Pol 40 mL VOA	4°C	VOA-HALL MET-NH23 Pest-RECH
NBCL\0376W001H1	7-25-97	1005	↓	↓	↓	
NBCL\0376W002G1	7-25-97	1115	↓	↓	↓	
NBCL\0376W001G1	7-25-97	1215	↓	↓	↓	
NBCL\0376W001A1	7-25-97	1445	↓	↓	↓	
NBCL\0376W001A1	7-25-97	—	↓	40 mL	↓	
<u>[Signature]</u> 7-25-97						

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B. Temple</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to Lab</u>	DATE <u>7/25/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849147502</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>DQ03 files</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-----------------------------	---

**Subzone G**  
**DPT**

Environmental and Safety Designs, Inc.



5724 SUMMER TREES DR. MEMPHIS, TN 38134 41-800-588-7962  
 CINCINNATI, OH CHARLESTON, SC JACKSON, TN KNOXVILLE, TN  
 NASHVILLE, TN NORFOLK, VA PENSACOLA, FL RALEIGH, NC

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
 BPA/ISO: POLY REL 21 SWL

PAGE 21 OF 21

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 854-0029  
 FAX NO. (403) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	Metals	CN										
2	X	X										DQO Level II
1		X										"
1	X											"
1	X	X										"
1	X	X										"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN									
					TEMP.	CHEMICAL												
NBCL0376P002-G1	6/10/97	1350	H <sub>2</sub> O	1-Liter Poly	4°C	*	2	X	X									
NBCL0376P003-G1	6/10/97	1450	"	"	"	"	1		X									
"	"	1509	"	"	"	"	1	X										
NBCL037SP002-G1	"	1414	Soil	4oz Glass	4°C	-	1	X	X									
NBCL037SP001-G1	"	1019	Soil	4oz Glass	4°C	-	1	X	X									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON _____	DATE <u>6/10/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: <u>HNO<sub>3</sub> (metals), NaOH (CN)</u> <u>DQO level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	---	--



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2  
 CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLES VEENBY  
 ADDRESS ZONE L TELEPHONE NO. (803) 854-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
1 X					DOD Level 2
1 X					" "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
037SP001-G1	6-10-97	1019	SOIL	2 oz Jar	4	None	1	X			
037SP002-G1	6-10-97	1414	"	" "	4	"	1	X			

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>6/10/97</u> TIME <u>1620</u>	RECEIVED BY: SIGNATURE <u>Johanna</u> PRINTED <u>Johanna</u> COMPANY <u>TARGET</u> REASON <u>LAD</u>	DATE <u>6/10/97</u> TIME <u>1620</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Hand Delivered COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To Target Lab  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

06/11/97 15:14 TEL 7477306 ENSAFE ALLEN HOS 001



NAVY CLEAN ENSAFE/ALLEN&HOSHALL (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS Zone L TELEPHONE NO. (803) 854-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	KORAK	ANALYSIS REQUIRED					REMARKS
2	X						DQO Level 2
2	X						" "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
0370P02-G1	6-10-97	2:00	H <sub>2</sub> O	40 mL	4	HCL
0370P003-G1	6-10-97	3:20	H <sub>2</sub> O	40 mL	4	HCL

[Signature]  
6-10-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>WENDELL ROWLS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE 6-10-97 TIME 4:20	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BURSTE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE 6/10 97 TIME 15:20	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
--	---------------------------------	--	-------------------------------------	---	--------------	---	--------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET MOBILE LAB.  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

CLNCCCR1



CHAIN OF CUSTODY RECORD

OTO TASK = 2912-0  
 BPA/So: P04 R0 UGWL

PAGE 1 OF 1

5724 SUMMER TREES DR. MEMPHIS, TN 38134 #1-800-588-7962  
 CINCINNATI, OH, CHARLESTON, SC, JACKSON, TN, KNOXVILLE, TN  
 NASHVILLE, TN, NORFOLK, VA, PENSACOLA, FL, RALEIGH, NC

CLIENT NAVAL BASE CHARLESTON  
 ADDRESS ZONE L  
 PROJECT NAME/NUMBER 2912-0841

PROJECT MANAGER CHARLIE VERNOY  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	CN					
2	X	X					NGO LEVEL II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0376P004-61	6/11/97	1032	H <sub>2</sub> O	1-LITER POLY	4°C	X

[Signature]  
 6-11-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Don Williams</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE <u>6-11-97</u> TIME <u>1625</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO. <u>4849151786</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* HADZ (Metals), RADII (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	--	---

[Signature] 7/7/97

CONFIDENTIAL  
 ENVIRONMENTAL AND SAFETY DESIGNS, INC.  
 02/15/97 TEL 901.271.1200 FAX 901.271.1200



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BFA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLSTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. (803) 984-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. (803) 256-0107  
SAMPLERS: (SIGNATURE) Wendell C. Rankin

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2					DQO LEVEL 2

RELINQUISHED BY: SIGNATURE <u>Wendell Rankin</u> PRINTED <u>Wendell Rankin</u> COMPANY <u>TARGET</u> REASON <u>LAS</u>	DATE <u>6-11-97</u> TIME <u>3:45</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JANIS BUNN</u> COMPANY <u>TARGET</u> REASON <u>LAS</u>	DATE <u>6/11/97</u> TIME <u>3:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: WIPSD DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: TO TARGET  
MOBILE LAR

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

06/13/97 16:41 TEL 7477306 ENSAFE ALLEN HOS →→→ CHARSAFE 02



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1  
 CTO-TASK: 2912-08410  
 CCC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 864-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
					DRO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN		
					TEMP.	CHEMICAL					
NBCL037SP004-G1	6-13-97	0830	SO:1	4oz (glass)	4°C	—	1	X	X		
NBCL037SP005-G1		0903					1	X	X		
NBCL037SP006-G1		0939					1	X	X		
NBCL037SP007-G1		1000					1	X	X		
NBCL037SP008-G1		1400					1	X	X		
NBCL037SP008A-G1		1423					2	X	X		
NBCL037SP009-G1							1	X	X		

[Signature]  
6-12-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/13/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4349149874</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DRO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
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(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1  
CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. 803 984-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. 803 986-6107  
SAMPLERS: (SIGNATURE) Randy Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
10A						DQC LEVEL 2
						"
						"
						"
						"
						"
						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS								
					TEMP.	CHEMICAL									
-X 037SP004-G1	6-13-97	0830	SOIL	2 OZ Jar	4	NONE	1	X							
-X 037SP005-G1	6-13-97	0903	"	" "	"	"	1	X							"
-X 037SP006-G1	6-13-97	0939	"	" "	"	"	1	X							"
-X 037SP007-G1	6-13-97	1000	"	" "	"	"	1	X							"
-X 037SP008-G1	6-13-97	1410	"	" "	"	"	1	X							"
-X 037SP008A-G1	6-13-97	1423	"	" "	"	"	1	X							"
-X 037TP013-G1	6-13-97	1500	"	" "	"	"	1	X							"

*W. Underwood*  
6-13-97

RELINQUISHED BY: SIGNATURE <u>Randy Beard</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/13/97</u> TIME	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOLYN B. VANDERBILT</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/13/97</u> TIME <u>4W</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TR: TARGET</u> <u>TR: LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
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(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL Z1 SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERIZY  
ADDRESS ZONE L TELEPHONE NO. (803) 854-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 854-0107  
SAMPLERS: (SIGNATURE) Don Bf

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	METALS	CN					
2	X	X					DOO LEVEL II
2	X	X					" " "
1	X						" " "
1	X						" " "
2	X	X					" " "
2	X	X					" " "

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	METALS	CN								
					TEMP.	CHEMICAL											
NBCL0374P007-41	6/13/97	0925	H <sub>2</sub> O	1-LITER Poly	4°C	X	2	X	X								
NBCL0374P006-41	"	0945	"	" " "	"	"	2	X	X								
NBCL0374P008-41	"	1000	"	" " "	"	"	1	X									
"	"	1023	"	" " "	"	"	1	X									
NBCL0374P009-41	"	1055	"	" " "	"	"	2	X	X								
NBCL0374P010-41	"	1110	"	" " "	"	"	2	X	X								
<del>NBCL0374P011-41</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>" " "</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>	<del>"</del>

Don Bf  
6-13-97

RELINQUISHED BY: SIGNATURE <u>Don Bf</u> PRINTED <u>Don Bf</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>1841149874</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>As HNO<sub>3</sub> (Metals), NaOH(LN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	--	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNELY  
 ADDRESS ZONE 2 TELEPHONE NO. 803 844-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803 856-0107  
 SAMPLERS: (SIGNATURE) \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2	X					DDO LEVEL 2
2	X					"
2	X					"
2	X					"
2	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VERK									
					TEMP.	CHEMICAL											
0376P006-B1	6-13-97	9:50	H2O	40ML	4	HCL	2	X									
0376P007-B1	6-13-97	9:35	H2O	40ML	4	HCL	2	X									
0376P008-B1	6-13-97	10:30	H2O	40ML	4	HCL	2	X									
0376P009-B1	6-13-97	11:05	H2O	40ML	4	HCL	2	X									
0376P010-B1	6-13-97	11:20	H2O	40ML	4	HCL	2	X									

*Wendell C. Rawls*  
6-13-97

RELINQUISHED BY: SIGNATURE <u>Wendell C. Rawls</u> PRINTED <u>WENDELL RAWLS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/13/97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B. VERNELY</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/13/97</u> TIME <u>4:50</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TO: TARGET</u> <u>Mobile LAB</u>	_____	



NAVY CLEAN  
ENSAF/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Vernoy  
ADDRESS: Zone L TELEPHONE NO.: (803) 884-0029  
PROJECT NAME/NUMBER: 2912-08410 FAX NO.: (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	CN					
1	X	X					L200 Level II ↓
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					
1	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN				
					TEMP.	CHEMICAL							
- NBCL037SP009-G1	6-14-97	0840	soil	4oz (glass)	4%	-	1	X	X				
- NBCL037SP010-G1		0745					1	X	X				
- NBCL037SP011-G1		0733					1	X	X				
- NBCL037SP012-G1		0755					1	X	X				
- NBCL037SP013-G1		0810					1	X	X				
- NBCL037SP014-G1		0908					1	X	X				
- NBCL037SP015-G1		0937					1	X	X				

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6-16-97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx  
SHIPMENT NO. 4849149863  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) CV 7/9/97



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT LOWAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERADY  
 ADDRESS ZONE L TELEPHONE NO. 803-894-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED								REMARKS	
1	X									D80-Level 2
1	X									"
1	X									"
1	X									"
1	X									"
1	X									"
1	X									"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS												
					TEMP.	CHEMICAL													
037SP009-G1	6-14-97	0640	SOIL	2 OZ JAR	4	NONE	1	X											
037SP010-G1	6-14-97	0715	"	" "	"	"	1	X											
037SP011-G1	6-14-97	0733	"	" "	"	"	1	X											
037SP012-G1	6-14-97	0755	"	" "	"	"	1	X											
037SP013-G1	6-14-97	0810	"	" "	"	"	1	X											
037SP014-G1	6-14-97	0908	"	" "	"	"	1	X											
037SP015-G1	6-14-97	0937	"	" "	"	"	1	X											

*Wendell C. (Carroll)*  
 6-14-97

RELINQUISHED BY: SIGNATURE <u>Randy Beard</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/14/97</u> TIME <u>1:45</u>	RECEIVED BY: SIGNATURE <u>John Suorte</u> PRINTED <u>JOHN SUORTE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/14</u> TIME <u>2:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. _____	_____	<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>TO: TARGET</u>	_____	<input type="checkbox"/> STORED (90 DAYS MAX)
<u>MOBILE LAB</u>	_____	<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT: Navy Base Charleston PROJECT MANAGER: CHARLIE VEENOY  
 ADDRESS: ZONE L TELEPHONE NO.: (803) 884-0029  
 PROJECT NAME/NUMBER: 2912-08410 FAX. NO.: (803) 856-0107  
 SAMPLERS: (SIGNATURE) Don Boff

ANALYSIS REQUIRED		REMARKS
NO. OF CONTAINERS		
CN		ALL SAMPLES DQO LEVEL II
METALS		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	CN	METALS										
					TEMP.	CHEMICAL													
NBCL0376P014-G1	6/14/97	0710	H <sub>2</sub> O	1-LITER Poly	4°C	*	1	X											
NBCL0376P012-G1	"	0800	"	" " "	"	"	1	X											
NBCL0376P011-G1	"	0812	"	" " "	"	"	1	X											
NBCL0376P013-G1	"	0915	"	" " "	"	"	1	X											
NBCL0376P014-G1	"	1135	"	" " "	"	"	2	X	X										
NBCL0376P015-G1	"	1300	"	" " "	"	"	1	X											LIMITED VOLUME SAMPLE
<del>NBCL0376P023-G1</del>	<del>6/15/97</del>	<del>1252</del>	<del>"</del>	<del>" " "</del>	<del>"</del>	<del>"</del>	<del>2</del>	<del>X</del>	<del>X</del>										<del>VOID</del>

Don Boff  
6-14-97

RELINQUISHED BY: SIGNATURE: <u>Don Boff</u> PRINTED: <u>Don Boff</u> COMPANY: <u>EnSafe</u> REASON: <u>Lab</u>	DATE: <u>6-16-97</u> TIME: <u>1600</u>	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RELINQUISHED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____	RECEIVED BY: SIGNATURE: _____ PRINTED: _____ COMPANY: _____ REASON: _____	DATE: _____ TIME: _____
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METHOD OF SHIPMENT: FED EX  
 SHIPMENT NO. 4849149863  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: ALL SAMPLES LEVEL II DQO  
\* HNO<sub>3</sub> (METALS), NaOH (CN)

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) CV 7/9/97



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERARDY  
 ADDRESS ZONE L TELEPHONE NO. 903 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 913 856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rands

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2	X					BDO - Level 2
2	X					"
2	X					"
2	X					"
2	X					"
1						TRIP BLANK

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X 037GP013 - G1	6-14-97	9:25	H <sub>2</sub> O	40 mL	4	HCL
X 037GP012 - G1	6-14-97	9:46	H <sub>2</sub> O	40 mL	4	HCL
X 037GP011 - G1	6-14-97	9:50	H <sub>2</sub> O	40 mL	4	HCL
X 037GP015 - G1	6-14-97	11:20	H <sub>2</sub> O	40 mL	4	HCL
X 037GP019 - G1	6-14-97	11:45	H <sub>2</sub> O	40 mL	4	HCL
X 037TP019 - G1	6-14-97	1340	H <sub>2</sub> O	40 mL	4	HCL

*Wendell C. Rands*  
 6-14-97

RELINQUISHED BY: SIGNATURE <u>Wendell C. Rands</u> PRINTED <u>Wendell C. Rands</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-14-97</u> TIME <u>1:45</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHANN B VOEGTLE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/14/97</u> TIME <u>2:40</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO: TARGET</u> <u>Mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL ZI SWL

CLIENT Navy Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER CHARLIE VERNOY  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	Metals	CN										
1	X											All Samples DQD Level II
1	X											
1	X											
1		X										
1		X										
2	X	X										
1	X											
1		X										
2	X	X										

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CN									
					TEMP.	CHEMICAL												
M NBCLO376P013-G1	6/15/93	0750	H <sub>2</sub> O	1-LITER Poly	40C	*	1	X										
V NBCLO376P012-G1	"	0810	"	" " "	"	"	1	X										
M NBCLO376P011-G1	"	0820	"	" " "	"	"	1	X										
I NBCLO376P016-G1	"	0855	"	" " "	"	"	1		X									
I NBCLO376P017-G1	"	0916	"	" " "	"	"	1		X									
I NBCLO376P018-G1	"	0930	"	" " "	"	"	1		X									
V NBCLO376P020-G1	"	0940	"	" " "	"	"	2	X	X									
V NBCLO376P015-G1	"	0840	"	" " "	"	"	1	X										
I NBCLO376P021-G1	"	1214	"	" " "	"	"	1		X									
I NBCLO376P024-G1	"	1243	"	" " "	"	"	2	X	X									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Do Safe</u> COMPANY <u>Zn Safe</u> REASON <u>Lab</u>	DATE <u>6/16</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fedex</u> SHIPMENT NO. <u>4849149863</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>All Samples DQD Level II</u> <u>* HNO<sub>3</sub> (Metals), NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
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 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REC 21 SWL

CLIENT NAVY BASE CHARLESTON  
 ADDRESS ZONE L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER CHARLIE KEARNEY  
 TELEPHONE NO. (803) 884-0028  
 FAX. NO. (803) 886-6107

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	1	2	3	4	5	6	
METALS CN							Air SAMPLES DRO LEVEL II
	X	X					
	X	X					
	X	X					
	X	X					
	X	X					
	X	X					
						LIMITED SAMPLE VOLUME	

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
1- NBCL0376P023-G1	6/15/97	1252	H <sub>2</sub> O	1-LITER Pail	4°C	*	2	X X	
1- NBCL0376P025-G1	"	1253	"	" " "	"	"	2	X X	
1- NBCL0376P026-G1	"	1300	"	" " "	"	"	2	X X	
1- NBCL0376P027-G1	"	1310	"	" " "	"	"	2	X X	
1- NBCL0376P028-G1	"	1325	"	" " "	"	"	2	X X	
1- NBCL0376P017-G1	"	1340	"	" " "	"	"	1	X	
1- NBCL0376P014-G1	"	1410	"	" " "	"	"	1	X	
<u>[Signature]</u> <u>6-15-97</u>									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Name]</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fedex</u> SHIPMENT NO. <u>4849149863</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>ALL SAMPLES DRO LEVEL II</u> <u>* HNO<sub>3</sub> (Metals), NaOH (Co)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-6167  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2	X					DIG LEVEL 2
2	X					"
2	X					"
2	X					"
2	X					"
1	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	LEAK								
					TEMP.	CHEMICAL										
X 037GP016-G1	6-15-97	10:05	H <sub>2</sub> O	40 ml	4	HCL	2	X								
X 037GP017-G1	6-15-97	10:15	H <sub>2</sub> O	40ml	4	HCL	2	X								
X 037GP018-G1	6-15-97	10:25	H <sub>2</sub> O	40ml	4	HCL	2	X								
X 037GP020-G1	6-15-97	9:50	H <sub>2</sub> O	40ml	4	HCL	2	X								
( 037GP023-G1	6-15-97	12:40	H <sub>2</sub> O	40ML	4	HCL	2	X								
X 037GP021-G1	6-15-97	1:00	H <sub>2</sub> O	40ml	4	HCL	1	X								

Wendell Rawls  
6-15-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-15-97</u> TIME <u>2:15</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN GUMM</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/15/97</u> TIME <u>2:2</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	--	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS 2912-08410 TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER \_\_\_\_\_ FAX NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
2					DOO-LEVEL 2
2					"
2					"
2					"
2					"
2					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
0376P024-G1	6-15-97	1243	H <sub>2</sub> O	40 mL	4	HCl
0376P025-G1	6-15-97	1253	"	" "	"	"
0376P026-G1	6-15-97	1300	"	" "	"	"
0376P027-G1	6-15-97	1310	"	" "	"	"
0376P028-G1	6-15-97	1325	"	" "	"	"
037TP028-G1	6-15-97	1325	"	" "	"	"

Wendell Randle  
6-15-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/15/97</u> TIME <u>2:15</u>	RECEIVED BY: SIGNATURE <u>John D. Venter</u> PRINTED <u>TARGET</u> COMPANY <u>LAB</u> REASON _____	DATE <u>6/15/97</u> TIME <u>2:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To: TARGET mobile LAB</u>	_____	



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REZ 21 SWL

CLIENT NAVY BASE CHARLESTON  
ADDRESS ZONE L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) Don Bell

PROJECT MANAGER CHARLIE VERNON  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	METALS	CN				
2	X	X				All Samples DDO LEVEL II ↓
1	X					
1	X					
1	X					
1	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL	METALS	CN					
NBCL0376P022-G1	6/16/97	0845	H <sub>2</sub> O	1-Liter Poly	4°C	*	2	X	X				
NBCL0376P018-G1	"	0900	"	" " "	"	"	1	X					
NBCL0376P016-G1	"	0910	"	" " "	"	"	1	X					
NBCL0376P021-G1	"	1325	"	" " "	"	"	1	X					
NBCL0376SP016-G1	"	1343	Soil	4oz (glass)	"	—	1	X	X				
NBCL0376P029-G1	"	1425	H <sub>2</sub> O	1-Liter Poly	"	*	2	X	X				

Don Bell  
6-16-97

RELINQUISHED BY: SIGNATURE <u>Don Bell</u> PRINTED <u>DON BLAUFORD</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/16/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
--	---	---	--------------	---	--------------	---	--------------

METHOD OF SHIPMENT: <u>FEDEX</u> SHIPMENT NO. <u>4849149863</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>ALL SAMPLES DDO LEVEL II</u> <u>* HNO<sub>3</sub> (METALS), NaOH (CN)</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	---	---



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: 2912-0841D  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS 2912-0841D TELEPHONE NO. 803-884-0629  
PROJECT NAME/NUMBER ZONE L FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1 X						DDO LEVEL 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
K 037SP016-G1	6-16-97	1343	SOIL	2 oz Jar	4	
<p>Wendell Rando</p> <p>6-16-97</p>						

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>Randy Brand</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/16/97</u> TIME <u>3:30</u>	RECEIVED BY: SIGNATURE <u>John Blum</u> PRINTED _____ COMPANY _____ REASON _____	DATE <u>6/16/97</u> TIME <u>3:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To: TARGET</u> <u>Mobile LAB</u>	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



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CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS Zone L TELEPHONE NO. 803-884-0629  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1 X						DGO LEVEL 2
1 X						"
1 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS		REMARKS
					TEMP.	CHEMICAL			
0376P014-G1	6-16-97	8:25	H <sub>2</sub> O	40ML	4	HCL	1	X	DGO LEVEL 2
0376P022-G1	6-16-97	8:50	H <sub>2</sub> O	40ML	4	HCL	1	X	"
0376P029-G1	6-16-97	2:25	H <sub>2</sub> O	40ML	4	HCL	1	X	"
Wendell Rawls 6-16-97									

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-16-97</u> TIME <u>2:35</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUORSTE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/16/97</u> TIME <u>2:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To: TARGET mobile LAB  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SWL

CLIENT NAVY BASE CHARLESTON  
 ADDRESS ZONE L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER CHARLIE VERNOY  
 TELEPHONE NO. (803) 884-0029  
 FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	METALS	CN				
2	X	X				All samples DQO Level II
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL	METALS	CN					
NBCLO376P030-41	6/17/97	1125	H <sub>2</sub> O	1-LITER Poly	PC	*	2	X	X				
NBCLO376P031-41	"	1355	"	" " "	"	"	2	X	X				

[Signature]  
 6-17-97

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	6-17-97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>Don B. Bradford</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>106</u>	1600	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>TRUCK</u>	COMMENTS: <u>ALL SAMPLES DQO LEVEL II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849149841</u>	<u>* HNO<sub>3</sub>, NaOH</u>	
SPECIAL INSTRUCTION: _____	_____	





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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: PD 4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	PAH	_____	_____	
1	X	X			DQO Level II
1	X	X			
1	X	X			
<del>_____</del>					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	PAH	_____	_____
					TEMP.	CHEMICAL					
NBCL037SP017-G1	6-17-97	1332	Soil	4oz (glass)	4°C	—	1	X	X		
NBCL037SP018-G1		1342					1	X	X		
NBCL037SP019-G1							1	X	X		
<del>_____</del>											

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/17/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149841</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-8840029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
100	X											000 level 2
	X											"
	X											"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS							
					TEMP.	CHEMICAL								
X 037SP017-G1	<del>1336-17-97</del> 7332		SOL	2 oz Jar	4	NONE	1	X						
X 037SP018-G1	6-17-97	1342	"	" "	4	NONE	1	X						
X 037SP019-G1	6-17-97	1400	"	" "	4	"	1	X						

*Wendell Rando*  
*6-17-97*

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/17/97</u> TIME <u>4:10</u>	RECEIVED BY: SIGNATURE <u>Jordan B. V. S. T. C.</u> PRINTED <u>Jordan B. V. S. T. C.</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/17/97</u> TIME <u>3:53</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: To TARGET mobile LAB  
AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



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CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CU				
1	X	X				DQ0 Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
WBCL0875FO03-G1	7/1-97		So: 1	4oz (glass)	4°C	—	1	X	X		
<del>[Signature]</del> <del>7-1-97</del>											

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7/1/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE <u>7/1/97</u> TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849149756</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQ0 Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 5

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
 ADDRESS ZONE 2 TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1	X					DQO LEVEL 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
X0375P003-G1	7-1-97	0915	SOIL	2 OZ Jar	4	NONE	1	X	DQO LEVEL 2
<p><i>Wendell Pears</i> 7-1-97</p>									

RELINQUISHED BY:  
 SIGNATURE Randy Beard  
 PRINTED RANDY BEARD  
 COMPANY TARGET  
 REASON LAS

DATE 7/1/97  
 TIME 4:00

RECEIVED BY:  
 SIGNATURE [Signature]  
 PRINTED TOMAS VON STE  
 COMPANY TARGET  
 REASON LAS

DATE 7/1/97  
 TIME 3:10

RELINQUISHED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET  
mobile LAS

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Amenaid 7/11/97 JS

PAGE 1 OF 1



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CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: DOY REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
TELEPHONE NO. (803) 854-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	PCB	_____	_____	
1	X				DQO Level II
1	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	PCB	REMARKS
					TEMP.	CHEMICAL				
<u>NACLO3769008-61</u>	<u>7-7-97</u>	<u>0840</u>	<u>H2O</u>	<u>1 Liter (fely)</u>	<u>4°C</u>	<u>*</u>	<u>1</u>	<u>X</u>		
<u>NACLO3769008-61</u>	<u>7-7-97</u>	<u>1321</u>					<u>1</u>		<u>X</u>	

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	<u>7/7/97</u>	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>CDavis</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>ENSAFE</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>Lab</u>	<u>1700</u>	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>* HNO3, R&amp;DH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4449149234</u>		
SPECIAL INSTRUCTION:		

**Subzone H  
Soil Boring**



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**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 Rel. #21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Robert B. Blithe

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	Silica, Pest/Pack	Metals, CN		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	Silica, Pest/Pack	Metals, CN					
					TEMP.	CHEMICAL									
NBCL/037SB015H1	5/16/97	1003	Soil	2-2oz, 2-4oz	4°C	None	4	X	X	X					
NBCL/037SB015H2		1020					4	X	X	X					
NBCL/037SB005F1		1114					4	X	X	X					
NBCL/037SB005F2		1137					4	X	X	X					
NBCL/037SB001G1		1351					4	X	X	X					
NBCL/037SB001G2		1401					4	X	X	X					
NBCL/037SB001A1		1441					4	X	X	X					
<del>NBCL/037SB002A1</del>															
NBCL/037SB002A1		1521					4	X	X	X					
NBCL/037SB001A2	↓	1457	↓	↓	↓	↓	4	X	X	X					

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RELINQUISHED BY: SIGNATURE <u>Robert B. Blithe</u> PRINTED <u>Robert B. Blithe</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/16/97</u> TIME <u>1615</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>0904036733</u> SPECIAL INSTRUCTION: <u>None</u>	COMMENTS: <u>All samples are DQ03.</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 Ref # 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Robert B. Blythe

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
					TEMP.	CHEMICAL		VOA	SVOA	Metals	CN	Res/PCB	
NBCL/CB37SB005H1	5/19/99	1054	Soil	2-202, 2-402	4°C	None	4	X	X	X	X	X	
NBCL/CB37SB005H2		1105					4	X	X	X	X	X	
NBCL/CB37SB005I1		1212					4	X	X	X	X	X	
NBCL/CB37SB005I2		1232					4	X	X	X	X	X	
NBCL/CB37CB005I2		1232					4	X	X	X	X	X	
NBCL/CB37SB003DH1		1504					4	X	X	X	X	X	
NBCL/CB37SB003DH1		1504					4	X	X	X	X	X	
NBCL/CB37TB020H1	↓	—	↓	2-202	↓	↓	2	X					
<del>Brewer Blythe 5/19/99</del>													

RELINQUISHED BY: SIGNATURE <u>Robert B. Blythe</u> PRINTED <u>Robert B. Blythe Jr.</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>5/19/99</u> TIME <u>1645</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex COMMENTS: All samples are DQ03. AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 0904036722  
 SPECIAL INSTRUCTION: None  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
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(901) 383-9115

Ammended 6/30/97  
CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL-21 SOL

CLIENT NAVAL BASE CHAS PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) RK Penn RS Dawson

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	SUBA	PEST/PCB	CN	META	
8	2	2	2	1	1	
8	2	2	2	1	1	
2	2					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBC11037P006H1	6/4/97	1050	H2O	1 L POLY, 1 L AMBER 40 ML GLASS	4°C	HNO3 NAOH
NBC11037E006H1	6/4/97	1100	H2O	↓	↓	↓
037TB006H1	6/4/97	1100	H2O	↓	↓	↓

RK Penn 6/4/97

RELINQUISHED BY: SIGNATURE <u>RK Penn</u> PRINTED <u>RK Brewer</u> COMPANY <u>CEED</u> REASON <u>ANALYSIS</u>	DATE <u>6/4/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FED EX  
SHIPMENT NO. 4643769126  
SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLES ARE DQ 03 UNLESS OTHERWISE NOTED

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

614197  
 REP  
 PAGE 21 OF 2

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: PO 4 REL-21 SWL

CLIENT NAVAL BASE CHAS PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) RK Brewer RC Jensen

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	SUBA/PSSV	METALS/CN		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		

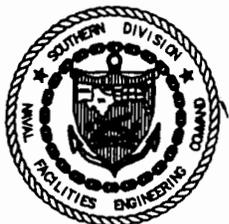
FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL/0375B006H1	6-4-97	0840	Sail	4 yd <sup>2</sup> 20y	4°C	NONE
006H2		0845				
007H1		0851				
007H2		0856				
008H1		0904				
008H2		0910				
001H1		0940				
001H2		0950				
002H1		0924				
002H2		0927				

RELINQUISHED BY: <u>RK Brewer</u> SIGNATURE <u>RK Brewer</u> PRINTED <u>RK Brewer</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/4/97</u> TIME <u>1500</u>	RECEIVED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: _____ SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FED EX  
 SHIPMENT NO. 4643769126  
 SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLES ARE DQ03 UNLESS OTHERWISE NOTED

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
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CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: 204 REL-21 SWL

CLIENT NAVAL BASE CHAS PROJECT MANAGER CHARLIE UERVOY  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) RK Brewer RST Dawson

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		LDA	SIDA/PEST	METALS/CN		
NBC103758003H1	6-4-97	1025	SOIL	40g; 2oz	4°C	NONE	4	2	1	1		
003H2		1027					4	2	1	1		
004H1		1005					4	2	1	1		
004H2		1015					4	2	1	1		
NBC103713004H1	6-4-97	—	SOIL	2oz	4°C	NONE	1	1				
<del>_____ 6/14/97 _____</del>												

RELINQUISHED BY: SIGNATURE <u>RK Brewer</u> PRINTED <u>RK Brewer</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/14/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: FED EX  
SHIPMENT NO. 4643769126  
SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLES ARE DQ03 UNLESS OTHERWISE NOTED

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
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**CHAIN OF CUSTODY RECORD**

PAGE \_\_\_\_\_ OF \_\_\_\_\_

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O 4 REL-21 SWL

CLIENT NAVAL BASE CHAS. PROJECT MANAGER CHARLIE VernoY  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) RK [Signature] RS Dawson

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	VDA	SIDA/PEST	METAL/CN	
4	2	1	1	
4	2	1	1	
4	2	1	1	
4	2	1	1	
1	1			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NACL037SB013HZ	6/5/97	1155	Soil	2oz & 4oz	4°C	NONE
014H1		1205				
014H2		1210				
NBCU031CB04HZ		1210				
NBCU037TB013HZ	6/5/97			2oz	4°C	NONE

DQ04 CA  
6/19/97

4/5/97  
RK [Signature]

RELINQUISHED BY: SIGNATURE <u>RS Dawson</u> PRINTED <u>RS DAWSON</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/5/97</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FED EX  
 SHIPMENT NO. 4643769115  
 SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLES ARE DQ03  
UNLESS OTHERWISE NOTED

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
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CHAIN OF CUSTODY RECORD

PAGE \_\_\_\_\_ OF \_\_\_\_\_

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 REL-21 SWC

CLIENT NAVAL BASE CHAS PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) RL Dawson RS Dawson

ANALYSIS REQUIRED				REMARKS
NO. OF CONTAINERS	VOA	SYDA/PEST	METALS/CN	

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	SYDA/PEST	METALS/CN	REMARKS
					TEMP.	CHEMICAL					
NBCU0375B009H1	6/5/97	1055	Soil	20g / 40g	4°C	NONE	4	2	1	1	
NBCU0375B009H1	6/5/97	1055	Soil	20g / 40g	4°C	NONE	4	2	1	1	DQD4 CAP 6/19/97
NBCU0375B010H1		1105					4	2	1	1	
		1110					4	2	1	1	
		1115					4	2	1	1	
		1120					4	2	1	1	
		1130					4	2	1	1	
		1135					4	2	1	1	
		1150					4	2	1	1	

RELINQUISHED BY: SIGNATURE <u>RS DAWSON</u> PRINTED <u>RS DAWSON</u> COMPANY <u>CEERD</u> REASON <u>Analysis</u>	DATE <u>6/5/97</u> TIME <u>1300</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FED EX COMMENTS: ALL SAMPLES ARE DQD3 UNLESS OTHERWISE NOTED AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4643769115  
 SPECIAL INSTRUCTION: NONE



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: PO 4 REL-21

CLIENT NAVAL BASE CHAS PROJECT MANAGER Charlie Derronoy  
 ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 0912-08420 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) RK Brewer RST Brewer

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	SUDA-PEST	METAL-CN		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
4	2	1	1		
1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL/0375301641	8/25/77	0948	Soil	2oz; 4oz	4°C	NONE
01642		0950				
01741		0956				
01742		0959				
01841		1003				
01842		1005				
NBCL/0375301641						

RK Brewer 8/25/77

RELINQUISHED BY: SIGNATURE <u>RK Brewer</u> PRINTED <u>RK Brewer</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>8/25/77</u> TIME <u>1400</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FED EX COMMENTS: ALL SAMPLES ARE DQ 03 UNLESS OTHERWISE NOTED. AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4643769093  
 SPECIAL INSTRUCTION: \_\_\_\_\_  DISPOSED OF  
 \_\_\_\_\_  STORED (90 DAYS MAX)  
 \_\_\_\_\_  STORED OVER 90 DAYS  
 \_\_\_\_\_  RETURNED TO CUSTOMER

**Subzone H  
Groundwater**

CTO-TASK: 2912-08440  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHAL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08440 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		VDA	SVGA Res PCB	Metals, LVI		
NBCL0376W002H1	7-24-97	1345	1120	16 Amber, 12 1/2 oz 2ml	4°C	VOL-THEL MUT-HEC CN-1500	8	X	X	X		
NBCL0376W003H1	↓	1510	↓	↓	↓	↓	8	X	X	X		
NBCL0376W002H1	↓	—	↓	40 ML	↓	4°C	2	X				
<del>7-24-97</del>												

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Tech. B. Temple</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to lab</u>	DATE <u>7/24/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx COMMENTS: DRC3 + T&S  
 SHIPMENT NO. 4849149535  
 SPECIAL INSTRUCTION: SWL  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/24/97 10:33 LBL 141/300 ENSAFE ALLEN HUD -> CHARDAFE 01/01

CTO-TASK:
COC #:
BPA/SO: POY REL 21



NAVY CLEAN
ENSAFE/ALLEN&HOSHALL
(901) 383-9115

CHAIN OF CUSTODY RECORD

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy
ADDRESS Zone L TELEPHONE NO. 803-884-0029
PROJECT NAME/NUMBER 2912-08440 FAX. NO. 803-856-0107
SAMPLERS: (SIGNATURE)

Table with columns for ANALYSIS REQUIRED (NO. OF CONTAINERS, VOA, VOA Post/Pre, METALS, EN) and REMARKS. Includes handwritten '7-25-97' and a signature.

Main data table with columns: FIELD SAMPLE NUMBER, DATE, TIME, SAMPLE TYPE, TYPE/SIZE OF CONTAINER, PRESERVATION (TEMP, CHEMICAL), and analysis columns.

Relinquished/Received by table with columns for SIGNATURE, PRINTED, COMPANY, REASON, DATE, and TIME.

Method of shipment and comments table with fields for SHIPMENT NO., SPECIAL INSTRUCTION, COMMENTS, and AFTER ANALYSIS options.

**Subzone H**  
**DPT**



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-0840  
COC #: 704 RZ 21 SWL  
BPA/SO: 704 RZ 21 SWL

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0840 FAX NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) John Mayfield

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		ANALYSIS REQUIRED						REMARKS	
					TEMP.	CHEMICAL	NO. OF CONTAINERS	METALS	CA					
NBCL0376P001-H1	6/16/97	1100	H <sub>2</sub> O	1.1 Pail	4°C	*	2	X	X					DPO Lab Z
NBCL0376A003-H1	6/16/97	1105	"	"	"	"	2	X	X					" " "
NBCL0376P002-H1	6/16/97	1127	"	"	"	"	2	X	X					" " "
NBCL0376P004-H1	"	1150	"	"	"	"	2	X	X					" " "
<del>Don Buff 6-16-97</del>														

RELINQUISHED BY: <u>Don Buff</u>	DATE: <u>6/16/97</u>	RECEIVED BY:	DATE:	RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
SIGNATURE: <u>Don Bradford</u>	TIME: <u>1100</u>	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____
PRINTED: <u>Don Bradford</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>EnSafe</u>		COMPANY: _____		COMPANY: _____		COMPANY: _____	
REASON: <u>Lab</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: <u>FED EX</u>	COMMENTS: <u>ALL SAMPLES DDO/LVL 1</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>4849149863</u>	<u>* HNO<sub>3</sub>, NaOH</u>	<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: _____		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS Zone L TELEPHONE NO. 803 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803 856-0107  
SAMPLERS: (SIGNATURE) Wendell Rauls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1	X					DDO LEVEL 2
1	X					"
1	X					"
1	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Vial
					TEMP.	CHEMICAL		
X 0376P001-H1	6-16-97	11:05	H2O	40ML	4	HCL	1	X
X 0376P003-H1	6-16-97	11:15	H2O	40ML	4	HCL	1	X
X 0376P002-H1	6-16-97	11:30	H2O	40ML	4	HCL	1	X
X 0376P004-H1	6-16-97	12:00	H2O	40ML	4	HCL	1	X

*Wendell Rauls*  
*6-16-97*

RELINQUISHED BY: SIGNATURE <u>Wendell Rauls</u> PRINTED <u>Wendell Rauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-16-97</u> TIME <u>2:00</u>	RECEIVED BY: SIGNATURE <u>John B. Veroy</u> PRINTED <u>John B. Veroy</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-16-97</u> TIME <u>2:05</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Hand Delivery</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To: TARGET</u> <u>MOBILE LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL ZI SWL

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE C TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) Don Ruff

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	MS	AS	CS	VS	OS	
2	X	X				KEL SAMPLES DQD LEVEL II
2	X	X				
2	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	MS	AS	CS	VS	OS
					TEMP.	CHEMICAL						
NBCL0374P06A-H1	6/17/97	1505	H <sub>2</sub> O	1-LITER Poly	4°C	R	2	X	X			
NBLL0374P006-H1	"	1525	"	" " "	"	"	2	X	X			
NBLL0374P008-H1	"	1532	"	" " "	"	"	2	X	X			

Don Ruff  
6-18-97

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>Don Ruff</u>	<u>6-17-97</u>	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>Don Ruff</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>LAB</u>	<u>1600</u>	REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: ESOEY  
SHIPMENT NO. 4849149841  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \*HNO<sub>3</sub>, NaOH

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
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CHAIN OF CUSTODY RECORD

PAGE 2 OF 8

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DRO Level 2
2 X						"
2 X						"
2 X						"
2 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS					
					TEMP.	CHEMICAL						
0376P006-H1	6-17-97	3:15	H <sub>2</sub> O	40 ml	4	HCL	2	X				
0376P006-H1	6-17-97	3:35	H <sub>2</sub> O	40 ml	4	HCL	2	X				
0376P008-H1	6-17-97	3:40	H <sub>2</sub> O	40 ml	4	HCL	2	X				
0376P008-H1	6-17-97	3:45	H <sub>2</sub> O	40 ml	4	HCL	2	X				
0376P008-H1	6-17-97	4:00	H <sub>2</sub> O	40 ml	4	HCL	2	X				

*Wendell Rawls*  
6-17-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-17-97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>DAVID BUONICCONTI</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/18/97</u> TIME <u>3:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To: TARGET</u> <u>make LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
--	-----------------------------------	---

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval base Charleston PROJECT MANAGER Charlie Kernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) C. Davis

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	UN				
1	X	X				D&O Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	UN	REMARKS
					TEMP.	CHEMICAL				
NBCLSP001-H1	6-17-97	1445	soil	4oz (Glas)	4°C	-	1	X	X	D&O Level II
<del>_____</del> <u>C. Davis</u> <u>6-17-97</u>										

RELINQUISHED BY: SIGNATURE <u>C. Davis</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/17/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149841</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>D&amp;O Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-----------------------------------	---



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 5 OF 8

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VEKNOY  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912 08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
<u>10A</u>						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO.	X									
					TEMP.	CHEMICAL											
<u>0375001-H1</u>	<u>6-17-97</u>	<u>1452</u>	<u>SOIL</u>	<u>2 OZ JAR</u>	<u>4</u>	<u>None</u>	<u>1</u>	<u>X</u>									<u>DOD leve LZ</u>
<u>Wendell Rando</u> <u>6-17-97</u>																	

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/17/97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUORSTON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/17/97</u> TIME <u>3:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: U. TARGET  
public LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REC Z1 SWL

CLIENT: Navy Base Charleston PROJECT MANAGER: CHARLIE VERNON  
 ADDRESS: Zone L TELEPHONE NO. (803) 834-0024  
 PROJECT NAME/NUMBER: 2912-08410 FAX NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	IN	OUT	...	...	...	...	...	...	...	...		
2	X	X										ALL SAMPLES DQO LEVEL II
2	X	X										
1		X										
1	X											

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	IN	OUT	...	...	...	...	...	...	...	...	
					TEMP.	CHEMICAL												
NBCL0376PO10-H1	6/18/97	0850	H <sub>2</sub> O	1-LITER Poly	4°C	*	2	X	X									
NBCL0376PO11-H1	"	0910	"	"	"	"	2	X	X									
NBCL0376PO12-H1	"	0930	"	"	"	"	1		X									
"	"	0940	"	"	"	"	1	X										

[Signature]  
 6/18/97

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>6-18-97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>	TIME: _____	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____
PRINTED: <u>[Signature]</u>	COMPANY: <u>EnSafe</u>	PRINTED: _____	COMPANY: _____	PRINTED: _____	COMPANY: _____	PRINTED: _____	COMPANY: _____
REASON: <u>Lab</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: FEDEx COMMENTS: ALL SAMPLES DQO LEVEL II AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849149830 \*HNO<sub>3</sub>, NaOH  DISPOSED OF  
 SPECIAL INSTRUCTION: \_\_\_\_\_  STORED (90 DAYS MAX)  
 \_\_\_\_\_  STORED OVER 90 DAYS  
 \_\_\_\_\_  RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell R. Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DRO LEVEL 2
2 X						"
2 X						"
1 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
037GP010-H1	6-18-97	8:55	H <sub>2</sub> O	40 ml	4	HCL
037GP011-H1	6-18-97	9:20	H <sub>2</sub> O	40 ml	4	HCL
037GP012-H1	6-18-97	9:40	H <sub>2</sub> O	40 ml	4	HCL
037TP012-H1	6-18-97	10:16	H <sub>2</sub> O	40 ml	4	HCL

*Wendell Rawls*  
*6-18-97*

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-18-97</u> TIME <u>10:20</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JORTH BIVON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/18/97</u> TIME <u>11:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To: TARGET</u> <u>Mobile LAB</u>	_____	



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: P04 REL 21 SWL

CLIENT Naval Base Charleston

PROJECT MANAGER Charlie Vernoy

ADDRESS Zone L

TELEPHONE NO. (403) 884-0029

PROJECT NAME/NUMBER 2912-08410

FAX NO. (803) 856-0107

SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CN			
1	X	X			DDO Level II
1	X	X			
1	X	X			
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL	Metals	CN					
NBCLO37SP003-H1	6-18-97	0830	Soil	4oz (glass)	4°C	—	1	X	X				
NBCLO37SP004-H1		0850					1	X	X				
NBCLO37SP005-H1		0901					1	X	X				
NBCLO37SP006-H1		0915					1	X	X				

*[Signature]*  
6-18-97

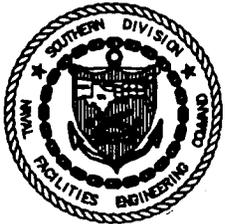
RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>6/14/97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: FedEx  
SHIPMENT NO. 4849149830  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: DDO Level II

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) Ch 7/14/97



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NMRL Base Charleston PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
<u>1</u>					<u>DOO LEVEL 2</u>
<u>1</u>					<u>"</u>
<u>1</u>					<u>"</u>
<u>1</u>					<u>"</u>

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION								
					TEMP.	CHEMICAL							
<u>X 037SP003-H1</u>	<u>6-18-97</u>	<u>0830</u>	<u>SOIL</u>	<u>2 oz Jar</u>	<u>4</u>	<u>None</u>	<u>1</u>	<u>X</u>					
<u>X 037SP004-H1</u>	<u>6-18-97</u>	<u>0850</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>					
<u>X 037SP005-H1</u>	<u>6-18-97</u>	<u>0901</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>					
<u>X 037SP006-H1</u>	<u>6-18-97</u>	<u>0915</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>X</u>					

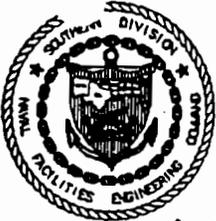
*Unusable Results*  
6-18-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/18/97</u> TIME <u>10:20</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BULLIETTE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/18/97</u> TIME <u>11:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Hand Delivered</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To TARGET mobile LAB</u>	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

06/25/97 16:44 TEL 7477306 ENSAFE ALLEN HOS →→→ CHARSAFE 03



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernicy  
 TELEPHONE NO. (803) 884-0029  
 FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	Metals	CAI		
1	X	X		DDO Level II
1	X	X		
1	X	X		
2	X	X		
2	X	X		
2	X	X		
1	X	X		
2	X	X		
1	X	X		
2	X	X		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CAI	REMARKS
					TEMP.	CHEMICAL				
<del>NBCL037SPO6A-H1</del>	<del>6/25/97</del>	<del>1400</del>	<del>S</del>	<del>4oz (glass)</del>			<del>1</del>	<del>X</del>	<del>X</del>	
NBCL037SPO6A-H1	6/25/97	1400	Soil	4oz (glass)	4°C	—	1	X	X	
NBCL037SPO02-H1		1415				—	1	X	X	
NBCL0376P009-H1		1435	Water	1 Liter (Poly)		HNO <sub>3</sub> NACH	2	X	X	
NBCL0376P013-H1		1450	"	"		"	2	X	X	
NBCL0376P014-H1		1505	"	"		"	2	X	X	
NBCL037SPO07-H1		1520	Soil	4oz (glass)		—	1	X	X	
NBCL0376P015-H1		1530	Water	1 Liter (Poly)		HNO <sub>3</sub> NACH	2	X	X	
NBCL037SPO08-H1		1540	Soil	4oz (glass)		—	1	X	X	
NBCL037EPO6A-H1		1358	Water	1 Liter (Poly)		HNO <sub>3</sub> NACH	2	X	X	

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>6/25/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>484929793</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DDO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-855-0029  
 PROJECT NAME/NUMBER 2914-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOA						DGS LEVEL 2
						"
						"
						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X 037SP06A-H1	6-25-97	1358	SOIL	2 OZ JAR	4	NONE
X 037SP002-H1	6-25-97	1415	"	" "	"	"
X 037SP007-H1	6-25-97	1505	"	" "	"	"
X 037SP008-H1	6-25-97	1530	"	" "	"	"

*Wendell Randa*  
 6-25-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/25/97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TRIA BURKITE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/25/97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-09410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLOTTE VERNON  
 ADDRESS Zone L TELEPHONE NO. 803-855-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Pauls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
X 2						DGO LEVEL 2
X 2						"
X 2						"
X 2						"
X 7						TRIP BLANK
X 2						EQUIPMENT BLANK

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOL
					TEMP.	CHEMICAL		
X 0376P009-H1	6-25-97	2:45	H <sub>2</sub> O	40 mL	4	HCL	X	2
X 0376P013-H1	6-25-97	2:55	H <sub>2</sub> O	40 ml	4	HCL	X	2
X 0376P014-H1	6-25-97	3:10	H <sub>2</sub> O	40 mL	4	HCL	X	2
X 0376P015-H1	6-25-97	3:40	H <sub>2</sub> O	40 mL	4	HCL	X	2
X 037TP015-H1	6-25-97	3:40	H <sub>2</sub> O	40 mL	4	HCL	X	7
X 037EP06A-H1	6-25-97	1358	H <sub>2</sub> O	40 ML	4	HCL	X	2

RELINQUISHED BY: SIGNATURE <u>Wendell Pauls</u> PRINTED <u>Wendell Pauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-25-97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JERRY BURRITT</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-25-97</u> TIME <u>4:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. _____	_____	<input type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: <u>To: TARGET</u>	_____	<input type="checkbox"/> STORED (90 DAYS MAX)
<u>Mobile LAB</u>	_____	<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHAL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
 COC #:           
 BPA/SO: P4 Rezzi Sinc

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERADY  
 ADDRESS ZONE L TELEPHONE NO. (803)884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. (803)856-0107  
 SAMPLERS: (SIGNATURE) Sarah J. Baird

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	1	2	3	4	5	
METALS CA						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	1	2	3	4	5	REMARKS
					TEMP.	CHEMICAL							
NBCLO376P016H1	6-26-97	0625	H2O	2-1/2 Poly	4"	*	2	X	X				D90 Level 2
NBCLO376P017H1	"	0900	"	"	"	"	2	X	X				"
NBCLO376P018H1	"	0920	"	"	"	"	2	X	X				"
NBCLO376P019H1	"	0950	"	"	"	"	2	X	X				"
NBCLO376P020H1	"	1015	"	"	"	"	2	X	X				"
NBCLO376P021H1	"	1035	"	"	"	"	2	X	X				"
NBCLO376P022H1	"	1120	"	"	"	"	2	X	X				"
NBCLO376P023H1	"	1140	"	"	"	"	2	X	X				"
NBCLO376P025H1	"	0105	"	"	"	"	2	X	X				"
NBCLO376P026H1	"	0125	"	"	"	"	2	X	X				"

RELINQUISHED BY: SIGNATURE <u>Sarah J Baird</u> PRINTED <u>Sarah L. Baird</u> COMPANY <u>E/144</u> REASON <u>ANALYSIS</u>	DATE <u>6-26-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4849149782  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* NaOH, HNO3

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER





AMENDED

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-084

COC #: \_\_\_\_\_

BPA/SO: Po 4 Per 21 SWL

Environmental and Safety Designs, Inc.

935 Houston Northcutt Blvd., Ste. 113 • Mt. Pleasant, SC 29464

CLIENT NAVAL BASE CHARLESTON  
(803) 884-0029

PROJECT MANAGER CHARLIE VELODY

ADDRESS ZONEL

TELEPHONE NO. (803) 884-0029

PROJECT NAME/NUMBER 2912-084-101

FAX NO. (803) 876-0107

SAMPLERS: (SIGNATURE) [Signature]

ANALYSIS REQUIRED

NO. OF CONTAINERS	ANALYSIS REQUIRED		REMARKS
	MEMS	SWL	
2	X	X	DDO LVL 2
1	X	X	"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	REMARKS
					TEMP.	CHEMICAL		
NBCL0376POZZ-H1	6-26-97	1100	H <sub>2</sub> O	2-12 Poly	40C	*	2	DDO LVL 2
NBCL0375PO14-H1	"	1018	Soil	1-2oz Glass	"	None	1	"

[Signature] 6-26-97

RELINQUISHED BY: [Signature]  
SIGNATURE  
PRINTED: JACK MARRAS  
COMPANY: ETA-4  
REASON: ANALYSIS

DATE: 6-26-97  
TIME: 1600  
RECEIVED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

DATE \_\_\_\_\_  
TIME \_\_\_\_\_  
RELINQUISHED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

DATE \_\_\_\_\_  
TIME \_\_\_\_\_  
RECEIVED BY:  
SIGNATURE \_\_\_\_\_  
PRINTED \_\_\_\_\_  
COMPANY \_\_\_\_\_  
REASON \_\_\_\_\_

DATE \_\_\_\_\_  
TIME \_\_\_\_\_

METHOD OF SHIPMENT: \_\_\_\_\_  
SHIPMENT NO. \_\_\_\_\_  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: P04 REL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
Metals CPO					DQO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
NBCL037SP009-H1	06/26/97	0833	Soil	4oz (Glass)	4°C	—				
NBCL037SP010-H1		0850								
NBCL037SP011-H1		0925								
NBCL037SP012-H1		0940								
NBCL037SP013-H1		0900								
NBCL037SP016-H1		1326								
NBCL037SP017-H1		1340								

[Signature]  
0-26-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/26/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849149742</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DQO level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARISE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-983-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-986-0107  
 SAMPLERS: (SIGNATURE) Wendell C Rembe

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DDO LEVEL 2
2 X						"
2 X						"
2 X						"
2 R						"
2 X						"
2 X						"
2 X						"
2 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
X 037CP016-H1	6-26-97	8:40	H <sub>2</sub> O	40ml	4	HCL	2	X	DDO LEVEL 2
X 037CP017-H1	6-26-97	9:05	H <sub>2</sub> O	40ml	4	HCL	2	X	"
037CP018-H1	6-26-97	9:40	H <sub>2</sub> O	40ml	4	HCL	2	X	"
037CP019-H1	6-26-97	10:10	H <sub>2</sub> O	40ml	4	HCL	2	X	"
037CP021-H1	6-26-97	10:25	H <sub>2</sub> O	40ml	4	HCL	2	R	"
037CP023-H1	6-26-97	10:45	H <sub>2</sub> O	40ml	4	HCL	2	X	"
037CP022-H1	6-26-97	11:16	H <sub>2</sub> O	40ml	4	HCL	2	X	"
037CP020-H1	6-26-97	11:30	H <sub>2</sub> O	40ml	4	HCL	2	X	"
037CP024-H1	6-26-97	11:50	H <sub>2</sub> O	40ml	4	HCL	2	X	"
037CP025-H1	6-26-97	1:15	H <sub>2</sub> O	40ml	4	HCL	2	X	"

RELINQUISHED BY:  
 SIGNATURE Wendell Rembe  
 PRINTED Wendell Rembe  
 COMPANY TARGET  
 REASON LAB

DATE 6-26-97  
 RECEIVED BY:  
 SIGNATURE John D. Versteeg  
 PRINTED JOHN D. VERSTEEG  
 COMPANY TARGET  
 REASON LAB

DATE \_\_\_\_\_  
 RELINQUISHED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 RECEIVED BY:  
 SIGNATURE \_\_\_\_\_  
 PRINTED \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 REASON \_\_\_\_\_

DATE \_\_\_\_\_  
 TIME \_\_\_\_\_

METHOD OF SHIPMENT: HAND DELIVERED  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO: TARGET  
Mobile LAB

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 2 OF 3

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Pauls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DGO LEVEL 2
2 X						"
2 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL							
0376P026-H1	6-26-97	1:35	H <sub>2</sub> O	40 ml	4	HCL	2	X					
0376P027-H1	6-26-97	1:50	H <sub>2</sub> O	40 ml	4	HCL	2	X					
0376P027-H1	6-26-97	1:55	H <sub>2</sub> O	40 ml	4	HCL	2	X					
<i>Wendell Pauls</i> 6-26-97													

RELINQUISHED BY: SIGNATURE <u>Wendell Pauls</u> PRINTED <u>Wendell Pauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-26-97</u> TIME <u>2:10</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>John B. Vester</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/16/97</u> TIME <u>2:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To TARGET</u> <u>MOBILE LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_







NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTD-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: P04 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	METALS	CA					
2	X	X					DQD Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
NBC L Ø37 GP Ø38-H1	6/27/97	1315	W	Poly 1 Lit.	4°C	*	2	X	X			

[Signature]  
6-27-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>6/27/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4849149771  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* NaOH; HNO<sub>3</sub>

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

01/04

ENSAFE ALLEN HOS

06/27/97 15:18 TEL 7477306



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-03410  
COC #: \_\_\_\_\_  
BPA/SO: PO4 REL 21 SWL

CLIENT Nuclear Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-03410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Kervoy  
TELEPHONE NO. (803) 854-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	Mo tests	CAI		
				DDO level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Mo tests	CAI	REMARKS
					TEMP.	CHEMICAL				
NBCL0375P018-H1	6/27/97	0824	Soil	4oz(glass)	4C	—	1	X	X	
NBCL0375P019-H1		0834					1	X	X	
NBCL0375P020-H1		0845					1	X	X	
NBCL0375P021-H1		0900					1	X	X	
NBCL0375P022-H1		0930					1	X	X	
NBCL0375P023-H1		0947					1	X	X	
NBCL0375P024-H1		1008					1	X	X	
NBCL0375P025-H1		1050					1	X	X	

[Signature] 6-27-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C. J. J. S.</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/27/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>Fed Ex</u> SHIPMENT NO. <u>4849144771</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DDO level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 4

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

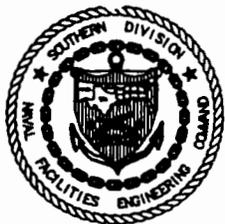
NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2	X					DDO LEVEL 2
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"
2	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X 0376P028-H1	6-27-97	8:40	H <sub>2</sub> O	40 ml	4	HCL
X 0376P029-H1	6-27-97	8:55	H <sub>2</sub> O	40 ml	4	HCL
X 0376P030-H1	6-27-97	9:15	H <sub>2</sub> O	40 ml	4	HCL
X 0376P031-H1	6-27-97	9:30	H <sub>2</sub> O	40 ml	4	HCL
X 0376P032-H1	6-27-97	9:45	H <sub>2</sub> O	40 ml	4	HCL
X 0376P033-H1	6-27-97	10:05	H <sub>2</sub> O	40 ml	4	HCL
X 0376P034-H1	6-27-97	10:30	H <sub>2</sub> O	40 ml	4	HCL
X 0376P035-H1	6-27-97	11:15	H <sub>2</sub> O	40 ml	4	HCL
X 0376P036-H1	6-27-97	12:45	H <sub>2</sub> O	40 ml	4	HCL
X 0376P037-H1	6-27-97	1:05	H <sub>2</sub> O	40 ml	4	HCL

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-27-97</u> TIME <u>2:15</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>CHARLIE VERNON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/27</u> TIME <u>2:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 4

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rauls

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOAK	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL				
K 0376P038-H1	6-27-97	1:20	H <sub>2</sub> O	40 ML	4	HCL	2	X		DDO LEVEL 2
K 0377P038-H1	6-27-97	1:36	H <sub>2</sub> O	40 ML	4	HCL	2	X		"
<p><i>Wendell Rauls</i>          6-27-97</p>										

RELINQUISHED BY: SIGNATURE <u>Wendell Rauls</u> PRINTED <u>Wendell Rauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/27/97</u> TIME <u>2:15</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B VORSTEE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/27/97</u> TIME <u>2:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1						DDO LEVEL 2
1						"
1						"
1						"
1						"
1						"
1						"
1						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
X 037SP018-H1	6-27-97	0824	SOIL	2 oz Jar	4	NONE	1	X	DDO LEVEL 2
X 037SP019-H1	6-27-97	0834	"	"	"	"	1	X	"
X 037SP020-H1	6-27-97	0845	"	"	"	"	1	X	"
X 037SP021-H1	6-27-97	0900	"	"	"	"	1	X	"
X 037SP022-H1	6-27-97	0930	"	"	"	"	1	X	"
X 037SP023-H1	6-27-97	0947	"	"	"	"	1	X	"
X 037SP024-H1	6-27-97	1008	"	"	"	"	1	X	"
X 037SP025-H1	6-27-97	1050	"	"	"	"	1	X	"
Wendell Rousey 6-27-97									

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/27/97</u> TIME _____	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>DENNIS VERNON</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/27/97</u> TIME <u>3:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET  
mobile LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #:

BPA/SO: PO4 REL 215WL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
Metals CA					DQO Lact/II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS											
					TEMP.	CHEMICAL												
✓ NBCL037GP033H	6/28/97	0818	W	Poly/1Ltr	4°C	*	1											
✓ NBCL037GP033M1	6/27/97	0950					1											
✓ NBCL037GP037	6/28/97	0830					2											
✓ NBCL037GP014-7L	6/28/97	1105					2											
✓ NBCL037GP011-7L	6/28/97	1330					2											
✓ NBCL037GP006-7L	6/29/97	1405																
✓ NBCL037GP040-7L	6/29/97	1440																
✓ NBCL037GP041-7L	6/28/97	1440																
<del>[Signature] 6/28/97</del>																		

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	6/30/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>Julian C. Cooney</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>*Metals preserved w/ HNO<sub>3</sub></u> <u>CA preserved w/ NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849149760</u>		
SPECIAL INSTRUCTION: _____		



**NAVY CLEAN**  
**ENSAFE/ALLEN & HOSHALL**  
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2910-08410

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	Metals	Cu					
1	X	X					D&D Level II
1	X	X					
1	X	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	Cu				
					TEMP.	CHEMICAL							
✓ NBCL037SP028-111	6/28/97	0813	soil	4oz(glass)	4°C	—	1	X	X				
NBCL037SP027-111		0831					1	X	X				
NBCL037SP026-111							1	X	X				CD

*[Signature]*  
 6-28-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>Ensafe Lab</u> REASON _____	DATE <u>6/28/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4849149760  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: D&D level II

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
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**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Beard

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL						
0375PO28-H1	6-28-97	0813	SOIL	2 oz Jar	4	NONE	1	X				DQO LEVEL 2
0375PO27-H1	6-28-97	0828	"	" "	"	"	1	X				"

RELINQUISHED BY: SIGNATURE <u>Randy Beard</u> PRINTED <u>RANDY BEARD</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/28/97</u> TIME <u>3:30</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TARGET</u> COMPANY <u>LAD</u> REASON _____	DATE <u>6/28/97</u> TIME <u>3:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET  
Mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS Zone L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DOO LEVEL 2
2 X						"
2 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
0376P040-H1	6-28-97	2:40	H <sub>2</sub> O	40ml	4	HCL
0376P041-H1	6-28-97	2:50	H <sub>2</sub> O	40ml	4	HCL
637TP041-H1	6-28-97	2:50	H <sub>2</sub> O	40ml	4	HCL

*Wendell Rawls*

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/28/97</u> TIME <u>5:30</u>	RECEIVED BY: SIGNATURE <u>John B. V...</u> PRINTED <u>John B. V...</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/28/97</u> TIME <u>3:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>Mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 CDC #: \_\_\_\_\_  
 BPA/SO: P04 REL 21 SWL

CLIENT Naval Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) C. Davis

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-8029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	CU				
1	X	X				DDO Level II
1	X	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
UBCLD37SPD.33-1H1	6-29-97	0824	Soil	4oz (glass)	4°C	—	1	X	X	
UBCLD37SPD.31-1H1		0850					1	X	X	
UB-CD										

*Handwritten signature and date:*  
6-29-97

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>C. Davis</u>	<u>6/30/97</u>	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>C. Davis</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>	TIME <u>1700</u>	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>DDO Level II</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>449149760</u>		
SPECIAL INSTRUCTION: _____		



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE 2 TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1 X						DRO LEVEL 2
1 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
X 037SP033-H1	6-29-97	0834	SOIL	2 oz Jar	4	NONE	1	X			
X 037SP031-H1	6-29-97	0850	SOIL	" "	" "	" "	1	X			

*Wendell Banks*  
 6-29-97

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/29/97</u> TIME _____	RECEIVED BY: SIGNATURE <u>John O. Williams</u> PRINTED <u>JOHN O WILLIAMS</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/29/97</u> TIME <u>2:42</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>To TARGET mobile LAB</u>	_____	



**NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL**  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2412-158410

CDC #: \_\_\_\_\_

BPA/SO: Dr. 201 2. SWL

CLIENT NAS Charleston PROJECT MANAGER Charlie Venny  
 ADDRESS Z021 TELEPHONE NO. 803-883-0329  
 PROJECT NAME/NUMBER 2412-158410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Sam J. Beard

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	Metals	Cn										
2	X	X										DAO level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	Cn									
					TEMP.	CHEMICAL												
NBCA0376P047H1	6/29/97	0830	W	Poly/1Ltr.	4°C	*	2	X	X									
NBCL0376P046H1		0900	W															
NBCL0376P044H1		0955																
NBCL0376P048H1		1010																

6/29/97  
Sam J. Beard

RELINQUISHED BY: SIGNATURE <u>John C. Cox</u> PRINTED <u>John C. Cox</u> COMPANY <u>En Safe</u> REASON <u>Lab</u>	DATE <u>6/30/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4449149760  
 SPECIAL INSTRUCTION: \_\_\_\_\_  
 COMMENTS: \*Metals preserved w/ HNO<sub>3</sub>  
Cn preserved w/ NaOH  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

00/00/91 11:00 TEL 141/000 ENSAFE ALLEN BOX 777 VANDARBILT



**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 3 OF 5

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
ADDRESS ZONE L TELEPHONE NO. 803-883-6029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-886-0107  
SAMPLERS: (SIGNATURE) Wendell C. Pauls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2	X					DBO LEVEL 2
2	X					"
2	X					"
2	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	X										
					TEMP.	CHEMICAL												
X 0376P047-H1	6-29-97	8:55	H <sub>2</sub> O	40ml	4	HCL	2	X										
X 0376P046-H1	6-29-97	9:10	H <sub>2</sub> O	40ml	4	HCL	2	X										
X 0376P044-H1	6-29-97	9:57	H <sub>2</sub> O	40 ml	4	HCL	2	X										
X 0376P048-H1	6-29-97	10:15	H <sub>2</sub> O	40 ml	4	HCL	2	X										

*Wendell Pauls*  
6-29-97

RELINQUISHED BY: SIGNATURE <u>Wendell Pauls</u> PRINTED <u>Wendell Pauls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-29-97</u> TIME <u>2:15</u>	RECEIVED BY: SIGNATURE <u>John P. Volzter</u> PRINTED <u>JOHN P VOLZTER</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/29/97</u> TIME <u>2:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>WAMP DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To: TARGET mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-0841.0

COC #: \_\_\_\_\_

BPA/SO: PO4 REL 21 SW2

CLIENT Navy Base Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08410  
 SAMPLERS: (SIGNATURE) C Davis

PROJECT MANAGER Charlie Vernoy  
 TELEPHONE NO. (803) 884-0029  
 FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	CU			
1	X	X			DDO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	Metals	CU				
					TEMP.	CHEMICAL							
NBCLO37SP026-H1	7-1-97	1127	Soil	4oz (glass)	4°C	-	1	X	X				
NBCLO37SP029-H1		1142					1	X	X				
NBCLO37SP030-H1		1324					1	X	X				
NBCLO37SP032-H1		1340					1	X	X				

*Analysis*  
7-1-97

RELINQUISHED BY: SIGNATURE <u>C Davis</u> PRINTED <u>C Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7/1/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 4849149756  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0529  
 PROJECT NAME/NUMBER 2912-08416 FAX. NO. 803-856-6107  
 SAMPLERS: (SIGNATURE) Randy Brans

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
VOA						DRO LEVEL 2

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
X 037SP026-H1	7-1-97	1127	SOIL	2 02 Jar	4	NONE	1
F 037SP029-H1	7-1-97	1142	"	" "	"	"	1
037SP030-H1	7-1-97	1324	"	" "	"	"	1
037SP032-H1	7-1-97	1346	"	" "	"	"	1
<p><i>Wendell Pauls</i> 7-1-97</p>							

RELINQUISHED BY: SIGNATURE <u>Randy Brans</u> PRINTED <u>RANDY BRANS</u> COMPANY <u>TRACET</u> REASON <u>LAB</u>	DATE <u>7/1/97</u> TIME	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN VORSTER</u> COMPANY <u>TRACET</u> REASON <u>LAB</u>	DATE <u>7/1/97</u> TIME <u>3:10</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME
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METHOD OF SHIPMENT: Hand Delivered COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TRACET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
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CHAIN OF CUSTODY RECORD

7/3/97 JS

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #:

BPA/SO: POY RE-21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Verroy  
TELEPHONE NO. (803) 884-0029  
FAX NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	En				
3	X	X				D90 Lu 2
2	X	X				"
2	X	X				"
2	X	X				"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
1 NBCL0376P039-H1	7/1/97	1330	W	Poly / 1 Liter	4°C	*					
1 NBCL0376P042-H1	7/1/97	1355	W	Poly / 1 Liter	4°C	*					
1 NBCL0376P043-H1	"	1410	"	"	4°C	*					
1 NBCL0376P045-H1	"	1430	"	"	"	*					

[Signature] 7-1-97

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Julian Sedey</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>7-1-97</u> TIME <u>1600</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	--	---	--------------------------------	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>4849149756</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>* Metals preserved w/ HNO<sub>3</sub> / NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
 ENSAF/ALLEN & HOSHALL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DOO LEVEL 2
2 X						"
2 X						"
2 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X 037GP039-H1 037 WE	7-1-97	1:35	H2O	40 mL	4	HCL
7 037GP042-H1 037 WE	7-1-97	2:00	H2O	40 mL	4	HCL
X 037GP043-H1 037 WE	7-1-97	2:10	H2O	40 mL	4	HCL
7 037GP045-H1	7-1-97	2:45	H2O	40 mL	4	HCL

*Wendell Rawls*  
 7-1-97

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON _____	DATE <u>7/1/97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TARGET</u> COMPANY <u>LAD</u> REASON _____	DATE <u>7/1/97</u> TIME <u>49</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>TO TARGET</u> <u>MOBILE LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**Subzone I  
Soil Boring**



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4 Bldg 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Paul B. Bluth Jr.

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
					TEMP.	CHEMICAL		VOA	SVOA	Metals	CN	Pest/PCB	
NBCL/037SB005H1	5/19/99	1054	Soil	2-202, 2-402	4°C	None	4	X	X	X	X	X	
NBCL/037SB005H2		1105					4	X	X	X	X	X	
NBCL/037SB005I1		1212					4	X	X	X	X	X	
NBCL/037SB005I2		1232					4	X	X	X	X	X	
NBCL/037CB005I2		1232					4	X	X	X	X	X	
NBCL/037SB005H1		1504					4	X	X	X	X	X	
NBCL/037CB005H1		1504					4	X	X	X	X	X	
NBCL/037TB005H1	✓	—	✓	2-202	✓	✓	2	X					
<del>Removed by Paul B. Bluth Jr. 5/19/99</del>													

RELINQUISHED BY: SIGNATURE <u>Paul B. Bluth Jr.</u> PRINTED <u>Paul B. Bluth Jr.</u> COMPANY <u>Ensafe</u> REASON <u>Analysis</u>	DATE <u>6/19/99</u> TIME <u>1645</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
 SHIPMENT NO. 0904036722  
 SPECIAL INSTRUCTION: None

COMMENTS: All samples are DQO3.

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

Zone L Amended 6/10/97

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SC: P.04REL-2130L

CLIENT NAVAL BASE CHAS.  
ADDRESS ZONE L CW  
PROJECT NAME/NUMBER 0912-0840  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER CHARLIE VERNON  
TELEPHONE NO. 803-884-0029  
FAX NO. \_\_\_\_\_  
[Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	YSA	SYNTHETIC	METAL	CAN	
4	2	1	1		
4	2	1	1		
4	2	1	1		

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	YSA	SYNTHETIC	METAL	CAN	REMARKS
					TEMP.	CHEMICAL						
NBELH37EBO06I1	6/9/97	0945	SOIL	Zone L	4°C	NONE	4	2	1	1		
↓ OOB I1	↓	0955	↓	↓	↓	↓	4	2	1	1		
↓ OOB I2	↓	1005	↓	↓	↓	↓	4	2	1	1		
NEL037TBO0B12	6/9/97	—	SOIL	Zone	4°C	NONE	1					

RELINQUISHED BY: <u>[Signature]</u> SIGNATURE PRINTED <u>CS/VAWS 60</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/9/97</u> TIME <u>1600</u>	RECEIVED BY: _____ SIGNATURE PRINTED _____ COMPANY REASON _____	DATE _____ TIME _____	RELINQUISHED BY: _____ SIGNATURE PRINTED _____ COMPANY REASON _____	DATE _____ TIME _____	RECEIVED BY: _____ SIGNATURE PRINTED _____ COMPANY REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FEL EX  
SHIPMENT NO. 1643769060  
SPECIAL INSTRUCTION: NONE

COMMENTS: ALL SAMPLE ARE DQ03 UNLESS OTHERWISE NOTED.

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4 REL-21 SWL

CLIENT NAVAL BASE CHAS PROJECT MANAGER Charlie Werny  
 ADDRESS ZONE I (L) TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 0912-0840 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) RK Brewer RS Deussen

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VDA	SIDELINE	METAL	CN	
4	2	1	1	1	
4	2	1	1	1	
1	1				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NECL037002I1	6/10/97	0840	Soil	Zone I 4oz	4°C	NONE
NECL0375B004I1		0845				
NECL037TB004I1				2oz		

*RS Deussen*  
6.10.97

RELINQUISHED BY: SIGNATURE <u>RK Brewer</u> PRINTED <u>RK Brewer</u> COMPANY <u>CEERD</u> REASON <u>ANALYSIS</u>	DATE <u>6/10/97</u> TIME <u>1500</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>4643769034</u> SPECIAL INSTRUCTION: <u>NONE</u>	COMMENTS: <u>ALL SAMPLES ARE DQ03 UNLESS NOTED IN REMARKS</u> <u>PKS</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

**Subzone I  
Groundwater**

07/25/97 16:21 TEL 7477306 ENSAFE ALLEN HOS CHARSAFE

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: PCY REL 21



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verray  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08440 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	VOA	6 to A, Pest/PEB	Metals, I, EN		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X	X	X		
8	X				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\0376W002E1	7-25-97	0845	It20	1 Amber, 11 Poly 40 mL VOA	4°C	VOA-MCL PEB-MCL MET-MCL
NBCL\0376W001H1	7-25-97	1005				
NBCL\0376W002G1	7-25-97	1115				
NBCL\0376W001G1	7-25-97	1215				
NBCL\0376W001A1	7-25-97	1445				
NBCL\0376W001A1	7-25-97			40 mL		

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B. Teypte</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to Lab</u>	DATE <u>7/25/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: FedEx COMMENTS: DQ03 r ties AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849147502  
 SPECIAL INSTRUCTION: SWL  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

**Subzone I**  
**DPT**



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 REL 21 SWL

CLIENT NAVY BASE CHARLESTON PROJECT MANAGER CHARLIE JENNOX  
 ADDRESS ZONE 6 TELEPHONE NO. (803) 884-0079  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. (803) 856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	METALS	CN					
2	X	X					All SAMPLES LEVEL # DDD

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL0374P001-I1	6/17/97	1435	H <sub>2</sub> O	1-LITER Poly	40C	*

[Signature]  
6-17-97

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>6-17-97</u>	RECEIVED BY: _____	DATE: _____	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>		SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>Don Behar</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>EnSafe</u>	TIME: <u>1600</u>	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <u>Lab</u>		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: <u>FedEx</u>	COMMENTS: <u>LEVEL # DDD</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849149641</u>	<u>* HNO<sub>3</sub>, CN</u>	
SPECIAL INSTRUCTION: _____	_____	





**NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL**  
(901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #: \_\_\_\_\_

BPA/SO: DO4 REL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone L  
PROJECT NAME/NUMBER 2912-08410  
SAMPLERS: (SIGNATURE) [Signature]

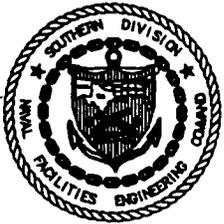
PROJECT MANAGER Charlie Vernon  
TELEPHONE NO. (803) 884-0029  
FAX. NO. (803) 856-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	Oil	_____	_____	
1 X X					DDO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NBC10375PO01-I1	6-17-97	1420	Soil	4oz (glass)	4C	-	1 X X		
<i>[Large handwritten signature and date 6-17-97 crossing out the table]</i>									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>C Davis</u> COMPANY <u>Ensafe</u> REASON <u>Lab</u>	DATE <u>6/17/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4849149841</u> SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	1	2	3	4	
<u>1</u>	<u>X</u>				<u>DDO level 2</u>

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
<u>1037SP001-F1</u>	<u>6-17-97</u>	<u>1420</u>	<u>SOIL</u>	<u>2 02 JAR</u>	<u>4</u>	<u>NONE</u>	<u>1</u>	<u>X</u>	<u>DDO level 2</u>
<u>Wendell Paul</u> <u>6-17-97</u>									

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/17/97</u> TIME <u>4:00</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN B CONSTABLE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/17/97</u> TIME <u>5:15</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To: TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
ENSAFEE/ALLEN & HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-09410  
COC #: \_\_\_\_\_  
BPA/SO: P04 BEL 21 SWL

CLIENT Naval Base Charleston  
ADDRESS Zone 6  
PROJECT NAME/NUMBER 2912-09410  
SAMPLERS: (SIGNATURE) [Signature]

PROJECT MANAGER Charlie Kearney  
TELEPHONE NO. (803) 834-0029  
FAX. NO. (803) 356-0107

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Mo	Bi	SV	Other	
1	X	X			DQO Level II
1	X	X			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
NBCL0375P005-I	6/27/97	1230	Soil	4oz (glass)	4°C	—	1	X X	
NBCL0375P005-II	6/27/97	1230	Soil	"	"	—	1	X X	
<p><i>[Handwritten Signature]</i> 6-27-97</p>									

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Ed Davis</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/27/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex  
SHIPMENT NO. 484914977  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNY  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-886-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
1	X					DDO LEVEL 2
1	X					"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
037SP005-I1	6-27-97	1230	SOIL	2 oz Jar	4	NONE					
037SP008-I1	6-27-97	1330	"	" "	4	"					
<p>Wendell Brand 6-27-97</p>											

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/27/97</u> TIME	RECEIVED BY: SIGNATURE <u>John B. ...</u> PRINTED <u>JOHN B. ...</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/27/97</u> TIME <u>3:20</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME
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METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
ENSAFE/ALLEN & HOSHAL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410

COC #:

BPA/SO: PO4 REL 215WL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verney  
 ADDRESS Zone L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
	Metals	Cd			
1					DDO Level II
1					
2					
2					
2					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
✓ NBCL037GP033HI	6/28/97	0818	W	Poly/1Ltr	4°C	*	1			
✓ NBCL037GP033HI	6/27/97	0950					1			
✓ NBCL037GP033HI	6/28/97	0830					2			
✓ NBCL037GP0107I	6/28/97	1105					2			
✓ NBCL037GP0117I	6/28/97	1330					2			
✓ NBCL037GP0067I	6/28/97	1405								
✓ NBCL037GP0407I	6/28/97	1440								
✓ NBCL037GP0417I	6/28/97	1440								

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	6/30/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>Julian C. Clary</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>	TIME <u>1700</u>	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: Fed Ex COMMENTS: \*Metals preserved w/ HNO<sub>3</sub>  
 SHIPMENT NO. 4849149760 Cd preserved w/ NaOH  
 SPECIAL INSTRUCTION: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

00/30/97 11:03 TEL 141300 ENSAFE ALLEN BUS 111 CHARCAFE 002



**NAVY CLEAN**  
 ENSAFE/ALLEN&HOSHALL  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-883-0024  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	VOAK	ANALYSIS REQUIRED						REMARKS
								DQO LEVEL 2
								"
								"
								"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOAK										
					TEMP.	CHEMICAL												
0376P007-II	6-28-97	9:40	H <sub>2</sub> O	40ml	4	HCL	2	X										
0376P010-II	6-28-97	11:15	H <sub>2</sub> O	40ml	4	HCL	2	X										
0376P014-II	6-28-97	1:40	H <sub>2</sub> O	40ml	4	HCL	2	X										
0376P016-II	6-28-97	1:50	H <sub>2</sub> O	40ml	4	HCL	2	X										

*Wendell Rawls*

RELINQUISHED BY: <u>Wendell Rawls</u>	DATE: <u>6/28/97</u>	RECEIVED BY: <u>[Signature]</u>	DATE: <u>6/28/97</u>	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>Wendell Rawls</u>	TIME: <u>1:18</u>	SIGNATURE: _____	TIME: <u>3:30</u>	SIGNATURE: _____	TIME: _____	SIGNATURE: _____	TIME: _____
PRINTED: <u>Wendell Rawls</u>	COMPANY: <u>TARGET LABS</u>	PRINTED: <u>[Signature]</u>	COMPANY: <u>TARGET LABS</u>	PRINTED: _____	COMPANY: _____	PRINTED: _____	COMPANY: _____
REASON: _____		REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: To: TARGET mobile LAB  
 AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



NAVY CLEAN  
 ENSAFE/ALLEN & HOSHAL  
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: PO4 RFL 21 SWL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verry  
 ADDRESS Zone L TELEPHONE NO. 803-883-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) John C. Long

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Cn				
2	X	X				DDO Level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION						
					TEMP.	CHEMICAL					
NBC 20376P005-T1	6/29/97	0820	W	poly/lit.	4°C	*	2	X	X		
NBC 20376P005-T2		0930									
<del>John C. Long 6/29/97</del>											

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>John C. Long</u>	<u>6/30/97</u>	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>John C. Long</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>En Safe</u>	TIME <u>1700</u>	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fed Ex</u>	COMMENTS: <u>* Metal preserved w/ HNO3</u> <u>Cn preserved w/ NaOH</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849149760</u>		
SPECIAL INSTRUCTION: _____		

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



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CHAIN OF CUSTODY RECORD

PAGE 2 OF 5

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERVOY  
ADDRESS ZONE 4 TELEPHONE NO. 803 883-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803 956-0107  
SAMPLERS: (SIGNATURE) Wendell C. Rawls

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED	REMARKS
					TEMP.	CHEMICAL			
X 037GP005-II	6-29-97	8:35	H <sub>2</sub> O	40ml	4	HCL	2	X	DBO LEVEL 2
X 037GP012-II	6-29-97	9:35	H <sub>2</sub> O	40 ml	4	HCL	2	X	'
<p><i>Wendell Rawls</i> 6-29-97</p>									

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-29-97</u> TIME <u>2:45</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>DAWN BUONOTTE</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/29</u> <u>97</u> TIME <u>2:55</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	---	---	--------------------------------	---	--------------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u>	COMMENTS: _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. _____	_____	
SPECIAL INSTRUCTION: <u>TARGET mobile LAB</u>	_____	

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



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(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 2912-08410  
COC #:   
BPA/SO: PO4 REL 21 SWL  
CD

CLIENT: Naval Base Charleston PROJECT MANAGER: Charlie Vernoy  
ADDRESS: Zone L TELEPHONE NO.: (803) 884-0029  
PROJECT NAME/NUMBER: 2912-08410 FAX NO.: (803) 856-0107  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
	Metals	CN		
1	X	X		DQO Level II
1	X	X		
<i>[Signature]</i> 6-30-97				

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION					
					TEMP.	CHEMICAL				
NBCL0375P006-II	6-30-97	0847	Soil	4 oz (glass)	4°C	-				
NBCL0375P007-I		0918								

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE: <u>[Signature]</u>	6/30/97	SIGNATURE: _____		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>C. Davis</u>		PRINTED: _____		PRINTED: _____		PRINTED: _____	
COMPANY: <u>Ensafe</u>	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____	COMPANY: _____	TIME: _____
REASON: <u>Lab</u>	1700	REASON: _____		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: Fed Ex COMMENTS: DQO Level II AFTER ANALYSIS, SAMPLES ARE TO BE:  
 SHIPMENT NO. 4849149760  
 SPECIAL INSTRUCTION: \_\_\_\_\_  DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_

08/20/97 17:11 TEL /4/300 ENSAFE ALLEN HUD +--+ CHARSAFTE 08/20



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**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
 COC #: \_\_\_\_\_  
 BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNON  
 ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) Randy Brand

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
1												DDO LEVEL 2
1												"
<i>Wendell Kank</i>												

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
037SP006-I1	6-30-97	0847	SOIL	2 oz Jar	4	NONE						
037SP007-I1	6-30-97	0918	"	" "	"	"						

RELINQUISHED BY: SIGNATURE <u>Randy Brand</u> PRINTED <u>RANDY BRAND</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/24/97</u> TIME <u>3:35</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>TARGET</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6/30/97</u> TIME <u>3:30</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	---	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: HAND DELIVERED COMMENTS: \_\_\_\_\_  
 SHIPMENT NO. \_\_\_\_\_  
 SPECIAL INSTRUCTION: TO TARGET  
MOBIL LAB

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

Ar. dated 7/2/97



NAVY CLEAN  
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CHAIN OF CUSTODY RECORD

CTO-TASK: 2912-08410  
COC #:   
BPA/SO: 104-REL 215WL

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
ADDRESS Fuel TELEPHONE NO. 803-883-0029  
PROJECT NAME/NUMBER 2912-08410 FAX NO. 803-856-0107  
SAMPLERS: (SIGNATURE) John C Coory

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	Metals	Cr				
2	X	X				DG level II

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<u>NAEL 0376P 08721</u>	<u>6/30/97</u>	<u>1015</u>	<u>W</u>	<u>Poly / 12 Lit.</u>	<u>4°C</u>	<u>*</u>
<u>NAEL 0376P 08731</u>	<u>6/30/97</u>	<u>1040</u>	<u>W</u>			

John C Coory 6/30/97

RELINQUISHED BY: SIGNATURE <u>John C Coory</u> PRINTED <u>John C Coory</u> COMPANY <u>EnSafe</u> REASON <u>Lab</u>	DATE <u>6/30/97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: Air Ex  
SHIPMENT NO. 4849149760  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: \* Metals preserved w/ HNO<sub>3</sub>  
Cr preserved w/ NaOH

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

08/30/97 11:00 TEL 141300 ENSAFE ALLEN BUS 777 CHARLOTTE



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**CHAIN OF CUSTODY RECORD**

CTO-TASK: 2912-08410  
COC #: \_\_\_\_\_  
BPA/SO: \_\_\_\_\_

CLIENT NAVAL BASE CHARLESTON PROJECT MANAGER CHARLIE VERNOY  
ADDRESS ZONE L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-08410 FAX. NO. 803-856-0107  
SAMPLERS: (SIGNATURE) Wendell Rawls

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
2 X						DGD LEVEL 2
2 X						"
2 X						"

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
X 0376P009-I1	6-30-97	9:50	H <sub>2</sub> O	40 ml	4	HCL
X 0376P007-I1	6-30-97	10:00	H <sub>2</sub> O	40 ml	4	HCL
X 0376P008-I1	6-30-97	10:30	H <sub>2</sub> O	40 ml	4	HCL

*Wendell Rawls*

RELINQUISHED BY: SIGNATURE <u>Wendell Rawls</u> PRINTED <u>Wendell Rawls</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-30-97</u> TIME <u>3:35</u>	RECEIVED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>JOHN BUONSIRO</u> COMPANY <u>TARGET</u> REASON <u>LAB</u>	DATE <u>6-30</u> TIME <u>9:00</u>	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
--	---	--	--------------------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: <u>HAND DELIVERED</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: <u>To TARGET mobile LAB</u>	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
---	-----------------------------------	--



**SECOND ROUND**





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revise 1/9/90  
JPK  
CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: P.O. 4, R. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
PROJECT NAME/NUMBER 2912-0841 FAX NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) Matth A. Bost

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	ICP	EMSA	SVA	DRO-TPH	GRD-TPH	
2	X					
42	X	X	X	X	X	
2	X					
2	X					
2	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ICP	EMSA	SVA	DRO-TPH	GRD-TPH	REMARKS
					TEMP.	CHEMICAL							
✓ NBCL 037GP010F2	12-18-97	1510	H <sub>2</sub> O	40 ml vials	4°C	HCl	2	X					
✓ NBCL 099GP085E2	12-18-97	1600					42	X	X	X	X	X	
<del>NBCL 037GP012F4</del>	<del>12-18-97</del>	<del>1510</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del>2</del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
✓ NBCL 099GP007F2		1210					2	X					
✓ NBCL 037GP010F2		1730					2	X					
MAB													

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>Matth A. Bost</u>	12/16/97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>Matth Bost</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>EnSafe</u>	TIME 1740	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Ship to lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>FedEx</u>	COMMENTS: <u>All samples DRO 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE:
SHIPMENT NO. <u>4849175032</u>		<input checked="" type="checkbox"/> DISPOSED OF
SPECIAL INSTRUCTION: _____		<input type="checkbox"/> STORED (90 DAYS MAX)
		<input type="checkbox"/> STORED OVER 90 DAYS
		<input type="checkbox"/> RETURNED TO CUSTOMER



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**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O. 4, R. 21

CLIENT Naval Base Charleston PROJECT MANAGER C. Verna  
 ADDRESS Fare L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER Z912-08411 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Matth A. Bost

NO. OF CONTAINERS	ANALYSIS REQUIRED							REMARKS
VOC								

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS						
					TEMP.	CHEMICAL							
NBCL\037GP0RFZ	12-18-97	1144	H2O	40ml vial	4°C	HCl	2	X					
NBCL\037GP010FS	12-18-97	1416	H2O	I	I	I	2	X					
NBCL\0377W010FS	12-18-97	-	H2O	I	I	I	2	X					
<del>MAB</del>													

RELINQUISHED BY: SIGNATURE <u>Matth A. Bost</u> PRINTED <u>Matth Bost</u> COMPANY <u>EnSafe</u> REASON <u>Ship to Lab</u>	DATE <u>12/18/97</u> TIME <u>1630</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
---	--	---	--------------------------	---	--------------------------	---	--------------------------

METHOD OF SHIPMENT: FedEx  
 SHIPMENT NO. 3292595494  
 SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: All samples UOO 2

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
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*Corrected on 12-30-97*  
**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 2

CTO-TASK: \_\_\_\_\_

COC #: \_\_\_\_\_

BPA/SO: PO44 Rel. 21

CLIENT NAVAL BASE Charleston  
 ADDRESS Zone L  
 PROJECT NAME/NUMBER 2912-08411  
 SAMPLERS: (SIGNATURE) J. Wade

PROJECT MANAGER Charlie Venny  
 TELEPHONE NO. 803-884-0029  
 FAX NO. \_\_\_\_\_

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOC	SVOA				
3	X	X				
3	X	X				
2	X					
2	X					
2	X					
2	X					
2	X					
2	X					
2	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOC	SVOA					
					TEMP.	CHEMICAL								
NBCL\0376P017-H1	12-29-97	1055	Water	1-liter Amber 2-40ml	4°C	40ml-HCl	3	X	X					
NBCL\699GPO11-E2		1330		↓			3	X	X					
NBCL\0376P011-F4		1525		2-40 ml. vial			2	X						
NBCL\0376P012-F5		1533		↓			2	X						
NBCL\0376P010-F4		1600		↓			2	X						
NBCL\0376P011-H2		1640		↓			2	X						
NBCL\0376P011-H4		1652		↓			2	X						
NBCL\0376P011-H3		1705		↓			2	X						
NBCL\0376P011-H5		1730		↓			2	X						
NBCL\0376B011-H5		1735	✓	✓	✓	✓	2	X						

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>J. Wade</u>	12-29-97	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>J. Wade</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>Ensafe</u>	TIME <u>1845</u>	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Ship to Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: <u>Fedex</u>	COMMENTS: <u>All samples are DQ02</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
SHIPMENT NO. <u>4849175643</u>		
SPECIAL INSTRUCTION: _____		

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE) \_\_\_\_\_



NAVY CLEAN  
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CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: PD #4 Rel. 21

CLIENT NAVAL BASE Charleston PROJECT MANAGER Charlie Dewey  
ADDRESS Zone L TELEPHONE NO. 803-884-0029  
PROJECT NAME/NUMBER 2912-0841 FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) J. Wade

NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
<u>VOA</u>					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS
					TEMP.	CHEMICAL	
<u>NDCL\037T\011-HS</u>	<u>12-29-97</u>	<u>1745</u>	<u>WAT</u>	<u>2-40ml vial</u>	<u>4°C</u>	<u>HCL</u>	<u>3</u>

J

J. Wade  
12-29-97

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>J. Wade</u>	<u>12-29-97</u>	SIGNATURE _____		SIGNATURE _____		SIGNATURE _____	
PRINTED <u>J. Wade</u>		PRINTED _____		PRINTED _____		PRINTED _____	
COMPANY <u>E-Safe</u>	TIME <u>1845</u>	COMPANY _____	TIME _____	COMPANY _____	TIME _____	COMPANY _____	TIME _____
REASON <u>Ship to Lab</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: FE160  
SHIPMENT NO. 4949175043  
SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: All samples are DQ02

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

*Connected on 12-31-97*  
**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1  
 CTO-TASK: 2912-08411  
 COC #: \_\_\_\_\_  
 BPA/SO: P.O#4 Rel. 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vermoy  
 ADDRESS Zone L TELEPHONE NO. (803) 884-0029  
 PROJECT NAME/NUMBER 2912-08411 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Matth G. Post

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
100's						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION							
					TEMP.	CHEMICAL						
NBCL\037GP002F2	12-30-97	1013	H <sub>2</sub> O	10ml vials	4°C	HCl	2	X				
NBCL\037GP006F4		1120					2	X				
NBCL\037GP006F3		1440					2	X				
NBCL\037GP006F2		1558					2	X				
NBCL\037GP002F2		1700					2	X				
NBCL\037GP003-F2		1015					2	X				
NBCL\037GP006F5		1120					2	X				
NBCL\037GP006-F2		1505					2	X				
NBCL\037GP012-G2		1605					2	X				

*Jan 5, 1998*  
*12-30-97*

RELINQUISHED BY: SIGNATURE <u>Matth G. Post</u> PRINTED <u>Mat Post</u> COMPANY <u>Ensafe</u> REASON <u>Ship to lab</u>	DATE <u>12/30/97</u> TIME <u>1710</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>9947175054</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>All samples OOG 2</u> _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
 COC #: \_\_\_\_\_  
 BPA/SO: PO 4 REL 21

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Vernoy  
 ADDRESS Zone L TELEPHONE NO. 803-884-0029  
 PROJECT NAME/NUMBER 2912-08420 FAX. NO. 803-856-0107  
 SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS
	VOA	SVOA					
3	X	X					
3	X	X					
3	X	X					
3	X	X					
3	X	X					
3	X	X					
2	X						

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
NBCL\699GP097E2	1/7/98	1045	H <sub>2</sub> O	40mL Voa 1L Amber	4°C	VOA=HCL
NBCL\699GP006E2		1140				
NBCL\699GP008E2		1205				
NBCL\037GP011E2		1225				
NBCL\037GP010E2		1240				
NBCL\699GP004E2		1255				
NBCL\699GP003E2	↓	1310	↓	↓	↓	↓
NBCL\699TP003E2	1/7/98		↓	40mL VOA	↓	↓

[Signature]  
 1-7-98

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Todd B. Temple</u> COMPANY <u>ENSAFE</u> REASON <u>Ship to Lab</u>	DATE <u>1/7/98</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4848854953</u> SPECIAL INSTRUCTION: <u>SWL</u>	COMMENTS: <u>DG03 + TICs</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 2912-08411  
 COC #: \_\_\_\_\_  
 BPA/SO: P.o.4, Rel. #371  
MAB

CLIENT Naval Base Charleston PROJECT MANAGER Charlie Verroy  
 ADDRESS Zone L TELEPHONE NO. (803) 854-0029  
 PROJECT NAME/NUMBER 2912-08411 FAX. NO. \_\_\_\_\_  
 SAMPLERS: (SIGNATURE) Matth C. Boat

NO. OF CONTAINERS	ANALYSIS REQUIRED										REMARKS	
	1	2	3	4	5	6	7	8	9	10		
3	✓	✓										
3	✓	✓										
3	✓	✓										
2	✓											

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
<del>NRCL 037GP031E2</del>	<del>1-7-98</del>	<del>1530</del>	<del>H2S</del>	<del>40ul vials, 1 canter</del>	<del>4°C</del>	<del>vac-HCl</del>
<del>NRCLV099GP020E2</del>	<del>1</del>	<del>1455</del>	<del>I</del>	<del>I</del>	<del>I</del>	<del>I</del>
<del>NRCL 037GP08E2</del>	<del>1</del>	<del>1430</del>	<del>I</del>	<del>I</del>	<del>I</del>	<del>I</del>
<del>NRCL 037TP08E2</del>	<del>1</del>	<del>-</del>	<del>I</del>	<del>40ul vials</del>	<del>I</del>	<del>I</del>

*Matth C. Boat*

RELINQUISHED BY: SIGNATURE <u>Matth C. Boat</u> PRINTED <u>Mat Boat</u> COMPANY <u>EnSafe</u> REASON <u>Ship to lab</u>	DATE <u>1-8-97</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FedEx</u> SHIPMENT NO. <u>4848854964</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>All samples DGO 2</u> _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input checked="" type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN  
ENSAFE/ALLEN & HOSHALL  
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: \_\_\_\_\_  
COC #: \_\_\_\_\_  
BPA/SO: P.O. 4 Rel # 21

CLIENT NAV BASE CHARLESTON PROJECT MANAGER CHARLIE  
ADDRESS ZONE L TELEPHONE NO. 803 584 0029  
PROJECT NAME/NUMBER 2912-08411 FAX. NO. \_\_\_\_\_  
SAMPLERS: (SIGNATURE) [Signature]

NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	VOA	SVOA				
3	X	X				
	X	X				
	X	X				
	X	X				
	X	X				
1		X				
2	X					FREE PRODUCT!
2	X					

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	VOA	SVOA							
					TEMP.	CHEMICAL										
✓ NBCL/699GP042.EZ	1/8/98	0940	H2O	40ml VOA(x2) 1LTR (x1)	4°C	VOA=HCL	3	X	X							
✓ NBCL/699GP080.EZ		1200						X	X							
✓ NBCL/699GP089.EZ		1130						X	X							
✓ NBCL/699GP087.EZ		1055						X	X							
✓ NBCL/699GP088.EZ		1110						X	X							
✓ NBCL/057GP088.EZ		1020						X	X							
✓ NBCL/699GP019.EZ		1240		1 LTR AMBER			1		X							
✓ NBCL/699GP019.EZ	1/7/98	1650		40ml VOA(x2)			2	X								
NBCL/699GP080.EZ	1/8/98	1540	H2O	40ml VOA(x2)	4°C		2	X								

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>SHANTON PERAZZINI</u> COMPANY <u>ENSAFE</u> REASON <u>SHIP TO LAB</u>	DATE <u>1/8/98</u> TIME <u>1700</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>FED EX</u> SHIPMENT NO. <u>48488 54964</u> SPECIAL INSTRUCTION: _____	COMMENTS: <u>DPO LVL 2</u>	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS <input type="checkbox"/> RETURNED TO CUSTOMER
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