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DRAFT SUPPLEMENTAL RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION AND REMEDIAL INVESTIGATION REPORT FOR HIGH PRIORITY SITES APPENDIX M NAS KEY WEST FL

9/1/1996

BROWN AND ROOT ENVIRONMENTAL

0075

Draft
Supplemental RCRA Facility Investigation and Remedial Investigation Report

Appendix M

for

Naval Air Station Key West High-Priority Sites

Boca Chica Key, Florida

Southern Division
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888

Contract Task Order 0007

September 1996

Brown & Root Environmental

APPENDICES M

AIK-OES-96-5912

DRAFT
SUPPLEMENTAL RCRA FACILITY INVESTIGATION
AND
REMEDIAL INVESTIGATION REPORT

NAVAL AIR STATION KEY WEST
HIGH-PRIORITY SITES
BOCA CHICA KEY, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

Submitted by:
Brown & Root Environmental
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220

CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0007

SEPTEMBER 1996

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INORGANIC DATA VALIDATION
SDG 61335S

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-102

TO : **KEVIN WALTER** **DATE:** **APRIL 11, 1996**

FROM: **WILLIAM J. BROTZ** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION - TAL METALS AND CYANIDE**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG 61335S

17/Soil/	S1SS-6	S1SS-5	S1SS-7
	S1DPSS-1	S1SS-4	S1SS-1
	S9SS-2	S9SS-3	S9SS-4
	S9SS-5	S9DPSS-1	S9SB-1
	S9SB-2	S9SP-3	S9SB-4
	S9SB-5	S9DPSB-01	

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. 61335S. Seventeen (17) soil samples were included for TAL metals and cyanide analyses. Three field duplicate pairs (samples S1SS-5 & S1DPSS-1, S9SS-3 & S9DPSS-1 and S9SB-1 & S9DPSB-01) were included with this SDG. The samples were collected by Brown and Root Environmental on January 13, 15 and 17, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level C and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
• Calibration Verifications
• Laboratory Blank Analyses
* • Field Duplicate Precision

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method blanks at the maximum concentrations indicated below:

Analyte	Maximum Concentration	Action Level (Soil)
aluminum[1]	10.98 mg/kg	54.9 mg/kg
antimony	4.6 ug/L	4.6 mg/kg
arsenic	8.0 ug/L	8.0 mg/kg
beryllium	0.6 ug/L	0.6 mg/kg
cadmium	0.4 ug/L	0.4 mg/kg
calcium[1]	13.9 mg/kg	69.5 mg/kg
calcium	-4.1 ug/L	-4.1 mg/kg
copper[1]	0.541 mg/kg	2.71 mg/kg
iron	5.6 ug/L	5.6 mg/kg
magnesium	10.3 ug/L	10.3 mg/kg
selenium	5.2 ug/L	5.2 mg/kg
sodium[1]	11.4 mg/kg	57.0 mg/kg
thallium	4.6 ug/L	4.6 mg/kg
inc[1]	1.07 mg/kg	5.35 mg/kg
cyanide	1.0 ug/L	1.0 mg/kg
cyanide	-2.2 ug/L	-2.2 mg/kg

Samples affected : All

[1] Maximum concentration found in a soil preparation blank.

An action level of 5X the maximum positive concentration has been established to evaluate the sample data. Sample dilution factors were considered prior to the application of the action levels. Positive results for aluminum, antimony, arsenic, beryllium, cadmium, copper zinc and cyanide within the action levels are qualified as nondetected, "U". Negative values > 2X the absolute value of the IDL were found for cyanide. Positive results and nondetects reported for cyanide were qualified as estimated, "J", and "UJ", respectively. No actions were required for the remaining analytes as all results were greater than the action level or nondetects.

Notes

Field duplicate results have been summarized and are included within the support documentation. However, no data validation actions were taken.

Executive Summary

.aboratory Performance: The CCV %R cyanide was high. Several contaminants were found in the .aboratory method blanks.

Other Factors Affecting Data Quality: None.

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

C-49-04-6-102

NAS Key West
SDG 61335S

TABLE 1 - RECOMMENDATION SUMMARY

Aluminum	A[1]	Magnesium			
Antimony	A[1]	Manganese			
Arsenic	A[1]	Mercury			
Barium		Nickel			
Beryllium	A[1]	Potassium			
Cadmium	A[1]	Selenium			
Calcium		Silver			
Chromium		Sodium			
Cobalt		Thallium			
Copper	A[1]	Vanadium			
Iron		Zinc	A[1]		
Lead		Cyanide	A[1]	J[1]	

If the field is left blank, the qualifier is A - Accept all data.

[1] - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

J[1] - Accept data but qualify positive results as estimated, "J", and "UJ", respectively as a result of negative results > 2X IDL in the laboratory method blanks.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO [illegible] - NAS KEY WEST
SOIL [illegible]TA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	4070		MG/KG	3910		MG/KG	7560		MG/KG	4160		MG/KG	7810		MG/KG
ANTIMONY	4.2	U	MG/KG	0.64	U	MG/KG	5.4	U	MG/KG	1.4	U	MG/KG	21.7		MG/KG
ARSENIC	8.0	U	MG/KG	3.8	U	MG/KG	9.4	U	MG/KG	3.1	U	MG/KG	8.1	U	MG/KG
BARIUM	35.7		MG/KG	17.0		MG/KG	44.9		MG/KG	21.7		MG/KG	99.6		MG/KG
BERYLLIUM	0.06	U	MG/KG	0.07	U	MG/KG	0.08	U	MG/KG	0.08	U	MG/KG	0.10	U	MG/KG
CADMIUM	2.4		MG/KG	0.23	U	MG/KG	3.2		MG/KG	4.3		MG/KG	11.2		MG/KG
CALCIUM	293000		MG/KG	348000		MG/KG	317000		MG/KG	330000		MG/KG	321000		MG/KG
CHROMIUM	14.4		MG/KG	10.6		MG/KG	23.2		MG/KG	10.0		MG/KG	184		MG/KG
COBALT	1.7		MG/KG	0.37		MG/KG	1.9		MG/KG	0.53		MG/KG	4.6		MG/KG
COPPER	86.3		MG/KG	6.2		MG/KG	137		MG/KG	38.0		MG/KG	407		MG/KG
CYANIDE	0.28	UJ	MG/KG	0.28	UJ	MG/KG	0.41	UJ	MG/KG	0.23	UJ	MG/KG	0.23	UJ	MG/KG
IRON	13000		MG/KG	2050		MG/KG	17400		MG/KG	2180		MG/KG	28500		MG/KG
LEAD	172		MG/KG	17.2		MG/KG	219		MG/KG	84.6		MG/KG	381		MG/KG
MAGNESIUM	6210		MG/KG	11000		MG/KG	7590		MG/KG	12200		MG/KG	12100		MG/KG
MANGANESE	106		MG/KG	25.8		MG/KG	142		MG/KG	35.1		MG/KG	467		MG/KG
MERCURY	0.09	U	MG/KG	0.05	U	MG/KG	0.23		MG/KG	0.06	U	MG/KG	6.2		MG/KG
NICKEL	10.6		MG/KG	4.1		MG/KG	11.9		MG/KG	3.3		MG/KG	50.2		MG/KG
POTASSIUM	232	U	MG/KG	432		MG/KG	397		MG/KG	501		MG/KG	614		MG/KG
SELENIUM	1.0	U	MG/KG	1.2	U	MG/KG	1.1	U	MG/KG	1.2	U	MG/KG	1.1	U	MG/KG
SILVER	2.9		MG/KG	0.17	U	MG/KG	3.4		MG/KG	1.5		MG/KG	7.6		MG/KG
SODIUM	786		MG/KG	1270		MG/KG	991		MG/KG	2110		MG/KG	5770		MG/KG
THALLIUM	0.97	U	MG/KG	1.1	U	MG/KG	1.0	U	MG/KG	1.1	U	MG/KG	1.1	U	MG/KG
VANADIUM	9.6		MG/KG	8.8		MG/KG	12.6		MG/KG	6.8		MG/KG	7.4		MG/KG
ZINC	954		MG/KG	20.7		MG/KG	785		MG/KG	120		MG/KG	783		MG/KG

SAMPLE NUMBER:	S9DPSB-01	S9DPSS-1	S9SB-1	S9SB-2	S9SB-3
SAMPLE DATE:	01/17/96	01/15/96	01/17/96	01/17/96	01/17/96
LABORATORY ID:	9601335-17	9601335-11	9601335-12	9601335-13	9601335-14
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	81.0 %	75.0 %	81.0 %	80.0 %	80.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	255		MG/KG	1080		MG/KG	289		MG/KG	30.7	U	MG/KG	27.4	U	MG/KG
ANTIMONY	0.60	U	MG/KG	1.0	U	MG/KG	0.60	U	MG/KG	0.64	U	MG/KG	0.60	U	MG/KG
ARSENIC	2.8	U	MG/KG	2.5	U	MG/KG	1.7	U	MG/KG	2.3	U	MG/KG	1.2	U	MG/KG
BARIUM	8.9		MG/KG	42.3		MG/KG	8.0		MG/KG	9.1		MG/KG	7.0		MG/KG
BERYLLIUM	0.07	U	MG/KG	0.08	U	MG/KG	0.07	U	MG/KG	0.07	U	MG/KG	0.07	U	MG/KG
CADMIUM	0.09	U	MG/KG	6.4		MG/KG	0.09	U	MG/KG	0.10	U	MG/KG	0.09	U	MG/KG
CALCIUM	390000		MG/KG	331000		MG/KG	383000		MG/KG	389000		MG/KG	398000		MG/KG
CHROMIUM	4.7		MG/KG	15.1		MG/KG	2.3		MG/KG	2.2		MG/KG	2.1		MG/KG
COBALT	0.18	U	MG/KG	1.2		MG/KG	0.18	U	MG/KG	0.20	U	MG/KG	0.18	U	MG/KG
COPPER	2.6	U	MG/KG	17.3		MG/KG	2.8	U	MG/KG	2.3	U	MG/KG	2.2	U	MG/KG
CYANIDE	0.21	UJ	MG/KG	2.3	J	MG/KG	0.13	UJ	MG/KG	1.5	J	MG/KG	4.4		MG/KG
IRON	457		MG/KG	1470		MG/KG	133		MG/KG	47.6		MG/KG	31.9		MG/KG
LEAD	2.2		MG/KG	95.9		MG/KG	2.3		MG/KG	1.4		MG/KG	1.3		MG/KG
MAGNESIUM	1870		MG/KG	2120		MG/KG	1250		MG/KG	672		MG/KG	829		MG/KG
MANGANESE	5.2		MG/KG	23.7		MG/KG	2.9		MG/KG	3.2		MG/KG	0.63		MG/KG
MERCURY	0.06	U	MG/KG	0.36		MG/KG	0.06	U	MG/KG	0.05	U	MG/KG	0.05	U	MG/KG
NICKEL	1.8		MG/KG	3.6		MG/KG	0.59		MG/KG	0.76		MG/KG	0.53		MG/KG
POTASSIUM	34.4		MG/KG	106		MG/KG	37.7		MG/KG	25.2		MG/KG	32.0		MG/KG
SELENIUM	1.1	U	MG/KG	1.2	U	MG/KG	1.1	U	MG/KG	1.2	U	MG/KG	1.1	U	MG/KG
SILVER	0.16	U	MG/KG	1.6		MG/KG	0.16	U	MG/KG	0.22		MG/KG	0.76		MG/KG
SODIUM	1260		MG/KG	781		MG/KG	1390		MG/KG	1530		MG/KG	1290		MG/KG
THALLIUM	1.0	U	MG/KG	1.2	U	MG/KG	1.0	U	MG/KG	1.1	U	MG/KG	1.0	U	MG/KG
VANADIUM	4.3		MG/KG	3.9		MG/KG	1.5		MG/KG	0.71		MG/KG	0.43		MG/KG
ZINC	1.8	U	MG/KG	278		MG/KG	1.1	U	MG/KG	0.90	U	MG/KG	0.47	U	MG/KG

CTO ' ' - NAS KEY WEST
SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	S9SB-4			S9SB-5			S9SS-1			S9SS-2			S9SS-3		
SAMPLE DATE:	01/17/96			01/17/96			01/15/96			01/15/96			01/15/96		
LABORATORY ID:	9601335-15			9601335-16			9601335-06			9601335-07			9601335-08		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			81.0 %			75.0 %			59.0 %			62.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	179		MG/KG	45.6	U	MG/KG	4190		MG/KG	1600		MG/KG	1260		MG/KG
ANTIMONY	0.62	U	MG/KG	0.61	U	MG/KG	0.69	U	MG/KG	0.83	U	MG/KG	1.3	U	MG/KG
ARSENIC	1.2	U	MG/KG	1.2	U	MG/KG	5.3	U	MG/KG	5.1	U	MG/KG	3.7	U	MG/KG
BARIUM	6.1		MG/KG	6.1		MG/KG	27.1		MG/KG	14.5		MG/KG	51.3		MG/KG
BERYLLIUM	0.07	U	MG/KG	0.07	U	MG/KG	0.08	U	MG/KG	0.10	U	MG/KG	0.09	U	MG/KG
CADMIUM	0.10	U	MG/KG	0.09	U	MG/KG	2.1		MG/KG	0.30	U	MG/KG	7.9		MG/KG
CALCIUM	407000		MG/KG	398000		MG/KG	325000		MG/KG	465000		MG/KG	408000		MG/KG
CHROMIUM	3.1		MG/KG	4.9		MG/KG	13.1		MG/KG	7.2		MG/KG	124		MG/KG
COBALT	0.19	U	MG/KG	0.19	U	MG/KG	0.98		MG/KG	0.33		MG/KG	1.4		MG/KG
COPPER	2.4	U	MG/KG	2.4	U	MG/KG	49.6		MG/KG	6.9		MG/KG	19.8		MG/KG
CYANIDE	0.22	UJ	MG/KG	0.21	UJ	MG/KG	0.10	UJ	MG/KG	0.38	UJ	MG/KG	2.1	J	MG/KG
IRON	98.1		MG/KG	44.5		MG/KG	2650		MG/KG	1170		MG/KG	2780		MG/KG
LEAD	1.4		MG/KG	1.7		MG/KG	71.4		MG/KG	7.4		MG/KG	434		MG/KG
MAGNESIUM	1180		MG/KG	948		MG/KG	6470		MG/KG	2870		MG/KG	2500		MG/KG
MANGANESE	3.4		MG/KG	1.0		MG/KG	37.9		MG/KG	12.4		MG/KG	29.4		MG/KG
MERCURY	0.05	U	MG/KG	0.05	U	MG/KG	0.06		MG/KG	0.08	U	MG/KG	0.28		MG/KG
NICKEL	1.1		MG/KG	2.1		MG/KG	6.6		MG/KG	3.6		MG/KG	4.7		MG/KG
POTASSIUM	29.3		MG/KG	32.2		MG/KG	260		MG/KG	207		MG/KG	128		MG/KG
SELENIUM	1.2	U	MG/KG	1.1	U	MG/KG	1.3	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SILVER	0.31		MG/KG	0.16	U	MG/KG	1.8		MG/KG	0.22	U	MG/KG	0.72		MG/KG
SODIUM	955		MG/KG	1260		MG/KG	1310		MG/KG	1840		MG/KG	855		MG/KG
THALLIUM	1.1	U	MG/KG	1.0	U	MG/KG	1.2	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG
VANADIUM	1.4		MG/KG	0.52		MG/KG	10.5		MG/KG	8.5		MG/KG	5.0		MG/KG
ZINC	0.63	U	MG/KG	0.72	U	MG/KG	72.2		MG/KG	22.6		MG/KG	319		MG/KG

SAMPLE NUMBER:	S9SS-4			S9SS-5			/ /		/ /	
SAMPLE DATE:	01/15/96			01/15/96						
LABORATORY ID:	9601335-09			9601335-10						
QC_TYPE:	Normal			Normal						
% SOLIDS:	45.0 %			69.0 %			100.0 %		100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
INORGANICS										
ALUMINUM	4500		MG/KG	4790		MG/KG				
ANTIMONY	1.1	U	MG/KG	0.74	U	MG/KG				
ARSENIC	8.4	U	MG/KG	6.8	U	MG/KG				
BARIUM	17.5		MG/KG	21.1		MG/KG				
BERYLLIUM	0.13	U	MG/KG	0.09	U	MG/KG				
CADMIUM	0.43	U	MG/KG	0.28	U	MG/KG				
CALCIUM	387000		MG/KG	316000		MG/KG				
CHROMIUM	11.8		MG/KG	10.3		MG/KG				
COBALT	0.96		MG/KG	0.57		MG/KG				
COPPER	13.7		MG/KG	9.1		MG/KG				
CYANIDE	2.6	J	MG/KG	0.29	UJ	MG/KG				
IRON	3060		MG/KG	2680		MG/KG				
LEAD	19.1		MG/KG	15.1		MG/KG				
MAGNESIUM	6500		MG/KG	5690		MG/KG				
MANGANESE	66.4		MG/KG	34.9		MG/KG				
MERCURY	0.08	U	MG/KG	0.06	U	MG/KG				
NICKEL	4.9		MG/KG	4.3		MG/KG				
POTASSIUM	621		MG/KG	513		MG/KG				
SELENIUM	2.1	U	MG/KG	1.4	U	MG/KG				
SILVER	0.31	U	MG/KG	4.6		MG/KG				
SODIUM	2180		MG/KG	988		MG/KG				
THALLIUM	2.0	U	MG/KG	1.3	U	MG/KG				
VANADIUM	12.4		MG/KG	14.8		MG/KG				
ZINC	55.7		MG/KG	16.5		MG/KG				

ORGANIC DATA VALIDATION
SDG 61335S

Brown & Root Environmental

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C-49-04-6-174

TO: KEVIN WALTER DATE: APRIL 17, 1996

FROM: ANNE K. BATTISTA COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOA/SVOA/PEST/PCB/HERB ORGANICS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG 61335S

SAMPLES: Waters:

S1SS-4	S1SS-5	S1SS-6
S1SS-7	S1DPSS-1	S9SS-1
S9SS-2	S9SS-3	S9SS-4
S9SS-5	S9DPSS-1	S9SB-1
S9SB-2	S9SB-3	S9SB-4
S9SB-5	S9DPSB-01	

The sample set for the CTO 007 NAS Key West site, SDG 61335S, consists of seventeen (17) soil environmental samples. All samples were analyzed for Appendix IX volatile and semivolatile compounds, plus the samples were also analyzed for Target Compound List (TCL) pesticide/PCB and herbicide organic compounds. The field crew designated sample S1SS-4 for Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis. Three field duplicate pairs were included in this SDG(S1DPSS-1/S1SS-5, S9DPSS-1/S9SS-3 and S9DPSB-01/SPSB-1).

The samples were collected by Brown and Root Environmental on January 13th, 15th and 17th, 1996 and analyzed by General Engineering Laboratories, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Methods 8240, 8270, 8080 and 8150 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- Initial and continuing calibrations
- Laboratory and field blank analyses
- Field Duplicate Precision

The symbol (*) indicates that quality control criteria were not met
for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: APRIL 17, 1996 - PAGE 2

Volatiles

Initial and continuing calibration Relative Response Factors for acrolein and propionitrile were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by these noncompliances. As a result of this major calibration noncompliance, nondetected results for the aforementioned compounds are considered unreliable and were rejected, (R), in the affected samples.

The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 01/25/96 (14:55). An additional standard was not analyzed containing this compound (as performed for the previous and following continuing calibrations). Hence, the nondetected results reported for this compound in the samples associated with the aforementioned continuing calibrations were rejected, (UR).

The laboratory analyzed samples S9SB-1, S9SB-2 and S9DPSB-01 as medium level soils. The laboratory also analyzed these samples under an initial low level soil calibration and an associated low level soil continuing calibration. It should be noted that this practice is not recommended in the 3/90 Statement of Work (SOW). Low level soil samples and medium level soil samples should be analyzed under separate calibrations. Furthermore, the laboratory did not analyzed a medium level laboratory soil blank. Therefore, the aforementioned compounds could not be evaluated for blank contamination. No further action was taken.

The following volatile compound was detected in the low level laboratory method blank at the maximum concentrations indicated below:

Compound	Maximum Concentration	Action Level
Methylene Chloride	1 µg/L	10 µg/L

Samples Affected: All low level soil samples.

Sample aliquot size, percent solids and dilution factors were taken into consideration during the application of all action levels. Positive results for methylene chloride reported at concentrations below the detection limit were replaced with revised detection limits and qualified nondetected, (U).

Poor surrogate Percent Recoveries (%Rs) and poor internal standard areas were reported in samples S1DPSS-01, S1SS-5, S1SS-6 and S1SS-7. As a result, the laboratory reanalyzed the samples and reported similar results. Also, the reanalyses were performed outside of the holding time. Therefore, the original analyses were chosen for validation. No further action was taken.

Poor surrogate %Rs and poor internal standard areas were reported in samples S9DPSS-1, S9SB-5, S9SS-1, S9SS-2, S9SS-3, S9SS-4 and S9SS-5. As a result the laboratory reanalyzed these samples. However, similar or worse results for surrogate %Rs and internal standard areas were reported in the aformentioned samples. Therefore, the original analyses were chosen for validation. No further action was taken.

Samples S9SB-4 and S9DPSB-01 had a poor internal standard area reported in the original analyses. Both samples were reanalyzed and had improved areas reported. As a result, the reanalyses were chosen for validation.

Sample S9SB-2 was originally analyzed at a 500-fold dilution. The laboratory reanalyzed this sample at a 100-fold dilution. The reanalysis was chosen for validation since the reporting levels are 5 times lower.

A positive result for acetone in sample S9SB-3 was reported above the linear calibration of the instrument. The laboratory reanalyzed this sample at a 10-fold dilution. The original analysis was chosen for validation with the exception of the positive result for acetone. The positive result for acetone from the diluted analysis was transposed over the undiluted result for this compound and used in validation.

It should be noted that the laboratory used 20g of sample for each sample analysis. No validation actions were taken.

The laboratory only analyzed two low level method blanks, however four bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. This practice does not preclude the possibility of cross-contamination which may be present form standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Hence, the validator was only able to apply two laboratory method blanks to the low level soil samples.

It should be noted that samples S9DPSB-01, S9SB-1 and S9SB-2 were analyzed at various dilutions. Therefore, reporting limits are elevated.

Methyl methacrylate was analyzed for both volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained in Appendix A - Qualified Analytical Results.

Semivolatiles

Initial and continuing calibration RRFs for 3,3'-dimethylbenzidine were reported less than the 0.050 quality control limit. An initial calibration RRF less than 0.050 was reported for 4-nitroquioline -1-oxide. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

A poor surrogate %R and poor internal standard areas were reported in samples S1DPSS-01 and S9SS-4. Therefore, the laboratory reanalyzed these samples and reported improved results in sample S1DPSS-01. The reanalysis of sample S9DPSS-01 was chosen for validation. The original analysis of sample S9SS-4 was chosen for validation since no improvements were noticed in internal standard areas. No further action was taken.

Benzo(a)anthracene, benzo(b)fluoranthene, chrysene, fluoranthene and/or pyrene were detected at concentrations which exceeded the linear calibration range of the instrument, in samples S1DPSS-01 and S1SS-5. As a result, the samples were reanalyzed at various dilutions. The original data, with the exception of the aforementioned compounds were used in validation. However, the diluted results for these compounds were transposed over to the undiluted results.

Poor field duplicate precision was noted in the field duplicate pair S1SS-5/S1DPSS-01 for the following compounds: benzo(a)anthracene, anthracene, chrysene and pyrene. Poor field duplicate precision was also noted in the pair S9SB-1/S9DPSB-1 for naphthalene. Positive and nondetected results for the aforementioned compounds were qualified as estimated, (J) and (UJ), in the associated field duplicate pair.

It should be noted that incorrect detection limits were reported on the laboratory Form Is in numerous samples for the following compounds: dinoseb, 4-nitroquinoline-1-oxide, aramite, 1,3,5-trinitrobenzene,

dimethoate, methapyrilene, chlorobenzilate and 3,3'-dimethylbenzidine. The data reviewer has amended the appropriate forms.

Pesticide/PCBs

Poor field duplicate precision was noted in the field duplicate pair S9SB-1/S9DPSB-1 for delta-BHC and Endrin. Positive and nondetected results for the aforementioned compounds were qualified as estimated, (J) and (UJ), in field duplicate pair above.

Numerous samples were analyzed at various dilutions. Hence, reporting limits are elevated.

No problems were noted.

Herbicides

All samples were analyzed at 10-fold dilutions. Hence, the reporting levels are elevated.

No problems were noted.

Additional Comments

Positive results reported at concentrations less than the Contract Required Quantitation Limit (CRQL) are are qualified as estimated, (J).

Executive Summary

Laboratory Performance: Initial and continuing calibration RRFs for acrolein, propionitrile, 3,3'-dichlorobenzidine and 4-nitroquinoline-1-oxide were reported less than the 0.050 quality control limit. The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 01/25/96 (14:55). Methylene chloride was reported in the volatile low level soil laboratory method blank. Numerous samples were reanalyzed due to surrogate failure and/or poor internal standard areas. Several semivolatile compounds were reported at concentrations which exceeded the linear calibration range of the instrument.

Other Factors Affecting Data Quality: None.

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The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG 61335S

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA			BNA	PEST/PCB	HERB
S1SS-4	A[1]	J[1]	R[1]	R[3]		
S1SS-5	A[1]	J[1]	R[1,2]	J[2] R[3]		
S1SS-6	A[1]	J[1]	R[1,2]	R[3]	J[1]	
S1SS-7	A[1]	J[1]	R[1,2]	R[3]		
S1DPSS-1	A[1]	J[1]	R[1,2]	J[2] R[3,4]		
S9SS-1			R[1,2]	R[3]		
S9SS-2			R[1,2]	R[3]		
S9SS-3			R[1,2]	R[3]		
S9SS-4	A[1]		R[1,2]	R[3]		
S9SS-5			R[1,2]	R[3]		
S9DPSS-1			R[1,2]	R[3,4]		
S9SB-1		J[1]	R[1]	J[3] R[3,4]	J[4]	
S9SB-2		J[1]	R[1]	R[3,4]		
S9SB-3			R[1,2]	R[3,4]		
S9SB-4	A[1]		R[1]	R[3,4]		
S9SB-5			R[1,2]	R[3,4]		
S9DPSB-01		J[1]	R[1]	J[3] R[3,4]	J[4]	

If the field is left blank, the qualifier is A - Accept all data.

A[1] - Accept data, but change positive results for methylene chloride to a revised detection limit and qualify as nondetected, (U), as a result of laboratory method blank contamination.

J[1] - Accept data, but qualify positive results reported at concentrations less than the CRQL as estimated, (J).

J[2] - Accept data, but qualify positive and nondetected results for anthracene, benzo(a)anthracene, chrysene and pyrene as estimated, (J) and (UJ), as a result of poor field duplicate precision.

J[3] - Accept data, but qualify positive and nondetected results for naphthalene as estimated, (J) and (UJ), as a result of poor field duplicate precision.

J[4] - Accept data, but qualify positive and nondetected results for delta-BHC and Endrin as estimated, (J) and (UJ), as a result of poor field duplicate precision.

R[1] - Reject, (UR), nondetected results for acrolein and propionitrile, as a result of initial and continuing calibration RRFs less than 0.050.

R[2] - Reject, (UR), nondetected results for 2-chloro-1,3-butadiene since a calibration standard was not run for this compound during several continuing calibrations.

R^3 - Reject, (UR), nondetected results for 3,3'-dichlorobenzidine as a result of initial and calibration RRFs less than 0.050.

R^4 - Reject, (UR), nondetected results for 4-nitroquioline-1-oxide as a result of an initial calibration RRF less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 NAS KEY WEST
SOIL D
GENER... ENGINEERING LABS

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1,1-TRICHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	1	J	UG/KG	3	U	UG/KG
1,1,2-TRICHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1-DICHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1-DICHLOROETHENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2,3-TRICHLOROPROPANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DIBROMOETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DICHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DICHLOROPROPANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
2-BUTANONE	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG
2-CHLORO-1,3-BUTADIENE	2	UR	UG/KG	3	U	UG/KG	2	UR	UG/KG	3	UR	UG/KG	3	UR	UG/KG
2-HEXANONE	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG	1	J	UG/KG	6	U	UG/KG
4-METHYL-2-PENTANONE	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG
ACETONE	6	U	UG/KG	1	J	UG/KG	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG
ACETONITRILE	11	U	UG/KG	13	U	UG/KG	12	U	UG/KG	13	U	UG/KG	12	U	UG/KG
ACROLEIN	23	UR	UG/KG	26	UR	UG/KG	24	UR	UG/KG	26	UR	UG/KG	25	UR	UG/KG
ACRYLONITRILE	23	U	UG/KG	26	U	UG/KG	24	U	UG/KG	26	U	UG/KG	25	U	UG/KG
ALLYL CHLORIDE	11	U	UG/KG	13	U	UG/KG	12	U	UG/KG	13	U	UG/KG	12	U	UG/KG
BENZENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	23	U	UG/KG	26	U	UG/KG	24	U	UG/KG	6	J	UG/KG	25	U	UG/KG
BROMODICHLOROMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
BROMOFORM	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
BROMOMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CARBON DISULFIDE	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG
CARBON TETRACHLORIDE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLOROBENZENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLORODIBROMOMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	0.44	J	UG/KG	3	U	UG/KG
CHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLOROFORM	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLOROMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
DIBROMOMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
DICHLORODIFLUOROMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
~~ETHYL CYANIDE~~ Propanenitrile	23	UR	UG/KG	26	UR	UG/KG	24	UR	UG/KG	26	UR	UG/KG	25	UR	UG/KG
ETHYLBENZENE	0.31	J	UG/KG	0.31	J	UG/KG	0.40	J	UG/KG	2	J	UG/KG	0.34	J	UG/KG
IODOMETHANE	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG
ISOBUTYL ALCOHOL	23	U	UG/KG	26	U	UG/KG	24	U	UG/KG	26	U	UG/KG	25	U	UG/KG
METHACRYLONITRILE	11	U	UG/KG	13	U	UG/KG	12	U	UG/KG	13	U	UG/KG	12	U	UG/KG
METHYL METHACRYLATE	11	U	UG/KG	13	U	UG/KG	12	U	UG/KG	13	U	UG/KG	12	U	UG/KG
METHYLENE CHLORIDE	3	U	UG/KG	3	U	UG/KG	4	U	UG/KG	3	U	UG/KG	3	U	UG/KG
STYRENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TETRACHLOROETHENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TOLUENE	2	J	UG/KG	1	J	UG/KG	2		UG/KG	7		UG/KG	3		UG/KG
TRANS-1,2-DICHLOROETHENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	11	U	UG/KG	13	U	UG/KG	12	U	UG/KG	13	U	UG/KG	2	J	UG/KG
TRICHLOROETHENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TRICHLOROFLUOROMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
VINYL ACETATE	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG	7	U	UG/KG	6	U	UG/KG
VINYL CHLORIDE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
XYLENES, TOTAL	7	U	UG/KG	8	U	UG/KG	7	U	UG/KG	8	U	UG/KG	8	U	UG/KG

SAMPLE NUMBER:	S9DPSB-01			S9DPSS-1			S9SB-1			S9SB-2			S9SB-3		
SAMPLE DATE:	01/17/96			01/15/96			01/17/96			01/17/96			01/17/96		
LABORATORY ID:	9601335-17			9601335-11			9601335-12			9601335-13			9601335-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			75.0 %			81.0 %			80.0 %			80.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,1,1-TRICHLOROETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,1,2-TRICHLOROETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,1-DICHLOROETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,1-DICHLOROETHENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,2,3-TRICHLOROPROPANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,2-DIBROMOETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,2-DICHLOROETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
1,2-DICHLOROPROPANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
2-BUTANONE	3090	U	UG/KG	7	U	UG/KG	3090	U	UG/KG	625	U	UG/KG	6	U	UG/KG
2-CHLORO-1,3-BUTADIENE	1230	U	UG/KG	3	UR	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	UR	UG/KG
2-HEXANONE	3090	U	UG/KG	7	U	UG/KG	3090	U	UG/KG	625	U	UG/KG	6	U	UG/KG
4-METHYL-2-PENTANONE	3090	U	UG/KG	7	U	UG/KG	3090	U	UG/KG	625	U	UG/KG	6	U	UG/KG
ACETONE	2430	J	UG/KG	7	U	UG/KG	3090	U	UG/KG	625	U	UG/KG	12		UG/KG
ACETONITRILE	6170	U	UG/KG	13	U	UG/KG	6170	U	UG/KG	1250	U	UG/KG	13	U	UG/KG
ACROLEIN	12300	UR	UG/KG	27	UR	UG/KG	12300	UR	UG/KG	2500	UR	UG/KG	25	UR	UG/KG
ACRYLONITRILE	12300	U	UG/KG	27	U	UG/KG	12300	U	UG/KG	2500	U	UG/KG	25	U	UG/KG
ALLYL CHLORIDE	6170	U	UG/KG	13	U	UG/KG	6170	U	UG/KG	1250	U	UG/KG	13	U	UG/KG
BENZENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	12300	U	UG/KG	27	U	UG/KG	12300	U	UG/KG	2500	U	UG/KG	25	U	UG/KG
BROMODICHLOROMETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
BROMOFORM	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
BROMOMETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
CARBON DISULFIDE	3090	U	UG/KG	7	U	UG/KG	3090	U	UG/KG	625	U	UG/KG	6	U	UG/KG
CARBON TETRACHLORIDE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
CHLOROBENZENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
CHLORODIBROMOMETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
CHLOROETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
CHLOROFORM	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
CHLOROMETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG

SAMPLE NUMBER:	S9DPSB-01			S9DPSS-1			S9SB-1			S9SB-2			S9SB-3		
SAMPLE DATE:	01/17/96			01/15/96			01/17/96			01/17/96			01/17/96		
LABORATORY ID:	9601335-17			9601335-11			9601335-12			9601335-13			9601335-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			75.0 %			81.0 %			80.0 %			80.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
DIBROMOMETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
DICHLORODIFLUOROMETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
ETHYL CYANIDE	12300	UR	UG/KG	27	UR	UG/KG	12300	UR	UG/KG	2500	UR	UG/KG	25	UR	UG/KG
ETHYLBENZENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
IODOMETHANE	3090	U	UG/KG	7	U	UG/KG	3090	U	UG/KG	625	U	UG/KG	6	U	UG/KG
ISOBUTYL ALCOHOL	12300	U	UG/KG	27	U	UG/KG	12300	U	UG/KG	2500	U	UG/KG	25	U	UG/KG
METHACRYLONITRILE	6170	U	UG/KG	13	U	UG/KG	6170	U	UG/KG	1250	U	UG/KG	13	U	UG/KG
METHYL METHACRYLATE	6170	U	UG/KG	13	U	UG/KG	6170	U	UG/KG	1250	U	UG/KG	13	U	UG/KG
METHYLENE CHLORIDE	672	J	UG/KG	3	U	UG/KG	59	J	UG/KG	171	J	UG/KG	3	U	UG/KG
STYRENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
TETRACHLOROETHENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
TOLUENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
TRANS-1,2-DICHLOROETHENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3		UG/KG
TRANS-1,3-DICHLOROPROPENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	6170	U	UG/KG	13	U	UG/KG	6170	U	UG/KG	1250	U	UG/KG	13	U	UG/KG
TRICHLOROETHENE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
TRICHLOROFLUOROMETHANE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
VINYL ACETATE	3090	U	UG/KG	7	U	UG/KG	3090	U	UG/KG	625	U	UG/KG	6	U	UG/KG
VINYL CHLORIDE	1230	U	UG/KG	3	U	UG/KG	1230	U	UG/KG	250	U	UG/KG	3	U	UG/KG
XYLENES, TOTAL	3690	U	UG/KG	8	U	UG/KG	3690	U	UG/KG	750	U	UG/KG	8	U	UG/KG

SAMPLE NUMBER:	S9SB-4	S9SB-5	S9SS-1	S9SS-2	S9SS-3
SAMPLE DATE:	01/17/96	01/17/96	01/15/96	01/15/96	01/15/96
LABORATORY ID:	9601335-15	9601335-16	9601335-06	9601335-07	9601335-08
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	81.0 %	81.0 %	75.0 %	59.0 %	62.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1,1-TRICHLOROETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1,2-TRICHLOROETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1-DICHLOROETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,1-DICHLOROETHENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2,3-TRICHLOROPROPANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DIBROMOETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DICHLOROETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
1,2-DICHLOROPROPANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
2-BUTANONE	6	U	UG/KG	6	U	UG/KG	7	U	UG/KG	9	U	UG/KG	8	U	UG/KG
2-CHLORO-1,3-BUTADIENE	3	U	UG/KG	3	UR	UG/KG	3	UR	UG/KG	3	UR	UG/KG	3	UR	UG/KG
2-HEXANONE	6	U	UG/KG	6	U	UG/KG	7	U	UG/KG	9	U	UG/KG	8	U	UG/KG
4-METHYL-2-PENTANONE	6	U	UG/KG	6	U	UG/KG	7	U	UG/KG	9	U	UG/KG	8	U	UG/KG
ACETONE	18		UG/KG	64		UG/KG	7	U	UG/KG	9	U	UG/KG	8	U	UG/KG
ACETONITRILE	12	U	UG/KG	12	U	UG/KG	13	U	UG/KG	17	U	UG/KG	16	U	UG/KG
ACROLEIN	25	UR	UG/KG	25	UR	UG/KG	27	UR	UG/KG	34	UR	UG/KG	32	UR	UG/KG
ACRYLONITRILE	25	U	UG/KG	25	U	UG/KG	27	U	UG/KG	34	U	UG/KG	32	U	UG/KG
ALLYL CHLORIDE	12	U	UG/KG	12	U	UG/KG	13	U	UG/KG	17	U	UG/KG	16	U	UG/KG
BENZENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	25	U	UG/KG	25	U	UG/KG	27	U	UG/KG	34	U	UG/KG	32	U	UG/KG
BROMODICHLOROMETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
BROMOFORM	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
BROMOMETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CARBON DISULFIDE	6	U	UG/KG	6	U	UG/KG	7	U	UG/KG	9	U	UG/KG	8	U	UG/KG
CARBON TETRACHLORIDE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLOROBENZENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLORODIBROMOMETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLOROETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLOROFORM	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
CHLOROMETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG

SAMPLE NUMBER:	S9SB-4	S9SB-5	S9SS-1	S9SS-2	S9SS-3
SAMPLE DATE:	01/17/96	01/17/96	01/15/96	01/15/96	01/15/96
LABORATORY ID:	9601335-15	9601335-16	9601335-06	9601335-07	9601335-08
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	81.0 %	81.0 %	75.0 %	59.0 %	62.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
DIBROMOMETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
DICHLORODIFLUOROMETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
ETHYL CYANIDE	25	UR	UG/KG	25	UR	UG/KG	27	UR	UG/KG	34	UR	UG/KG	32	UR	UG/KG
ETHYLBENZENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
IODOMETHANE	6	U	UG/KG	6	U	UG/KG	7	U	UG/KG	9	U	UG/KG	8	U	UG/KG
ISOBUTYL ALCOHOL	25	U	UG/KG	25	U	UG/KG	27	U	UG/KG	34	U	UG/KG	32	U	UG/KG
METHACRYLONITRILE	12	U	UG/KG	12	U	UG/KG	13	U	UG/KG	17	U	UG/KG	16	U	UG/KG
METHYL METHACRYLATE	12	U	UG/KG	12	U	UG/KG	13	U	UG/KG	17	U	UG/KG	16	U	UG/KG
METHYLENE CHLORIDE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
STYRENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TETRACHLOROETHENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TOLUENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TRANS-1,2-DICHLOROETHENE	3	U	UG/KG	10		UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	12	U	UG/KG	12	U	UG/KG	13	U	UG/KG	17	U	UG/KG	16	U	UG/KG
TRICHLOROETHENE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
TRICHLOROFLUOROMETHANE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
VINYL ACETATE	6	U	UG/KG	6	U	UG/KG	7	U	UG/KG	9	U	UG/KG	8	U	UG/KG
VINYL CHLORIDE	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG	3	U	UG/KG
XYLENES, TOTAL	8	U	UG/KG	8	U	UG/KG	8	U	UG/KG	10	U	UG/KG	10	U	UG/KG

SAMPLE NUMBER:	S9SS-4		S9SS-5							
SAMPLE DATE:	01/15/96		01/15/96		/ /		/ /		/ /	
LABORATORY ID:	9601335-09		9601335-10							
QC_TYPE:	Normal		Normal							
% SOLIDS:	45.0 %		69.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
VOLATILES										
1,1,1,2-TETRACHLOROETHANE	4	U UG/KG	3	U UG/KG						
1,1,1-TRICHLOROETHANE	4	U UG/KG	3	U UG/KG						
1,1,2,2-TETRACHLOROETHANE	4	U UG/KG	3	U UG/KG						
1,1,2-TRICHLOROETHANE	4	U UG/KG	3	U UG/KG						
1,1-DICHLOROETHANE	4	U UG/KG	3	U UG/KG						
1,1-DICHLOROETHENE	4	U UG/KG	3	U UG/KG						
1,2,3-TRICHLOROPROPANE	4	U UG/KG	3	U UG/KG						
1,2-DIBROMO-3-CHLOROPROPANE	4	U UG/KG	3	U UG/KG						
1,2-DIBROMOETHANE	4	U UG/KG	3	U UG/KG						
1,2-DICHLOROETHANE	4	U UG/KG	3	U UG/KG						
1,2-DICHLOROPROPANE	4	U UG/KG	3	U UG/KG						
2-BUTANONE	11	U UG/KG	7	U UG/KG						
2-CHLORO-1,3-BUTADIENE	4	UR UG/KG	3	UR UG/KG						
2-HEXANONE	11	U UG/KG	7	U UG/KG						
4-METHYL-2-PENTANONE	11	U UG/KG	7	U UG/KG						
ACETONE	11	U UG/KG	7	U UG/KG						
ACETONITRILE	22	U UG/KG	15	U UG/KG						
ACROLEIN	44	UR UG/KG	29	UR UG/KG						
ACRYLONITRILE	44	U UG/KG	29	U UG/KG						
ALLYL CHLORIDE	22	U UG/KG	15	U UG/KG						
BENZENE	4	U UG/KG	3	U UG/KG						
BIS(2-CHLOROISOPROPYL) ETHER	44	U UG/KG	29	U UG/KG						
BROMODICHLOROMETHANE	4	U UG/KG	3	U UG/KG						
BROMOFORM	4	U UG/KG	3	U UG/KG						
BROMOMETHANE	4	U UG/KG	3	U UG/KG						
CARBON DISULFIDE	11	U UG/KG	7	U UG/KG						
CARBON TETRACHLORIDE	4	U UG/KG	3	U UG/KG						
CHLOROBENZENE	4	U UG/KG	3	U UG/KG						
CHLORODIBROMOMETHANE	4	U UG/KG	3	U UG/KG						
CHLOROETHANE	4	U UG/KG	3	U UG/KG						
CHLOROFORM	4	U UG/KG	3	U UG/KG						
CHLOROMETHANE	4	U UG/KG	3	U UG/KG						

SAMPLE NUMBER:	S9SS-4			S9SS-5			/ /		/ /	
SAMPLE DATE:	01/15/96			01/15/96						
LABORATORY ID:	9601335-09			9601335-10						
QC_TYPE:	Normal			Normal						
% SOLIDS:	45.0 %			69.0 %			100.0 %		100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
VOLATILES										
CIS-1,3-DICHLOROPROPENE	4	U	UG/KG	3	U	UG/KG				
DIBROMOMETHANE	4	U	UG/KG	3	U	UG/KG				
DICHLORODIFLUOROMETHANE	4	U	UG/KG	3	U	UG/KG				
ETHYL CYANIDE	44	UR	UG/KG	29	UR	UG/KG				
ETHYLBENZENE	4	U	UG/KG	3	U	UG/KG				
IODOMETHANE	11	U	UG/KG	7	U	UG/KG				
ISOBUTYL ALCOHOL	44	U	UG/KG	29	U	UG/KG				
METHACRYLONITRILE	22	U	UG/KG	15	U	UG/KG				
METHYL METHACRYLATE	22	U	UG/KG	15	U	UG/KG				
METHYLENE CHLORIDE	4	U	UG/KG	3	U	UG/KG				
STYRENE	4	U	UG/KG	3	U	UG/KG				
TETRACHLOROETHENE	4	U	UG/KG	3	U	UG/KG				
TOLUENE	5		UG/KG	3	U	UG/KG				
TRANS-1,2-DICHLOROETHENE	4	U	UG/KG	3	U	UG/KG				
TRANS-1,3-DICHLOROPROPENE	4	U	UG/KG	3	U	UG/KG				
TRANS-1,4-DICHLORO-2-BUTENE	22	U	UG/KG	15	U	UG/KG				
TRICHLOROETHENE	4	U	UG/KG	3	U	UG/KG				
TRICHLOROFLUOROMETHANE	4	U	UG/KG	3	U	UG/KG				
VINYL ACETATE	11	U	UG/KG	7	U	UG/KG				
VINYL CHLORIDE	4	U	UG/KG	3	U	UG/KG				
XYLENES, TOTAL	13	U	UG/KG	9	U	UG/KG				

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1,2,4-TRICHLOROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1,2-DICHLOROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1,3,5-TRINITROBENZENE	1890	U	UG/KG	2120	U	UG/KG	1950	U	UG/KG	2160	U	UG/KG	2050	U	UG/KG
1,3-DICHLOROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1,3-DINITROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1,4-DICHLOROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1,4-DIOXANE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1,4-NAPHTHOQUINONE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
1-NAPHTHYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,4,5-TRICHLOROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,4,6-TRICHLOROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,4-DICHLOROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,4-DIMETHYLPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,4-DINITROPHENOL	754	U	UG/KG	848	U	UG/KG	781	U	UG/KG	862	U	UG/KG	819	U	UG/KG
2,4-DINITROTOLUENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,6-DICHLOROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2,6-DINITROTOLUENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-ACETYLAMINOFLUORENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-CHLORONAPHTHALENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-CHLOROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-METHYLNAPHTHALENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-NAPHTHYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-NITROANILINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-NITROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
2-PICOLINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
3 & 4-METHYLPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
3,3'-DICHLOROBENZIDINE	1890	U	UG/KG	2120	U	UG/KG	1950	U	UG/KG	2160	U	UG/KG	2050	U	UG/KG
3,3'-DIMETHYLBENZIDINE	1890	UR	UG/KG	2120	UR	UG/KG	1950	UR	UG/KG	2160	UR	UG/KG	2050	UR	UG/KG
3-METHYLCHOLANTHRENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-NITROANILINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-AMINOBIPHENYL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-CHLORO-3-METHYLPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-CHLOROANILINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-NITROANILINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-NITROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	377	UR	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
5-NITRO-O-TOLUIDINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ACENAPHTHENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ACENAPHTHYLENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ACETOPHENONE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ANILINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ANTHRACENE	377	UJ	UG/KG	424	U	UG/KG	325	J	UG/KG	431	U	UG/KG	410	U	UG/KG
ARAMITE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
BENZO(A)ANTHRACENE	4650	J	UG/KG	424	U	UG/KG	2190	J	UG/KG	431	U	UG/KG	410	U	UG/KG
BENZO(A)PYRENE	2310		UG/KG	424	U	UG/KG	2060		UG/KG	431	U	UG/KG	410	U	UG/KG
BENZO(B)FLUORANTHENE	7580		UG/KG	424	U	UG/KG	6080		UG/KG	431	U	UG/KG	410	U	UG/KG
BENZO(G,H,I)PERYLENE	1880		UG/KG	424	U	UG/KG	2000		UG/KG	431	U	UG/KG	410	U	UG/KG
BENZO(K)FLUORANTHENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
BENZYL ALCOHOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
BUTYLBENZYL PHTHALATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
CHLOROBENZILATE	1890	U	UG/KG	2120	U	UG/KG	1950	U	UG/KG	2160	U	UG/KG	2050	U	UG/KG
CHRYSENE	7230	J	UG/KG	424	U	UG/KG	3640	J	UG/KG	431	U	UG/KG	410	U	UG/KG
DI-N-BUT PHTHALATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
DI-N-OC PHTHALATE	377	U	UG/KG	424		UG/KG	390	U	UG/KG	431	U	UG/KG	410		UG/KG

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DIALLATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
DIBENZO(A,H)ANTHRACENE	573		UG/KG	424	U	UG/KG	636		UG/KG	431	U	UG/KG	410	U	UG/KG
DIBENZOFURAN	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
DIETHYL PHTHALATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
DIMETHOATE	1890	U	UG/KG	2120	U	UG/KG	1950	U	UG/KG	2160	U	UG/KG	2050	U	UG/KG
DIMETHYL PHTHALATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
DINOSEB	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
DIPHENYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
DISULFOTON	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ETHYL METHACRYLATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ETHYL METHANESULFONATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
FAMPHUR	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
FLUORANTHENE	7800		UG/KG	424	U	UG/KG	6400		UG/KG	431	U	UG/KG	410	U	UG/KG
FLUORENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
HEXACHLOROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
HEXACHLOROBUTADIENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
HEXACHLOROETHANE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
HEXACHLOROPROPENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
INDENO(1,2,3-CD)PYRENE	1580		UG/KG	424	U	UG/KG	1590		UG/KG	431	U	UG/KG	410	U	UG/KG
ISODRIN	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ISOPHORONE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
ISOSAFROLE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
KEPONE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
METHAPYRILENE	1890	U	UG/KG	2120	U	UG/KG	1950	U	UG/KG	2160	U	UG/KG	2050	U	UG/KG
METHYL METHANESULFONATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSODIETHYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSODIMETHYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSODIPHENYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMORPHOLINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSOPIPERIDINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
N-NITROSOPYRROLIDINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
NAPHTHALENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
NITROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
O,O,O-TRIETHYLPHOSPHOROTHIOATE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
O-TOLUIDINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
P-PHENYLENEDIAMINE	754	U	UG/KG	848	U	UG/KG	781	U	UG/KG	862	U	UG/KG	819	U	UG/KG
PENTACHLOROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
PENTACHLOROETHANE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
PENTACHLORONITROBENZENE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
PENTACHLOROPHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
PHENACETIN	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
PHENANTHRENE	2620		UG/KG	424	U	UG/KG	2890		UG/KG	431	U	UG/KG	410	U	UG/KG
PHENOL	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
PRONAMIDE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
PYRENE	7900	J	UG/KG	424	U	UG/KG	4680	J	UG/KG	431	U	UG/KG	410	U	UG/KG
PYRIDINE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
SAFROLE	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
SULFOTEP	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG
THIONAZIN	377	U	UG/KG	424	U	UG/KG	390	U	UG/KG	431	U	UG/KG	410	U	UG/KG

SAMPLE NUMBER:	S9DPSB-01			S9DPSS-1			S9SB-1			S9SB-2			S9SB-3		
SAMPLE DATE:	01/17/96			01/15/96			01/17/96			01/17/96			01/17/96		
LABORATORY ID:	9601335-17			9601335-11			9601335-12			9601335-13			9601335-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			75.0 %			81.0 %			80.0 %			80.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1,2,4-TRICHLOROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1,2-DICHLOROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1,3,5-TRINITROBENZENE	2020	U	UG/KG	2200	U	UG/KG	2010	U	UG/KG	2040	U	UG/KG	2060	U	UG/KG
1,3-DICHLOROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1,3-DINITROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1,4-DICHLOROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1,4-DIOXANE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1,4-NAPHTHOQUINONE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
1-NAPHTHYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,4,5-TRICHLOROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,4,6-TRICHLOROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,4-DICHLOROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,4-DIMETHYLPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,4-DINITROPHENOL	808	U	UG/KG	881	U	UG/KG	805	U	UG/KG	816	U	UG/KG	823	U	UG/KG
2,4-DINITROTOLUENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,6-DICHLOROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2,6-DINITROTOLUENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-ACETYLAMINOFLUORENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-CHLORONAPHTHALENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-CHLOROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-METHYLNAPHTHALENE	1560		UG/KG	441	U	UG/KG	2570		UG/KG	408	U	UG/KG	411	U	UG/KG
2-NAPHTHYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-NITROANILINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-NITROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
2-PICOLINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
3 & 4-METHYLPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
3,3'-DICHLOROBENZIDINE	2020	U	UG/KG	2200	U	UG/KG	2010	U	UG/KG	2040	U	UG/KG	2060	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2020	UR	UG/KG	2200	UR	UG/KG	2010	UR	UG/KG	2040	UR	UG/KG	2060	UR	UG/KG
3-METHYLCHOLANTHRENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG

SAMPLE NUMBER:	S9DPSB-01			S9DPSS-1			S9SB-1			S9SB-2			S9SB-3		
SAMPLE DATE:	01/17/96			01/15/96			01/17/96			01/17/96			01/17/96		
LABORATORY ID:	9601335-17			9601335-11			9601335-12			9601335-13			9601335-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			75.0 %			81.0 %			80.0 %			80.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-NITROANILINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-AMINOBIPHENYL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-CHLORO-3-METHYLPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-CHLOROANILINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-NITROANILINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-NITROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	404	UR	UG/KG	441	U	UG/KG	402	UR	UG/KG	408	UR	UG/KG	411	UR	UG/KG
5-NITRO-O-TOLUIDINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ACENAPHTHENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ACENAPHTHYLENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ACETOPHENONE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ANILINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ANTHRACENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ARAMITE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BENZO(A)ANTHRACENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BENZO(A)PYRENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BENZO(B)FLUORANTHENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BENZO(G,H,I)PERYLENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BENZO(K)FLUORANTHENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BENZYL ALCOHOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
BUTYLBENZYL PHTHALATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
CHLOROBENZILATE	2020	U	UG/KG	2200	U	UG/KG	2010	U	UG/KG	2040	U	UG/KG	2060	U	UG/KG
CHRYSENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DI-N-BU HTHALATE	404	U	UG/KG	441		UG/KG	402	U	UG/KG	408	U	UG/KG	411		UG/KG
DI-N-OCT PHTHALATE	404	U	UG/KG	441		UG/KG	402	U	UG/KG	408	U	UG/KG	411		UG/KG

SAMPLE NUMBER:	S9DPSB-01	S9DPSS-1	S9SB-1	S9SB-2	S9SB-3
SAMPLE DATE:	01/17/96	01/15/96	01/17/96	01/17/96	01/17/96
LABORATORY ID:	9601335-17	9601335-11	9601335-12	9601335-13	9601335-14
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	81.0 %	75.0 %	81.0 %	80.0 %	80.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DIALLATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DIBENZO(A,H)ANTHRACENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DIBENZOFURAN	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DIETHYL PHTHALATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DIMETHOATE	2020	U	UG/KG	2200	U	UG/KG	2010	U	UG/KG	2040	U	UG/KG	2060	U	UG/KG
DIMETHYL PHTHALATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DINOSEB	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DIPHENYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
DISULFOTON	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ETHYL METHACRYLATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ETHYL METHANESULFONATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
FAMPHUR	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
FLUORANTHENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
FLUORENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
HEXACHLOROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
HEXACHLOROBUTADIENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
HEXACHLOROETHANE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
HEXACHLOROPROPENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
INDENO(1,2,3-CD)PYRENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ISODRIN	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ISOPHORONE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
ISOSAFROLE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
KEPONE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
METHAPYRILENE	2020	U	UG/KG	2200	U	UG/KG	2010	U	UG/KG	2040	U	UG/KG	2060	U	UG/KG
METHYL METHANESULFONATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSODIETHYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSODIMETHYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSODIPHENYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG

SAMPLE NUMBER:	S9DPSB-01			S9DPSS-1			S9SB-1			S9SB-2			S9SB-3		
SAMPLE DATE:	01/17/96			01/15/96			01/17/96			01/17/96			01/17/96		
LABORATORY ID:	9601335-17			9601335-11			9601335-12			9601335-13			9601335-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			75.0 %			81.0 %			80.0 %			80.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMORPHOLINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSOPIPERIDINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
N-NITROSOPYRROLIDINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
NAPHTHALENE	404	UJ	UG/KG	441	U	UG/KG	960	J	UG/KG	408	U	UG/KG	411	U	UG/KG
NITROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
O,O,O-TRIETHYLPHOSPHOROTHIOATE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
O-TOLUIDINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
P-PHENYLENEDIAMINE	808	U	UG/KG	881	U	UG/KG	805	U	UG/KG	816	U	UG/KG	823	U	UG/KG
PENTACHLOROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PENTACHLOROETHANE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PENTACHLORONITROBENZENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PENTACHLOROPHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PHENACETIN	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PHENANTHRENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PHENOL	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PRONAMIDE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PYRENE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
PYRIDINE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
SAFROLE	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
SULFOTEP	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG
THIONAZIN	404	U	UG/KG	441	U	UG/KG	402	U	UG/KG	408	U	UG/KG	411	U	UG/KG

SAMPLE NUMBER:	S9SB-4			S9SB-5			S9SS-1			S9SS-2			S9SS-3		
SAMPLE DATE:	01/17/96			01/17/96			01/15/96			01/15/96			01/15/96		
LABORATORY ID:	9601335-15			9601335-16			9601335-06			9601335-07			9601335-08		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			81.0 %			75.0 %			59.0 %			62.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1,2,4-TRICHLOROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1,2-DICHLOROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1,3,5-TRINITROBENZENE	1950	U	UG/KG	2030	U	UG/KG	2180	U	UG/KG	2690	U	UG/KG	2640	U	UG/KG
1,3-DICHLOROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1,3-DINITROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1,4-DICHLOROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1,4-DIOXANE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1,4-NAPHTHOQUINONE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
1-NAPHTHYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,4,5-TRICHLOROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,4,6-TRICHLOROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,4-DICHLOROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,4-DIMETHYLPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,4-DINITROPHENOL	782	U	UG/KG	813	U	UG/KG	874	U	UG/KG	1080	U	UG/KG	1060	U	UG/KG
2,4-DINITROTOLUENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,6-DICHLOROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2,6-DINITROTOLUENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-ACETYLAMINOFLUORENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-CHLORONAPHTHALENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-CHLOROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-METHYLNAPHTHALENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-NAPHTHYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-NITROANILINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-NITROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
2-PICOLINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
3 & 4-METHYLPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
3,3'-DICHLOROBENZIDINE	1950	U	UG/KG	2030	U	UG/KG	2180	U	UG/KG	2690	U	UG/KG	2640	U	UG/KG
3,3'-DIMETHYLBENZIDINE	1950	UR	UG/KG	2030	UR	UG/KG	2180	UR	UG/KG	2690	UR	UG/KG	2640	UR	UG/KG
3-METHYLCHOLANTHRENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG

SAMPLE NUMBER:	S9SB-4	S9SB-5	S9SS-1	S9SS-2	S9SS-3
SAMPLE DATE:	01/17/96	01/17/96	01/15/96	01/15/96	01/15/96
LABORATORY ID:	9601335-15	9601335-16	9601335-06	9601335-07	9601335-08
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	81.0 %	81.0 %	75.0 %	59.0 %	62.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-NITROANILINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-AMINOBIPHENYL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-CHLORO-3-METHYLPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-CHLOROANILINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-NITROANILINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-NITROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	391	UR	UG/KG	406	UR	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
5-NITRO-O-TOLUIDINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ACENAPHTHENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ACENAPHTHYLENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ACETOPHENONE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ANILINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ANTHRACENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ARAMITE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BENZO(A)ANTHRACENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BENZO(A)PYRENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BENZO(B)FLUORANTHENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BENZO(G,H,I)PERYLENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BENZO(K)FLUORANTHENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BENZYL ALCOHOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
BUTYLBENZYL PHTHALATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
CHLOROBENZILATE	1950	U	UG/KG	2030	U	UG/KG	2180	U	UG/KG	2690	U	UG/KG	2640	U	UG/KG
CHRYSENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DI-N-BU `PHTHALATE	391	U	UG/KG	406	'	UG/KG	437	U	UG/KG	539	U	UG/KG	529	"	UG/KG
DI-N-OCTYL PHTHALATE	391	U	UG/KG	406	J	UG/KG	437	U	UG/KG	539	U	UG/KG	529		UG/KG

SAMPLE NUMBER:	S9SB-4	S9SB-5	S9SS-1	S9SS-2	S9SS-3
SAMPLE DATE:	01/17/96	01/17/96	01/15/96	01/15/96	01/15/96
LABORATORY ID:	9601335-15	9601335-16	9601335-06	9601335-07	9601335-08
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	81.0 %	81.0 %	75.0 %	59.0 %	62.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DIALLATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DIBENZO(A,H)ANTHRACENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DIBENZOFURAN	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DIETHYL PHTHALATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DIMETHOATE	1950	U	UG/KG	2030	U	UG/KG	2180	U	UG/KG	2690	U	UG/KG	2640	U	UG/KG
DIMETHYL PHTHALATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DINOSEB	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DIPHENYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
DISULFOTON	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ETHYL METHACRYLATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ETHYL METHANESULFONATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
FAMPHUR	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
FLUORANTHENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
FLUORENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
HEXACHLOROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
HEXACHLOROBUTADIENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
HEXACHLOROETHANE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
HEXACHLOROPROPENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
INDENO(1,2,3-CD)PYRENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ISODRIN	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ISOPHORONE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
ISOSAFROLE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
KEPONE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
METHAPYRILENE	1950	U	UG/KG	2030	U	UG/KG	2180	U	UG/KG	2690	U	UG/KG	2640	U	UG/KG
METHYL METHANESULFONATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSODIETHYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSODIMETHYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSODIPHENYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG

SAMPLE NUMBER:	S9SB-4			S9SB-5			S9SS-1			S9SS-2			S9SS-3		
SAMPLE DATE:	01/17/96			01/17/96			01/15/96			01/15/96			01/15/96		
LABORATORY ID:	9601335-15			9601335-16			9601335-06			9601335-07			9601335-08		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			81.0 %			75.0 %			59.0 %			62.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMORPHOLINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSOPIPERIDINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
N-NITROSOPYRROLIDINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
NAPHTHALENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
NITROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
O,O,O-TRIETHYLPHOSPHOROTHIOATE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
O-TOLUIDINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
P-PHENYLENEDIAMINE	782	U	UG/KG	813	U	UG/KG	874	U	UG/KG	1080	U	UG/KG	1060	U	UG/KG
PENTACHLOROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PENTACHLOROETHANE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PENTACHLORONITROBENZENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PENTACHLOROPHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PHENACETIN	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PHENANTHRENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PHENOL	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PRONAMIDE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PYRENE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
PYRIDINE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
SAFROLE	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
SULFOTEP	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG
THIONAZIN	391	U	UG/KG	406	U	UG/KG	437	U	UG/KG	539	U	UG/KG	529	U	UG/KG

SAMPLE NUMBER:	S9SS-4		S9SS-5							
SAMPLE DATE:	01/15/96		01/15/96		/ /		/ /		/ /	
LABORATORY ID:	9601335-09		9601335-10							
QC_TYPE:	Normal		Normal							
% SOLIDS:	45.0 %		69.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
SEMIVOLATILES										
1,2,4,5-TETRACHLOROBENZENE	733	U UG/KG	474	U UG/KG						
1,2,4-TRICHLOROBENZENE	733	U UG/KG	474	U UG/KG						
1,2-DICHLOROBENZENE	733	U UG/KG	474	U UG/KG						
1,3,5-TRINITROBENZENE	3670	U UG/KG	2370	U UG/KG						
1,3-DICHLOROBENZENE	733	U UG/KG	474	U UG/KG						
1,3-DINITROBENZENE	733	U UG/KG	474	U UG/KG						
1,4-DICHLOROBENZENE	733	U UG/KG	474	U UG/KG						
1,4-DIOXANE	733	U UG/KG	474	U UG/KG						
1,4-NAPHTHOQUINONE	733	U UG/KG	474	U UG/KG						
1-NAPHTHYLAMINE	733	U UG/KG	474	U UG/KG						
2,3,4,6-TETRACHLOROPHENOL	733	U UG/KG	474	U UG/KG						
2,4,5-TRICHLOROPHENOL	733	U UG/KG	474	U UG/KG						
2,4,6-TRICHLOROPHENOL	733	U UG/KG	474	U UG/KG						
2,4-DICHLOROPHENOL	733	U UG/KG	474	U UG/KG						
2,4-DIMETHYLPHENOL	733	U UG/KG	474	U UG/KG						
2,4-DINITROPHENOL	1470	U UG/KG	947	U UG/KG						
2,4-DINITROTOLUENE	733	U UG/KG	474	U UG/KG						
2,6-DICHLOROPHENOL	733	U UG/KG	474	U UG/KG						
2,6-DINITROTOLUENE	733	U UG/KG	474	U UG/KG						
2-ACETYLAMINOFLUORENE	733	U UG/KG	474	U UG/KG						
2-CHLORONAPHTHALENE	733	U UG/KG	474	U UG/KG						
2-CHLOROPHENOL	733	U UG/KG	474	U UG/KG						
2-METHYL-4,6-DINITROPHENOL	733	U UG/KG	474	U UG/KG						
2-METHYLNAPHTHALENE	733	U UG/KG	474	U UG/KG						
2-NAPHTHYLAMINE	733	U UG/KG	474	U UG/KG						
2-NITROANILINE	733	U UG/KG	474	U UG/KG						
2-NITROPHENOL	733	U UG/KG	474	U UG/KG						
2-PICOLINE	733	U UG/KG	474	U UG/KG						
3 & 4-METHYLPHENOL	733	U UG/KG	474	U UG/KG						
3,3'-DICHLOROBENZIDINE	3670	U UG/KG	2370	U UG/KG						
3,3'-DIMETHYLBENZIDINE	3670	UR UG/KG	2370	UR UG/KG						
3-METHYLCHOLANTHRENE	733	U UG/KG	474	U UG/KG						

SAMPLE NUMBER:	S9SS-4			S9SS-5							
SAMPLE DATE:	01/15/96			01/15/96			/ /			/ /			/ /		
LABORATORY ID:	9601335-09			9601335-10							
QC_TYPE:	Normal			Normal							
% SOLIDS:	45.0 %			69.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-NITROANILINE	733	U	UG/KG	474	U	UG/KG									
4-AMINOBIPHENYL	733	U	UG/KG	474	U	UG/KG									
4-BROMOPHENYL PHENYL ETHER	733	U	UG/KG	474	U	UG/KG									
4-CHLORO-3-METHYLPHENOL	733	U	UG/KG	474	U	UG/KG									
4-CHLOROANILINE	733	U	UG/KG	474	U	UG/KG									
4-CHLOROPHENYL PHENYL ETHER	733	U	UG/KG	474	U	UG/KG									
4-NITROANILINE	733	U	UG/KG	474	U	UG/KG									
4-NITROPHENOL	733	U	UG/KG	474	U	UG/KG									
4-NITROQUINOLINE-1-OXIDE	733	U	UG/KG	474	U	UG/KG									
5-NITRO-O-TOLUIDINE	733	U	UG/KG	474	U	UG/KG									
7,12-DIMETHYLBENZ(A)ANTHRACENE	733	U	UG/KG	474	U	UG/KG									
A,A-DIMETHYLPHENETHYLAMINE	733	U	UG/KG	474	U	UG/KG									
ACENAPHTHENE	733	U	UG/KG	474	U	UG/KG									
ACENAPHTHYLENE	733	U	UG/KG	474	U	UG/KG									
ACETOPHENONE	733	U	UG/KG	474	U	UG/KG									
ANILINE	733	U	UG/KG	474	U	UG/KG									
ANTHRACENE	733	U	UG/KG	474	U	UG/KG									
ARAMITE	733	U	UG/KG	474	U	UG/KG									
BENZO(A)ANTHRACENE	733	U	UG/KG	474	U	UG/KG									
BENZO(A)PYRENE	733	U	UG/KG	474	U	UG/KG									
BENZO(B)FLUORANTHENE	733	U	UG/KG	474	U	UG/KG									
BENZO(G,H,I)PERYLENE	733	U	UG/KG	474	U	UG/KG									
BENZO(K)FLUORANTHENE	733	U	UG/KG	474	U	UG/KG									
BENZYL ALCOHOL	733	U	UG/KG	474	U	UG/KG									
BIS(2-CHLOROETHOXY)METHANE	733	U	UG/KG	474	U	UG/KG									
BIS(2-CHLOROETHYL)ETHER	733	U	UG/KG	474	U	UG/KG									
BIS(2-ETHYLHEXYL)PHTHALATE	733	U	UG/KG	474	U	UG/KG									
BUTYLBENZYL PHTHALATE	733	U	UG/KG	474	U	UG/KG									
CHLOROBENZILATE	3670	U	UG/KG	2370	U	UG/KG									
CHRYSENE	733	U	UG/KG	474	U	UG/KG									
DI-N-BU `PHTHALATE	733	U	UG/KG	474	`I	UG/KG									
DI-N-OC. . . PHTHALATE	733	U	UG/KG	474		UG/KG									

SAMPLE NUMBER:	S9SS-4	S9SS-5	/ /	/ /	/ /
SAMPLE DATE:	01/15/96	01/15/96			
LABORATORY ID:	9601335-09	9601335-10			
QC_TYPE:	Normal	Normal			
% SOLIDS:	45.0 %	69.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DIALLATE	733	U	UG/KG	474	U	UG/KG									
DIBENZO(A,H)ANTHRACENE	733	U	UG/KG	474	U	UG/KG									
DIBENZOFURAN	733	U	UG/KG	474	U	UG/KG									
DIETHYL PHTHALATE	733	U	UG/KG	474	U	UG/KG									
DIMETHOATE	3670	U	UG/KG	2370	U	UG/KG									
DIMETHYL PHTHALATE	733	U	UG/KG	474	U	UG/KG									
DINOSEB	733	U	UG/KG	474	U	UG/KG									
DIPHENYLAMINE	733	U	UG/KG	474	U	UG/KG									
DISULFOTON	733	U	UG/KG	474	U	UG/KG									
ETHYL METHACRYLATE	733	U	UG/KG	474	U	UG/KG									
ETHYL METHANESULFONATE	733	U	UG/KG	474	U	UG/KG									
FAMPHUR	733	U	UG/KG	474	U	UG/KG									
FLUORANTHENE	733	U	UG/KG	474	U	UG/KG									
FLUORENE	733	U	UG/KG	474	U	UG/KG									
HEXACHLOROBENZENE	733	U	UG/KG	474	U	UG/KG									
HEXACHLOROBUTADIENE	733	U	UG/KG	474	U	UG/KG									
HEXACHLOROCYCLOPENTADIENE	733	U	UG/KG	474	U	UG/KG									
HEXACHLOROETHANE	733	U	UG/KG	474	U	UG/KG									
HEXACHLOROPROPENE	733	U	UG/KG	474	U	UG/KG									
INDENO(1,2,3-CD)PYRENE	733	U	UG/KG	474	U	UG/KG									
ISODRIN	733	U	UG/KG	474	U	UG/KG									
ISOPHORONE	733	U	UG/KG	474	U	UG/KG									
ISOSAFROLE	733	U	UG/KG	474	U	UG/KG									
KEPONE	733	U	UG/KG	474	U	UG/KG									
METHAPYRILENE	3670	U	UG/KG	2370	U	UG/KG									
METHYL METHANESULFONATE	733	U	UG/KG	474	U	UG/KG									
N-NITROSO-DI-N-BUTYLAMINE	733	U	UG/KG	474	U	UG/KG									
N-NITROSO-DI-N-PROPYLAMINE	733	U	UG/KG	474	U	UG/KG									
N-NITROSODIETHYLAMINE	733	U	UG/KG	474	U	UG/KG									
N-NITROSODIMETHYLAMINE	733	U	UG/KG	474	U	UG/KG									
N-NITROSODIPHENYLAMINE	733	U	UG/KG	474	U	UG/KG									
N-NITROSOMETHYLETHYLAMINE	733	U	UG/KG	474	U	UG/KG									

SAMPLE NUMBER:	S9SS-4			S9SS-5			/ /		/ /		/ /	
SAMPLE DATE:	01/15/96			01/15/96								
LABORATORY ID:	9601335-09			9601335-10								
QC_TYPE:	Normal			Normal								
% SOLIDS:	45.0 %			69.0 %			100.0 %		100.0 %		100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
SEMIVOLATILES												
N-NITROSOMORPHOLINE	733	U	UG/KG	474	U	UG/KG						
N-NITROSOPIPERIDINE	733	U	UG/KG	474	U	UG/KG						
N-NITROSOPYRROLIDINE	733	U	UG/KG	474	U	UG/KG						
NAPHTHALENE	733	U	UG/KG	474	U	UG/KG						
NITROBENZENE	733	U	UG/KG	474	U	UG/KG						
O,O,O-TRIETHYLPHOSPHOROTHIOATE	733	U	UG/KG	474	U	UG/KG						
O-TOLUIDINE	733	U	UG/KG	474	U	UG/KG						
P-DIMETHYLAMINOAZOBENZENE	733	U	UG/KG	474	U	UG/KG						
P-PHENYLENEDIAMINE	1470	U	UG/KG	947	U	UG/KG						
PENTACHLOROBENZENE	733	U	UG/KG	474	U	UG/KG						
PENTACHLOROETHANE	733	U	UG/KG	474	U	UG/KG						
PENTACHLORONITROBENZENE	733	U	UG/KG	474	U	UG/KG						
PENTACHLOROPHENOL	733	U	UG/KG	474	U	UG/KG						
PHENACETIN	733	U	UG/KG	474	U	UG/KG						
PHENANTHRENE	733	U	UG/KG	474	U	UG/KG						
PHENOL	733	U	UG/KG	474	U	UG/KG						
PRONAMIDE	733	U	UG/KG	474	U	UG/KG						
PYRENE	733	U	UG/KG	474	U	UG/KG						
PYRIDINE	733	U	UG/KG	474	U	UG/KG						
SAFROLE	733	U	UG/KG	474	U	UG/KG						
SULFOTEP	733	U	UG/KG	474	U	UG/KG						
THIONAZIN	733	U	UG/KG	474	U	UG/KG						

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SOIL D
GENER ENGINEERING LABS

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	17.2	U	UG/KG	325	U	UG/KG
4,4'-DDE	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	17.2	U	UG/KG	1730		UG/KG
4,4'-DDT	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	17.2	U	UG/KG	709		UG/KG
ALDRIN	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
ALPHA-BHC	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
AROCLOR-1016	232	U	UG/KG	267	U	UG/KG	248	U	UG/KG	53.7	U	UG/KG	1020	U	UG/KG
AROCLOR-1221	232	U	UG/KG	267	U	UG/KG	248	U	UG/KG	53.7	U	UG/KG	1020	U	UG/KG
AROCLOR-1232	232	U	UG/KG	267	U	UG/KG	248	U	UG/KG	53.7	U	UG/KG	1020	U	UG/KG
AROCLOR-1242	232	U	UG/KG	267	U	UG/KG	248	U	UG/KG	53.7	U	UG/KG	1020	U	UG/KG
AROCLOR-1248	232	U	UG/KG	267	U	UG/KG	248	U	UG/KG	53.7	U	UG/KG	1020	U	UG/KG
AROCLOR-1254	232	U	UG/KG	267	U	UG/KG	248	U	UG/KG	53.7	U	UG/KG	1020	U	UG/KG
AROCLOR-1260	232	U	UG/KG	267	U	UG/KG	248	U	UG/KG	644	J	UG/KG	1020	U	UG/KG
BETA-BHC	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
CHLORDANE	465	U	UG/KG	534	U	UG/KG	496	U	UG/KG	107	U	UG/KG	2030	U	UG/KG
DELTA-BHC	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
DIELDRIN	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	17.2	U	UG/KG	325	U	UG/KG
ENDOSULFAN I	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
ENDOSULFAN II	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	17.2	U	UG/KG	325	U	UG/KG
ENDOSULFAN SULFATE	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	17.2	U	UG/KG	325	U	UG/KG
ENDRIN	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	19.7		UG/KG	325	U	UG/KG
ENDRIN ALDEHYDE	74.4	U	UG/KG	85.4	U	UG/KG	79.3	U	UG/KG	17.2	U	UG/KG	325	U	UG/KG
GAMMA-BHC (LINDANE)	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
HEPTACHLOR	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
HEPTACHLOR EPOXIDE	37.2	U	UG/KG	42.7	U	UG/KG	39.6	U	UG/KG	8.6	U	UG/KG	162	U	UG/KG
METHOXYCHLOR	372	U	UG/KG	427	U	UG/KG	397	U	UG/KG	85.9	U	UG/KG	1620	U	UG/KG
METHYL PARATHION	93.0	U	UG/KG	107	U	UG/KG	99.2	U	UG/KG	21.5	U	UG/KG	406	U	UG/KG
PARATHION	93.0	U	UG/KG	107	U	UG/KG	99.2	U	UG/KG	21.5	U	UG/KG	406	U	UG/KG
PHORATE	93.0	U	UG/KG	107	U	UG/KG	99.2	U	UG/KG	21.5	U	UG/KG	406	U	UG/KG
TOXAPHENE	1860	U	UG/KG	2140	U	UG/KG	1980	U	UG/KG	430	U	UG/KG	8130	U	UG/KG

SAMPLE NUMBER:	S9DPSB-01			S9DPSS-1			S9SB-1			S9SB-2			S9SB-3		
SAMPLE DATE:	01/17/96			01/15/96			01/17/96			01/17/96			01/17/96		
LABORATORY ID:	9601335-17			9601335-11			9601335-12			9601335-13			9601335-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			75.0 %			81.0 %			80.0 %			80.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.6	U	UG/KG	8.8	U	UG/KG	8.2	U	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
4,4'-DDE	1.6	U	UG/KG	8.8	U	UG/KG	8.2	U	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
4,4'-DDT	5.4		UG/KG	8.8	U	UG/KG	8.2	U	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
ALDRIN	0.81	U	UG/KG	4.4	U	UG/KG	4.1	U	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
ALPHA-BHC	0.81	U	UG/KG	4.4	U	UG/KG	4.1	U	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
AROCLOR-1016	5.1	U	UG/KG	27.6	U	UG/KG	25.6	U	UG/KG	25.5	U	UG/KG	5.1	U	UG/KG
AROCLOR-1221	5.1	U	UG/KG	27.6	U	UG/KG	25.6	U	UG/KG	25.5	U	UG/KG	5.1	U	UG/KG
AROCLOR-1232	5.1	U	UG/KG	27.6	U	UG/KG	25.6	U	UG/KG	25.5	U	UG/KG	5.1	U	UG/KG
AROCLOR-1242	5.1	U	UG/KG	27.6	U	UG/KG	25.6	U	UG/KG	25.5	U	UG/KG	5.1	U	UG/KG
AROCLOR-1248	5.1	U	UG/KG	27.6	U	UG/KG	25.6	U	UG/KG	25.5	U	UG/KG	5.1	U	UG/KG
AROCLOR-1254	5.1	U	UG/KG	27.6	U	UG/KG	25.6	U	UG/KG	25.5	U	UG/KG	5.1	U	UG/KG
AROCLOR-1260	5.1	U	UG/KG	27.6	U	UG/KG	25.6	U	UG/KG	25.5	U	UG/KG	5.1	U	UG/KG
BETA-BHC	0.81	U	UG/KG	4.4	U	UG/KG	4.1	U	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
CHLORDANE	10.1	U	UG/KG	55.3	U	UG/KG	51.2	U	UG/KG	51.0	U	UG/KG	10.2	U	UG/KG
DELTA-BHC	1.7	J	UG/KG	4.4	U	UG/KG	4.1	UJ	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
DIELDRIN	1.6	U	UG/KG	8.8	U	UG/KG	8.2	U	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
ENDOSULFAN I	0.81	U	UG/KG	4.4	U	UG/KG	4.1	U	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
ENDOSULFAN II	1.6	U	UG/KG	8.8	U	UG/KG	8.2	U	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
ENDOSULFAN SULFATE	1.6	U	UG/KG	8.8	U	UG/KG	8.2	U	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
ENDRIN	1.9	J	UG/KG	8.8	U	UG/KG	8.2	UJ	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
ENDRIN ALDEHYDE	1.6	U	UG/KG	8.8	U	UG/KG	8.2	U	UG/KG	8.2	U	UG/KG	1.6	U	UG/KG
GAMMA-BHC (LINDANE)	0.81	U	UG/KG	4.4	U	UG/KG	4.1	U	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
HEPTACHLOR	0.81	U	UG/KG	4.4	U	UG/KG	4.1	U	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
HEPTACHLOR EPOXIDE	0.81	U	UG/KG	4.4	U	UG/KG	4.1	U	UG/KG	4.1	U	UG/KG	0.82	U	UG/KG
METHOXYCHLOR	8.1	U	UG/KG	44.2	U	UG/KG	41.0	U	UG/KG	40.8	U	UG/KG	8.2	U	UG/KG
METHYL PARATHION	2.0	U	UG/KG	11.0	U	UG/KG	10.2	U	UG/KG	10.2	U	UG/KG	2.0	U	UG/KG
PARATHION	2.0	U	UG/KG	11.0	U	UG/KG	10.2	U	UG/KG	10.2	U	UG/KG	2.0	U	UG/KG
PHORATE	2.0	U	UG/KG	11.0	U	UG/KG	10.2	U	UG/KG	10.2	U	UG/KG	2.0	U	UG/KG
TOXAPHENE	40.5	U	UG/KG	221	U	UG/KG	205	U	UG/KG	204	U	UG/KG	40.8	U	UG/KG

SAMPLE NUMBER:	S9SB-4	S9SB-5	S9SS-1	S9SS-2	S9SS-3
SAMPLE DATE:	01/17/96	01/17/96	01/15/96	01/15/96	01/15/96
LABORATORY ID:	9601335-15	9601335-16	9601335-06	9601335-07	9601335-08
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	81.0 %	81.0 %	75.0 %	59.0 %	62.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.6	U	UG/KG	1.6	U	UG/KG	8.9	U	UG/KG	2.2	U	UG/KG	10.6	U	UG/KG
4,4'-DDE	1.6	U	UG/KG	1.6	U	UG/KG	9.0		UG/KG	2.2	U	UG/KG	10.6	U	UG/KG
4,4'-DDT	1.6	U	UG/KG	1.6	U	UG/KG	8.9	U	UG/KG	2.3		UG/KG	10.6	U	UG/KG
ALDRIN	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
ALPHA-BHC	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
AROCLOR-1016	5.1	U	UG/KG	5.1	U	UG/KG	27.7	U	UG/KG	7.0	U	UG/KG	33.0	U	UG/KG
AROCLOR-1221	5.1	U	UG/KG	5.1	U	UG/KG	27.7	U	UG/KG	7.0	U	UG/KG	33.0	U	UG/KG
AROCLOR-1232	5.1	U	UG/KG	5.1	U	UG/KG	27.7	U	UG/KG	7.0	U	UG/KG	33.0	U	UG/KG
AROCLOR-1242	5.1	U	UG/KG	5.1	U	UG/KG	27.7	U	UG/KG	7.0	U	UG/KG	33.0	U	UG/KG
AROCLOR-1248	5.1	U	UG/KG	5.1	U	UG/KG	27.7	U	UG/KG	7.0	U	UG/KG	33.0	U	UG/KG
AROCLOR-1254	5.1	U	UG/KG	5.1	U	UG/KG	27.7	U	UG/KG	7.0	U	UG/KG	33.0	U	UG/KG
AROCLOR-1260	5.1	U	UG/KG	5.1	U	UG/KG	27.7	U	UG/KG	7.0	U	UG/KG	33.0	U	UG/KG
BETA-BHC	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
CHLORDANE	10.2	U	UG/KG	10.3	U	UG/KG	55.5	U	UG/KG	13.9	U	UG/KG	66.0	U	UG/KG
DELTA-BHC	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
DIELDRIN	1.6	U	UG/KG	1.6	U	UG/KG	8.9	U	UG/KG	2.2	U	UG/KG	10.6	U	UG/KG
ENDOSULFAN I	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
ENDOSULFAN II	1.6	U	UG/KG	1.6	U	UG/KG	8.9	U	UG/KG	2.2	U	UG/KG	10.6	U	UG/KG
ENDOSULFAN SULFATE	1.6	U	UG/KG	1.6	U	UG/KG	8.9	U	UG/KG	2.2	U	UG/KG	10.6	U	UG/KG
ENDRIN	1.6	U	UG/KG	1.6	U	UG/KG	8.9	U	UG/KG	5.1		UG/KG	10.6	U	UG/KG
ENDRIN ALDEHYDE	1.6	U	UG/KG	1.6	U	UG/KG	8.9	U	UG/KG	2.2	U	UG/KG	10.6	U	UG/KG
GAMMA-BHC (LINDANE)	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
HEPTACHLOR	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
HEPTACHLOR EPOXIDE	0.81	U	UG/KG	0.82	U	UG/KG	4.4	U	UG/KG	1.1	U	UG/KG	5.3	U	UG/KG
METHOXYCHLOR	8.1	U	UG/KG	8.2	U	UG/KG	44.4	U	UG/KG	11.1	U	UG/KG	52.8	U	UG/KG
METHYL PARATHION	2.0	U	UG/KG	2.0	U	UG/KG	11.1	U	UG/KG	2.8	U	UG/KG	13.2	U	UG/KG
PARATHION	2.0	U	UG/KG	2.0	U	UG/KG	11.1	U	UG/KG	2.8	U	UG/KG	13.2	U	UG/KG
PHORATE	2.0	U	UG/KG	2.0	U	UG/KG	11.1	U	UG/KG	2.8	U	UG/KG	13.2	U	UG/KG
TOXAPHENE	40.7	U	UG/KG	41.2	U	UG/KG	222	U	UG/KG	55.7	U	UG/KG	264	U	UG/KG

SAMPLE NUMBER:	S9SS-4		S9SS-5				
SAMPLE DATE:	01/15/96		01/15/96		/ /	/ /	/ /
LABORATORY ID:	9601335-09		9601335-10				
QC_TYPE:	Normal		Normal				
% SOLIDS:	45.0 %		69.0 %		100.0 %	100.0 %	100.0 %
	RESULT QUAL UNITS		RESULT QUAL UNITS		RESULT QUAL UNITS	RESULT QUAL UNITS	RESULT QUAL UNITS
PESTICIDES/PCBs							
4,4'-DDD	14.7	U UG/KG	9.6	U UG/KG			
4,4'-DDE	14.7	U UG/KG	15.1	UG/KG			
4,4'-DDT	14.7	U UG/KG	9.6	U UG/KG			
ALDRIN	7.3	U UG/KG	4.8	U UG/KG			
ALPHA-BHC	7.3	U UG/KG	4.8	U UG/KG			
AROCLOR-1016	45.9	U UG/KG	30.0	U UG/KG			
AROCLOR-1221	45.9	U UG/KG	30.0	U UG/KG			
AROCLOR-1232	45.9	U UG/KG	30.0	U UG/KG			
AROCLOR-1242	45.9	U UG/KG	30.0	U UG/KG			
AROCLOR-1248	45.9	U UG/KG	30.0	U UG/KG			
AROCLOR-1254	45.9	U UG/KG	30.0	U UG/KG			
AROCLOR-1260	45.9	U UG/KG	30.0	U UG/KG			
BETA-BHC	7.3	U UG/KG	4.8	U UG/KG			
CHLORDANE	91.8	U UG/KG	60.0	U UG/KG			
DELTA-BHC	7.3	U UG/KG	4.8	U UG/KG			
DIELDRIN	14.7	U UG/KG	9.6	U UG/KG			
ENDOSULFAN I	7.3	U UG/KG	7.9	UG/KG			
ENDOSULFAN II	14.7	U UG/KG	9.6	U UG/KG			
ENDOSULFAN SULFATE	14.7	U UG/KG	9.6	U UG/KG			
ENDRIN	14.7	U UG/KG	9.6	U UG/KG			
ENDRIN ALDEHYDE	14.7	U UG/KG	9.6	U UG/KG			
GAMMA-BHC (LINDANE)	7.3	U UG/KG	4.8	U UG/KG			
HEPTACHLOR	7.3	U UG/KG	4.8	U UG/KG			
HEPTACHLOR EPOXIDE	7.3	U UG/KG	4.8	U UG/KG			
METHOXYCHLOR	73.4	U UG/KG	48.0	U UG/KG			
METHYL PARATHION	18.4	U UG/KG	12.0	U UG/KG			
PARATHION	18.4	U UG/KG	12.0	U UG/KG			
PHORATE	18.4	U UG/KG	12.0	U UG/KG			
TOXAPHENE	367	U UG/KG	240	U UG/KG			

CTO 00[illegible] NAS KEY WEST
SOIL D
GENER[illegible] ENGINEERING LABS

SAMPLE NUMBER:	S1DPSS-1			S1SS-4			S1SS-5			S1SS-6			S1SS-7		
SAMPLE DATE:	01/13/96			01/13/96			01/13/96			01/13/96			01/13/96		
LABORATORY ID:	9601335-04			9601335-05			9601335-02			9601335-01			9601335-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	88.0 %			77.0 %			84.0 %			77.0 %			81.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	45.4	U	UG/KG	51.9	U	UG/KG	47.6	U	UG/KG	51.1	U	UG/KG	49.4	U	UG/KG
2,4,5-TP (SILVEX)	22.7	U	UG/KG	26.0	U	UG/KG	23.8	U	UG/KG	25.6	U	UG/KG	24.7	U	UG/KG
2,4-D	45.4	U	UG/KG	51.9	U	UG/KG	47.6	U	UG/KG	51.1	U	UG/KG	49.4	U	UG/KG

SAMPLE NUMBER:	S9DPSB-01			S9DPSS-1			S9SB-1			S9SB-2			S9SB-3		
SAMPLE DATE:	01/17/96			01/15/96			01/17/96			01/17/96			01/17/96		
LABORATORY ID:	9601335-17			9601335-11			9601335-12			9601335-13			9601335-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			75.0 %			81.0 %			80.0 %			80.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	49.4	U	UG/KG	53.3	U	UG/KG	49.4	U	UG/KG	50.0	U	UG/KG	50.0	U	UG/KG
2,4,5-TP (SILVEX)	24.7	U	UG/KG	26.7	U	UG/KG	24.7	U	UG/KG	25.0	U	UG/KG	25.0	U	UG/KG
2,4-D	49.4	U	UG/KG	53.3	U	UG/KG	49.4	U	UG/KG	50.0	U	UG/KG	50.0	U	UG/KG

SAMPLE NUMBER:	S9SB-4			S9SB-5			S9SS-1			S9SS-2			S9SS-3		
SAMPLE DATE:	01/17/96			01/17/96			01/15/96			01/15/96			01/15/96		
LABORATORY ID:	9601335-15			9601335-16			9601335-06			9601335-07			9601335-08		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	81.0 %			19.0 %			75.0 %			59.0 %			62.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	48.9	U	UG/KG	49.4	U	UG/KG	53.3	U	UG/KG	67.8	U	UG/KG	64.5	U	UG/KG
2,4,5-TP (SILVEX)	24.4	U	UG/KG	24.7	U	UG/KG	26.7	U	UG/KG	33.9	U	UG/KG	32.2	U	UG/KG
2,4-D	48.9	U	UG/KG	49.4	U	UG/KG	53.3	U	UG/KG	67.8	U	UG/KG	64.5	U	UG/KG

SAMPLE NUMBER:	S9SS-4		S9SS-5							
SAMPLE DATE:	01/15/96		01/15/96		/ /		/ /		/ /	
LABORATORY ID:	9601335-09		9601335-10							
QC_TYPE:	Normal		Normal							
% SOLIDS:	45.0 %		69.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	**QUAL**	**RESULT**	**QUAL**	**RESULT**	**QUAL**	**RESULT**	**QUAL**	**RESULT**	**QUAL**
HERBICIDES										
2,4,5-T	88.9	U UG/KG	58.0	U UG/KG						
2,4,5-TP (SILVEX)	44.4	U UG/KG	29.0	U UG/KG						
2,4-D	88.9	U UG/KG	58.0	U UG/KG						

INORGANIC DATA VALIDATION
SDG 61336W

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-096

TO : **KEVIN WALTER** **DATE:** **APRIL 10, 1996**

FROM: **WILLIAM J. BROTZ** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION - TAL METALS AND CYANIDE**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG 61336W

13/Aqueous/	FB01-011696	FB02-011696	RB01-011596
	RB01-011796	S9DPGW-01	S9MW-15
	S9MW-17	S9MW-19D	S9MW-21
	S9MW-24	S9MW-3	S9MW-6
	S9MW-9		

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. 61336W. Thirteen (13) aqueous samples were included for TAL metals and cyanide analyses. One field ~~dupl~~licate pair (samples S9MW-17 and S9DPGW-01), two (2) rinsate blanks (designated as FB-) and two ~~equi~~pment blanks (designated as RB-) were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and cyanide. The samples were collected by Brown and Root Environmental on January 15, 16, 17, 18, and 19, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level C and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
• Laboratory Blank Analyses
* • Field Duplicate Precision

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method blanks at the maximum concentrations indicated below:

Analyte	Maximum Concentration	Action Level (Aqueous)
aluminum	28.9 ug/L	144.5 ug/L
antimony	3.4 ug/L	17.0 ug/L
beryllium	0.6 ug/L	3.0 ug/L
cadmium	0.4 ug/L	2.0 ug/L
calcium[1]	70.3 ug/L	351.5 ug/L
chromium	3.6 ug/L	18.0 ug/L
iron[2]	14.4 ug/L	72.0 ug/L
lead[2]	2.1 ug/L	10.5 ug/L
magnesium	10.3 ug/L	51.5 ug/L
nickel	2.0 ug/L	10.0 ug/L
silver	0.8 ug/L	4.0 ug/L
sodium[1]	86.4 ug/L	432 ug/L
zinc[2]	2.4 ug/L	12.0 ug/L
yanide	0.9 ug/L	4.5 ug/L

Samples affected : All

[1] Maximum concentration found in a field blank.

[2] Maximum concentration found in a laboratory preparation blank.

An action level of 5X the maximum positive concentration has been established to evaluate the sample data. Sample dilution factors were considered prior to the application of the action levels. Positive results for aluminum, antimony, chromium, iron, lead, magnesium, nickel, sodium and zinc within the action levels are qualified as nondetected, "U". No actions were required for the remaining analytes as all results were greater than the action level or nondetects. Sample RB01-011596 was not applicable to samples in this SDG. Sample FB01-011696 was a potable water blank and therefore was validated as an environmental sample.

Notes

Field duplicate results have been summarized and are included within the support documentation. However, no data validation actions were taken.

Executive Summary

Laboratory Performance: Several contaminants were found in the laboratory method blanks.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
eph A. Samchuck
AN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG 61336W

TABLE 1 - RECOMMENDATION SUMMARY

Aluminum	A[1]	Magnesium	A[1]
Antimony	A[1]	Manganese	
Arsenic		Mercury	
Barium		Nickel	A[1]
Beryllium		Potassium	
Cadmium		Selenium	
Calcium		Silver	
Chromium	A[1]	Sodium	A[1]
Cobalt		Thallium	
Copper		Vanadium	
Iron	A[1]	Zinc	A[1]
Lead	A[1]	Cyanide	

If the field is left blank, the qualifier is A - Accept all data.

[1] - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO [illegible] - NAS KEY WEST
WATE[illegible]DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	FB01-011696			FB02-011696			RB01-011596			RB01-011796			S9DPGW-01		
SAMPLE DATE:	01/16/96			01/16/96			01/15/96			01/17/96			01/18/96		
LABORATORY ID:	9601336-05			9601336-04			9601336-02			9601336-07			9601336-13		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	13.9	U	UG/L	63.2	U	UG/L	27.2	U	UG/L	60.8	U	UG/L	83.9	U	UG/L
ANTIMONY	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L
ARSENIC	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L	5.8		UG/L	7.7		UG/L
BARIUM	0.60	U	UG/L	13.2		UG/L	0.60	U	UG/L	0.70		UG/L	8.2		UG/L
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L
CADMIUM	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L
CALCIUM	70.3		UG/L	47600		UG/L	92.4		UG/L	147		UG/L	195000		UG/L
CHROMIUM	0.90	U	UG/L	0.90	U	UG/L	1.1	U	UG/L	0.90	U	UG/L	0.90	U	UG/L
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L
COPPER	1.2	U	UG/L	2.9		UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L
CYANIDE	0.80	U	UG/L	1.7		UG/L	0.80	U	UG/L	0.80	U	UG/L	1.9		UG/L
IRON	3.0	U	UG/L	80.5		UG/L	9.2	U	UG/L	20.7	U	UG/L	17.8	U	UG/L
LEAD	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L	3.9	U	UG/L	1.8	U	UG/L
MAGNESIUM	3.3	U	UG/L	4310		UG/L	5.0	U	UG/L	12.8	U	UG/L	24200		UG/L
MANGANESE	0.60	U	UG/L	2.7		UG/L	0.60	U	UG/L	0.60	U	UG/L	0.98		UG/L
MERCURY	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L
NICKEL	1.3	U	UG/L	1.3	U	UG/L	1.3	U	UG/L	1.3	U	UG/L	1.3	U	UG/L
POTASSIUM	8.4	U	UG/L	13900		UG/L	8.4	U	UG/L	13.1		UG/L	2650		UG/L
SELENIUM	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L
SILVER	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
SODIUM	86.4		UG/L	22200		UG/L	38.9	U	UG/L	604		UG/L	43000		UG/L
THALLIUM	4.5	U	UG/L	4.5	U	UG/L	4.5	U	UG/L	4.5	U	UG/L	4.5	U	UG/L
VANADIUM	0.70	U	UG/L	1.5		UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
ZINC	2.2	U	UG/L	215		UG/L	3.1	U	UG/L	3.5	U	UG/L	1.5	U	UG/L

CTO C - NAS KEY WEST
WAT)ATA
GENL L ENGINEERING LABS

SAMPLE NUMBER:	S9MW-15			S9MW-17			S9MW-19D			S9MW-21			S9MW-24		
SAMPLE DATE:	01/18/96			01/18/96			01/19/96			01/18/96			01/19/96		
LABORATORY ID:	9601336-20			9601336-12			9601336-17			9601336-19			9601336-16		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	62.7	U	UG/L	230	U	UG/L	11.1	U	UG/L	11.1	U	UG/L	100	U	UG/L
ANTIMONY	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L	2.8	U	UG/L	2.6	U	UG/L
ARSENIC	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L
BARIUM	5.5		UG/L	7.9		UG/L	5.6		UG/L	7.8		UG/L	11.7		UG/L
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L
CADMIUM	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L
CALCIUM	67000		UG/L	183000		UG/L	94600		UG/L	198000		UG/L	166000		UG/L
CHROMIUM	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L
COPPER	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L
CYANIDE	0.83		UG/L	1.0		UG/L	0.89		UG/L	0.80	U	UG/L	0.88		UG/L
IRON	196		UG/L	51.7	U	UG/L	8.7	U	UG/L	44.8	U	UG/L	33.8	U	UG/L
LEAD	2.6	U	UG/L	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L
MAGNESIUM	41500		UG/L	24100		UG/L	139000		UG/L	377000		UG/L	195000		UG/L
MANGANESE	2.1		UG/L	1.1		UG/L	0.60	U	UG/L	8.5		UG/L	0.60	U	UG/L
MERCURY	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L
NICKEL	1.5	U	UG/L	1.3	U	UG/L	1.3	U	UG/L	1.3	U	UG/L	1.9	U	UG/L
POTASSIUM	12300		UG/L	2690		UG/L	58100		UG/L	142000		UG/L	57000		UG/L
SELENIUM	6.0		UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.9		UG/L
SILVER	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
SODIUM	161000		UG/L	43800		UG/L	1130000		UG/L	3290000		UG/L	1410000		UG/L
THALLIUM	4.5	U	UG/L	4.5	U	UG/L	4.5	U	UG/L	4.5	U	UG/L	4.5	U	UG/L
VANADIUM	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.93		UG/L
ZINC	2.7	U	UG/L	4.0	U	UG/L	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L

SAMPLE NUMBER:	S9MW-3			S9MW-6			S9MW-9				
SAMPLE DATE:	01/18/96			01/18/96			01/18/96			/ /	/ /
LABORATORY ID:	9601336-09			9601336-11			9601336-10				
QC_TYPE:	Normal			Normal			Normal				
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %	100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS	RESULT QUAL UNITS
INORGANICS											
ALUMINUM	71.0	U	UG/L	33.2	U	UG/L	21.4	U	UG/L		
ANTIMONY	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L		
ARSENIC	7.6		UG/L	4.9	U	UG/L	5.3		UG/L		
BARIUM	9.3		UG/L	7.7		UG/L	5.4		UG/L		
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L		
CADMIUM	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L		
CALCIUM	69000		UG/L	61900		UG/L	75300		UG/L		
CHROMIUM	1.2	U	UG/L	0.90	U	UG/L	0.90	U	UG/L		
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L		
COPPER	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L		
CYANIDE	0.80	U	UG/L	6.6		UG/L	0.80	U	UG/L		
IRON	360		UG/L	8.8	U	UG/L	14.3	U	UG/L		
LEAD	1.8	U	UG/L	1.8	U	UG/L	2.4		UG/L		
MAGNESIUM	43500		UG/L	68600		UG/L	79400		UG/L		
MANGANESE	5.0		UG/L	0.97		UG/L	5.3		UG/L		
MERCURY	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L		
NICKEL	3.2	U	UG/L	1.3	U	UG/L	2.3	U	UG/L		
POTASSIUM	9380		UG/L	15200		UG/L	23000		UG/L		
SELENIUM	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L		
SILVER	6.0		UG/L	0.70	U	UG/L	0.70	U	UG/L		
SODIUM	235000		UG/L	116000		UG/L	471000		UG/L		
THALLIUM	4.5	U	UG/L	4.5	U	UG/L	4.5	U	UG/L		
VANADIUM	4.4		UG/L	0.70	U	UG/L	0.89		UG/L		
ZINC	2.0	U	UG/L	2.6	U	UG/L	2.4	U	UG/L		

ORGANIC DATA VALIDATION
SDG 61336W

Brown & Root Environmental

A Division of Halliburton NUS Corporation

Foster Plaza VII
661 Andersen Drive
Pittsburgh, PA 15220-2745

(412) 921-7090
FAX: (412) 921-4040

C-49-04-6-181

TO: KEVIN WALTER DATE: APRIL 18, 1996

FROM: ANNE K. BATTISTA COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOA/SVOA/PEST/PCB/HERB ORGANICS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG 61336W

SAMPLES: Waters:

S9MW-3	S9MW-6	S9MW-9
S9MW-15	S9MW-17	S9DPGW-01
S9MW-19D	S9MW-21	S9MW-24
TB01-011396	TB01-011596	TB01-011696
TB01-011796	TB01-011896	TB02-011896
TB01-011996	RB01-011596	RB01-011796
FB01-011696	FB02-011696	

The sample set for the CTO 007 NAS Key West site, SDG 61336W, consists of nine (9) aqueous environmental samples, seven (7) trip blanks, two (2) rinsate blanks and two (2) field blanks. All samples, excluding the trip blanks, were analyzed for Appendix IX volatile and semivolatile compounds, plus Target Compound List (TCL) pesticide/PCB and herbicide organic compounds. The trip blanks were analyzed for the volatile compounds only. The field crew designated sample S9MW-21 for Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis. One field duplicate pair was included in this SDG(S9MW-17/S9DPGW-01).

The samples were collected by Brown and Root Environmental on January 10th, 13th, 15th, 16th, 17th, 18th and 19th, 1996 and analyzed by General Engineering Laboratories, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Methods 8240, 8270, 8080 and 8150 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- * Laboratory and field blank analyses
- * Field Duplicate Precision

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: APRIL 18, 1996 - PAGE 2

Volatiles

Initial and continuing calibration Relative Response Factors for acrolein and propionitrile were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by these noncompliances. As a result of this major calibration noncompliance, nondetected results for the aforementioned compounds are considered unreliable and were rejected, (UR), in the affected samples.

The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 01/24/96 (10:11). An additional standard was not analyzed containing this compound (as performed for the previous and following continuing calibrations). Hence, the nondetected results reported for this compound in the samples associated with the aforementioned continuing calibration are considered unreliable. No action was necessary since the affected samples were not used in validation.

The following volatile compounds were detected in the laboratory method and field quality control blanks at the maximum concentrations indicated below:

Compound	Maximum Concentration	Action Level
Methylene Chloride	0.9 µg/L	9 µg/L
Carbon Disulfide	0.007 µg/L	0.04 µg/L
Toluene*	1 µg/L	10 µg/L
Acetone*	2 µg/L	20 µg/L
1,1,1-trichloroethane*	1 µg/L	5 µg/L
Chloroform*	1 µg/L	5 µg/L

* - Maximum concentration of contaminant detected in a field quality control blank.

Samples Affected: All.

Sample aliquot size and dilution factors were taken into consideration during the application of all action levels. Positive results for toluene reported at concentrations below the detection limit were replaced with revised detection limits and qualified nondetected, (U). No action was taken for positive results reported above the action level. No action was necessary for 1,1,1-trichloroethane, chloroforom, carbon disulfide and methylene chloride since no positive results were reported for this compound in the environmental samples. It should be noted that field quality control blanks are not qualified based on field quality control blank contamination.

A positive result for trans-1,2-dichloroethene in sample S9MW-24 was reported above the linear calibration of the instrument. The laboratory reanalyzed this sample at a 50-fold dilution. The original analysis was chosen for validation with the exception of the positive result for trans-1,2-dichloroethene. The positive result for this compound from the diluted analysis was transposed over the undiluted result and used in validation.

It should be noted that the laboratory used 20ml of sample for each sample analysis. No validation actions were taken.

The laboratory only analyzed two laboratory method blanks, however, three bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. The laboratory indicated that instead of one blank associated with each BFB tune, one method blank was analyzed on a daily basis. This

practice does not preclude the possibility of cross-contamination which may be present from standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Since many samples were analyzed within the same day (but with two BFB tunes), the validator was only able to apply two laboratory method blank to all the samples.

Methyl methacrylate was analyzed for both volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained in Appendix A - Qualified Analytical Results.

Semivolatiles

Continuing calibration RRFs for 3,3'-dichlorobenzidine, 2-naphthylamine and 3,3'-dimethylbenzidine were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

A zero percent surrogate recovery for phenol, and a high %R for 2,4,6-tribromophenol were reported in sample FB02-011696. The internal standard perylene-d12 also had a poor area reported in this sample. As a result, the laboratory re-extracted and reanalyzed this sample, however the re-extraction was performed outside of the 7 day holding period. Therefore, the original analysis of the aforementioned sample was chosen for validation. No further action was taken since no qualifications are being made for surrogate and internal standard noncompliances.

Poor field duplicate precision, > 30% RPD, was noted in the field duplicate pair S9MW-17/S9DPGW-01 for bis(2-ethylhexyl)phthalate and naphthalene. Positive and nondetected results for the aforementioned compounds were qualified as estimated, (J) and (UJ), in samples S9MW-17 and S9DPGW-01.

Pesticide/PCBs

Samples S9MW-3,S9MW-9, S9DPGW-01 and S9MW-21 were analyzed at various dilutions. Hence, the reporting limits are elevated.

Herbicides

2,4-D was reported in a field quality control blank (potable water field blank FB02-011696). No action was taken since no positive results were reported for this compound in the environmental samples.

All samples were analyzed at 10-fold dilutions. Hence, the reporting levels are elevated.

Additional Comments

Positive results reported at concentrations less than the Contract Required Quantitation Limit (CRQL) are are qualified as estimated, (J).

It should be noted that field quality control blanks, which were sampled on the same day(s) as environmental samples, can only be applied for blank contamination assessment to those environmental collected during the associated sampling period. For example, contamination present in samples TB01-011396, TB01-011596, TB01-011696, TB01-011796, RB01-011596, RB01-011796, and FB02-011696 cannot be used to qualify the environmental samples in this SDG since they were sampled on different

days. Furthermore, the aforementioned blanks were sampled with environmental soil samples not contained within this SDG.

Additionally, it should be noted that sample FB02-011696 is a potable water field blank. The analytes present in this sample represent contaminants present in the potable source water and these contaminants will not be considered in blank contamination assessment.

Executive Summary

Laboratory Performance: Initial and/or continuing calibration RRFs for acrolein, propionitrile, 3,3'-dichlorobenzidine, 2-naphthylamine and 3,3'-dimethylbenzidine were reported less than the 0.050 quality control limit. The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 01/24/96 (10:11). Methylene chloride, acetone, chloroform, 1,1,1-trichloroethane, and carbon disulfide were reported in the volatile laboratory method and field quality control blanks. A zero percent surrogate recovery for phenol, and a high %R for 2,4,6-tribromophenol were reported in sample FB02-011696. The internal standard perylene-d12 also had a poor area reported in this sample. The laboratory has made it a practice to analyze one method blank per day for the volatile analyses.

Other Factors Affecting Data Quality: Toluene was reported in the field quality control blank TB01-011896. Poor field duplicate precision was noted in the field duplicate pair S9MW-17/S9DPGW-01 for bis(2-ethylhexyl)phthalate and naphthalene.

MEMO TO: KEVIN WALTER
DATE: APRIL 18, 1996 - PAGE 5

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG 61336W

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA	SVOA	PEST/PCB	HERB
S9MW-3	A^1 R^1	J^1 R^2	J^1	
S9MW-6	R^1	J^1 R^2		
S9MW-9	A^2 R^1	R^2		
S9MW-15	A^2 R^1	R^2		
S9MW-17	R^1	$J^{1,2}$ R^2		
S9DPGW-01	A^1 R^1	$J^{1,2}$ R^2		
S9MW-19D	J^1 R^1	R^2		
S9MW-21	A^2 J^1 R^1	R^2		
S9MW-24	A^1J^1 R^1	R^2		
TB01-011396	J^1 R^1			
TB01-011596	J^1 R^1			
TB01-011696	R^1			
TB01-011796	J^1 R^1			
TB01-011896	R^1			
TB02-011896	J^1 R^1			
TB01-011996	R^1			
RB01-011596	J^1 R^1	R^2		
RB01-011796	J^1 R^1	R^2		
FB01-011696	J^1 R^1	R^2		
FB02-011696	J^1 R^1	R^2		J^1

If the field is left blank, the qualifier is A - Accept all data.

A^1 - Accept data, but change positive result for toluene to a revised detection limit and qualify as nondetected, (U), as a result of field quality control blank contamination.

A^2 - Accept data, but change positive result for acetone to a revised detection limit and qualify as nondetected, (U), as a result of blank contamination.

J^1 - Accept data, but qualify positive results reported at concentrations less than the CRQL as estimated, (J).

J^2 - Accept data, but qualify positive and nondetected results for bis(2-ethylhexyl)phthalate and napthalene as estimated, (J) and (UJ), as a result of poor field duplicate precision.

R^1 - Reject, (UR), nondetected results for acrolein and propionitrile, as a result of initial and continuing calibration RRFs less than 0.050.

R^2 - Reject, (UR), nondetected results for 3,3'-dichlorobenzidine, 2-naphthylamine and 3,3'-dimethylbenzidine as a result of continuing calibration RRFs less than 0.050.

INORGANIC DATA VALIDATION
SDG 61417W

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-008

TO : **KEVIN WALTER** **DATE:** **APRIL 4, 1996**

FROM: **WILLIAM J. BROTZ** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION - TAL METALS AND CYANIDE**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG 61417W

16/Aqueous/	RB01-012296	RB01-012496	S9SW-01
	S9SW-02	S9SW-03	S9SW-04
	S9SW-05	S9DPSW-01	S3SW-01
	S3SW-02	S3SW-03	S3SW-04
	S3DPSW-01	BG1SW-01	BG2SW-01
	BG3SW-01		

Introduction

validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. 17W, sixteen (16) aqueous samples were included for TAL metals plus cyanide analyses. Two field duplicate pairs were included with this SDG (samples S9DPSW-01 & S9SW-03 and S3DPSW-01 & S3SW-01). These samples were analyzed for Target Analyte List (TAL) metals and cyanide. The samples were collected by Brown and Root Environmental on January 22, 23, 24, 25, and 26, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level C and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
• Laboratory Blank Analyses
* • Field Duplicate Precision
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method and field quality control blank at the maximum concentrations indicated below:

Analyte	Maximum Concentration	Action Level (Aqueous)
aluminum	19.8 ug/L	99.0 ug/L
arsenic	7.8 ug/L	39.0 ug/L
calcium	16.7 ug/L	83.5 ug/L
iron[1]	8.4 ug/L	42.0 ug/L
lead	1.8 ug/L	9.0 ug/L
magnesium[1]	19.1 ug/L	95.5 ug/L
sodium	96.1 ug/L	480.5 ug/L
cyanide	4.9 ug/L	24.5 ug/L

Samples affected : All

(1) Maximum concentration found in a laboratory preparation blank.

n action level of 5X the maximum positive concentration has been established to evaluate the sample data. Sample dilution factors were considered prior to the application of the action levels. Positive results for arsenic, iron, lead, manganese and cyanide within the action levels are qualified as nondetected, "U". No actions were required for the remaining analytes as all results were greater than the action level or nondetects.

Executive Summary

Laboratory Performance: Several contaminants were found in the laboratory method blanks.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

achments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG 61417W

TABLE 1 - RECOMMENDATION SUMMARY

Aluminum	A[1]	Magnesium	A[1]
Antimony		Manganese	
Arsenic	A[1]	Mercury	
Barium		Nickel	
Beryllium		Potassium	
Cadmium		Selenium	
Calcium		Silver	
Chromium		Sodium	
Cobalt		Thallium	
Copper		Vanadium	
Iron	A[1]	Zinc	
Lead	A[1]	Cyanide	A[1]

If the field is left blank, the qualifier is A - Accept all data.

A[1] - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO ' - NAS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	11.1	U	UG/L	11.1	U	UG/L	11.1	U	UG/L	67.6	U	UG/L	23.5	U	UG/L
ANTIMONY	2.6	U	UG/L	3.5		UG/L	7.3		UG/L	2.6	U	UG/L	2.6	U	UG/L
ARSENIC	4.9	U	UG/L	5.5	U	UG/L	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L
BARIUM	7.9		UG/L	7.0		UG/L	5.8		UG/L	0.60	U	UG/L	0.60	U	UG/L
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L
CADMIUM	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L
CALCIUM	105000		UG/L	323000		UG/L	326000		UG/L	101		UG/L	50.3		UG/L
CHROMIUM	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	1.4		UG/L	0.90	U	UG/L
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L
COPPER	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	2.9		UG/L	1.2	U	UG/L
CYANIDE	2.5	U	UG/L	3.1	U	UG/L	0.97	U	UG/L	0.80	U	UG/L	0.80	U	UG/L
IRON	3.0	U	UG/L	3.0	U	UG/L	3.0	U	UG/L	32.1	U	UG/L	5.9	U	UG/L
LEAD	1.8	U	UG/L	1.8	U	UG/L	3.9	U	UG/L	4.5	U	UG/L	1.8	U	UG/L
MAGNESIUM	193000		UG/L	1360000		UG/L	1320000		UG/L	50.6	U	UG/L	10.2	U	UG/L
MANGANESE	0.60	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	0.60	U	UG/L	0.60	U	UG/L
MERCURY	0.48		UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L
NICKEL	1.3	U	UG/L	1.3	U	UG/L	1.3	U	UG/L	2.1		UG/L	1.3	U	UG/L
POTASSIUM	70600		UG/L	418000		UG/L	404000		UG/L	8.4	U	UG/L	11.3		UG/L
SELENIUM	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L
SILVER	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
SODIUM	1720000	B	UG/L	11800000		UG/L	11400000		UG/L	75.3	U	UG/L	189	U	UG/L
THALLIUM	4.5	U	UG/L	12.0		UG/L	7.4		UG/L	4.5	U	UG/L	4.5	U	UG/L
VANADIUM	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
ZINC	1.4	U	UG/L	2.8	U	UG/L	2.8	U	UG/L	5.1		UG/L	3.2		UG/L

SAMPLE NUMBER:	S3DPSW-01			S3SW-01			S3SW-02			S3SW-03			S3SW-04		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	9601417-17			9601417-13			9601417-14			9601417-15			9601417-16		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	11.1	U	UG/L	11.1	U	UG/L	26.3	U	UG/L	67.2	U	UG/L	19.1	U	UG/L
ANTIMONY	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L
ARSENIC	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L	6.5	U	UG/L
BARIUM	6.9		UG/L	6.9		UG/L	6.7		UG/L	8.9		UG/L	7.2		UG/L
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L
CADMIUM	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L
CALCIUM	143000		UG/L	170000		UG/L	142000		UG/L	149000		UG/L	153000		UG/L
CHROMIUM	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L
COPPER	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	34.4		UG/L	1.3		UG/L
CYANIDE	3.7	U	UG/L	0.60	U	UG/L	36.8		UG/L	62.7		UG/L	3.8	U	UG/L
IRON	19.7	U	UG/L	25.1	U	UG/L	25.2	U	UG/L	67.6		UG/L	6.3	U	UG/L
LEAD	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L
MAGNESIUM	307000		UG/L	342000		UG/L	308000		UG/L	354000		UG/L	316000		UG/L
MANGANESE	0.60	U	UG/L	0.60	U	UG/L	0.60	U	UG/L	0.60	U	UG/L	0.60	U	UG/L
MERCURY	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L
NICKEL	1.3	U	UG/L	1.3	U	UG/L	2.2		UG/L	1.6		UG/L	1.3	U	UG/L
POTASSIUM	105000		UG/L	108000		UG/L	109000		UG/L	119000		UG/L	110000		UG/L
SELENIUM	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L
SILVER	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
SODIUM	2740000		UG/L	2750000		UG/L	2690000		UG/L	3270000		UG/L	2780000		UG/L
THALLIUM	4.5	U	UG/L	4.5	U	UG/L	8.5		UG/L	6.5		UG/L	7.1		UG/L
VANADIUM	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
ZINC	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L

CTO ' - NAS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	11.1	U	UG/L	11.1	U	UG/L	11.1	U	UG/L	11.1	U	UG/L	11.1	U	UG/L
ANTIMONY	4.2		UG/L	5.3		UG/L	3.6		UG/L	2.9		UG/L	3.7		UG/L
ARSENIC	4.9	U	UG/L	6.7	U	UG/L	6.1	U	UG/L	4.9	U	UG/L	4.9	U	UG/L
BARIUM	7.3		UG/L	6.7		UG/L	6.8		UG/L	7.0		UG/L	6.8		UG/L
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L
CADMIUM	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L	0.40	U	UG/L
CALCIUM	346000		UG/L	309000		UG/L	333000		UG/L	343000		UG/L	344000		UG/L
CHROMIUM	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	1.1		UG/L
COPPER	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L
CYANIDE	0.80	U	UG/L	45.2		UG/L	3.6	U	UG/L	0.98	U	UG/L	0.80	U	UG/L
IRON	19.1	U	UG/L	3.0	U	UG/L	3.0	U	UG/L	3.0	U	UG/L	3.0	U	UG/L
LEAD	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L	1.8	U	UG/L
MAGNESIUM	1160000		UG/L	1170000		UG/L	1170000		UG/L	1220000		UG/L	1170000		UG/L
MANGANESE	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L
MERCURY	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.13		UG/L	0.10	U	UG/L
NICKEL	1.3	U	UG/L	1.3	U	UG/L	1.3	U	UG/L	1.3	U	UG/L	1.6		UG/L
POTASSIUM	351000		UG/L	352000		UG/L	351000		UG/L	364000		UG/L	352000		UG/L
SELENIUM	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L	4.8	U	UG/L
SILVER	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
SODIUM	9900000		UG/L	9910000		UG/L	9860000		UG/L	10300000		UG/L	9980000		UG/L
THALLIUM	10.1		UG/L	9.5		UG/L	8.4		UG/L	5.6		UG/L	10.0		UG/L
VANADIUM	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
ZINC	2.8	U	UG/L	2.8	U	UG/L	2.8	U	UG/L	2.8	U	UG/L	2.8	U	UG/L

SAMPLE NUMBER:	S9SW-05			/ /			/ /			/ /		
SAMPLE DATE:	01/23/96											
LABORATORY ID:	9601417-08											
QC_TYPE:	Normal											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**
INORGANICS												
ALUMINUM	11.1	U	UG/L									
ANTIMONY	3.2		UG/L									
ARSENIC	5.3	U	UG/L									
BARIUM	6.8		UG/L									
BERYLLIUM	0.30	U	UG/L									
CADMIUM	0.40	U	UG/L									
CALCIUM	342000		UG/L									
CHROMIUM	0.90	U	UG/L									
COBALT	0.80	U	UG/L									
COPPER	1.2	U	UG/L									
CYANIDE	0.80	U	UG/L									
IRON	3.0	U	UG/L									
LEAD	1.8	U	UG/L									
MAGNESIUM	1180000		UG/L									
MANGANESE	1.2	U	UG/L									
MERCURY	0.10	U	UG/L									
NICKEL	1.3	U	UG/L									
POTASSIUM	353000		UG/L									
SELENIUM	4.8	U	UG/L									
SILVER	0.70	U	UG/L									
SODIUM	9970000		UG/L									
THALLIUM	8.1		UG/L									
VANADIUM	0.70	U	UG/L									
ZINC	2.8	U	UG/L									

ORGANIC DATA VALIDATION
SDG 61417W

Brown & Root Environmental INTERNAL CORRESPONDENCE

C-49-04-6-018

TO: **MR. KEVIN WALTER** **DATE:** **APRIL 18, 1996**

FROM: **MICHELLE L. ALLEN** **CC:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - TCL VOCs/SVOCs/PEST/PCBs/HERB**
CTO 7, NAS KEY WEST, FLORIDA
SDG 61417W

SAMPLES: Aqueous:

BG1SW-01	BG2SW-01	BG3SW-01	S9SW-01
S9SW-02	S9SW-03	S9DPSW-01	S9SW-04
S9SW-05			
TB01-012296	TB01-012396	TB01-012496	TB02-012496
RB01-012296	RB01-012496		

General Engineering Laboratories (GEL) Inc. analyzed nine environmental aqueous samples (including one field duplicate pair, samples S9SW-03/S9DPSW-01), four trip blanks (designated TB-), and two rinsate blanks (designated RB-) for Appendix IX Target Compound List (TCL) volatile, semivolatile, and pesticide/PCB organic compounds, with the exception of the trip blanks which were analyzed for volatiles only. In addition, the nine samples and two rinsate blanks were analyzed for TCL herbicide organic compounds.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8240/8270/8080/8150 analytical and reporting protocols and were evaluated according to the following parameters:

* • Holding times
• GC/MS tuning and mass calibration
* • Initial and continuing calibrations
* • Laboratory and field blank analyses
• Field duplicate precision

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatile Fraction

The initial calibration and subsequent continuing calibrations contained Relative Response Factors (RRFs) for acrolein and propionitrile which were less than 0.050. In addition, the subsequent continuing calibration RRFs for acrolein and propionitrile were below the 0.050 quality control limit. Failure to meet this quality control criteria indicates that the laboratory's instruments could not achieve satisfactory sensitivity for these compounds, and therefore, the associated positive and nondetected results for these compounds are severely compromised. Only nondetected results were reported for these compounds in the affected samples and these nondetects are considered to be unreliable and are rejected, "UR". These results are biased very low.

The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 01/30/96 (15:52). An additional standard was not analyzed containing this compound (as performed for the previous continuing calibration). Hence, the nondetected results reported for this compound in the samples associated with this continuing calibration are rejected, qualified, "UR".

No contaminants were detected in the laboratory method blanks. The field quality control blank analyses yielded the following contaminants at the maximum concentrations indicated:

Compound	Maximum Concentration	Action Level
Acetone	0.7 µg/L	7 µg/L
Chloroform	0.5 µg/L	2.5 µg/L

Sample aliquot size and dilution factors were considered prior to the application of the action level. Positive results for these compounds found below the detection limit have been deleted and replaced by the detection limit value, then qualified as undetected, "U".

Low areas were noted for the internal standard 1,4-dichlorobenzene-d4 (DCB) in samples BG1SW-01 and BG1SW-03. The reanalyses of these samples yielded acceptable internal standard areas, hence, were used in the validation of the data.

It should be noted that the laboratory used 20ml of sample for each sample analysis. The laboratory indicated that this deviation was used to achieve the desirable detection limits. No validation actions were taken.

The laboratory only analyzed two laboratory method blanks, however, three bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. The laboratory indicated that instead of one blank associated with each BFB tune, one method blank was analyzed on a daily basis. This practice precludes the possibility of cross-contamination which may be present from standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Since some samples were analyzed within one day (but with two BFB tunes), the validator was only able to apply the two laboratory method blanks to all the samples.

Methyl methacrylate was analyzed for both the volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained

in Appendix A - Qualified Analytical Results.

Semivolatile Fraction

The 7 day holding time from date of collection to date of extraction was exceeded in the re-extraction of samples S9SW-03RRO, S9SW-04RRO, S9SW-05RRO, and BG1SW-01RRO. No action was taken for samples S9SW-03RRO, S9SW-04RRO, and BG1SW-01RRO since the results from these analyses were not used in the data validation. The nondetected results reported for the target compounds in sample S9SW-05RRO were qualified as estimated, "UJ".

The initial calibration RRF for 4-nitroquinoline-1-oxide was less than 0.050. Failure to meet this quality control criterion indicates the laboratory's instruments could not achieve satisfactory sensitivity for these compound, and therefore, the associated positive and nondetected results for this compound are severely compromised. Only nondetected results were reported for this compound in the environmental samples and these nondetects are considered to be unreliable and are rejected, qualified "UR". These results are biased very low.

Some continuing calibration RRFs for 4-nitroquinoline-1-oxide and 3,3'-dimethylbenzidine were below the 0.050 quality control limit. The nondetected results reported for these compounds in the environmental samples were qualified as rejected, "UR". These results are biased low.

No contaminants were detected in the laboratory method blanks. The field quality control blank analyses yielded the following contaminant at the maximum concentration indicated:

Compound	Maximum Concentration	Action Level
Di-n-butylphthalate	35 µg/L	350 µg/L

No action was necessary since no positive results were reported for this compound in the associated environmental samples.

The Percent Recoveries (%Rs) for the acid fraction surrogate 2-fluorophenol (2FP) and 2,4,6-tribromophenol (TBP) were below the lower quality control limit in samples S9SW-04 and BG1SW-01. In addition, the base/neutral fraction surrogate, 2-fluorobiphenyl (FBP), was low in sample BG1SW-01. Since these samples were re-extracted outside of maximum the holding time and no gross surrogate noncompliances were observed (i.e., %Rs < 10%), the original analyses of these samples were used in the validation. No qualification was applied since the validation of the data contained in this SDG was conducted as a cursory review.

The %Rs for 2FP and TBP were less than 10% in sample S9SW-05. A low %R was also noted for the surrogate phenol-d5 (PHL). Upon re-extraction/reanalysis, the surrogate %Rs were acceptable. Hence, it is the professional opinion of the data validator that the results from the re-extraction/reanalysis (although performed outside of the holding time) are more representative. Therefore, the results from the reanalysis were used in the data validation. No qualification to the sample was necessary for surrogate noncompliances.

Pesticide/PCB fraction

No contaminants were detected in the laboratory method blanks. The field quality control blank analyses yielded the following contaminants at the maximum concentrations indicated:

Compound	Maximum Concentration	Action Level
Aldrin	0.049 µg/L	0.245 µg/L
α-BHC	0.026 µg/L	0.130 µg/L

Sample aliquot size and dilution factors were considered prior to the application of the action level. Positive results for these compounds found below the detection limit have been deleted and replaced by the detection limit value, then qualified as undetected, "U".

Herbicide fraction

No problems were noted.

Results reported below the detection limit in the volatile and semivolatile fractions were estimated, qualified, "J".

Executive Summary

Laboratory Performance: Holding times were missed for some re-extractions of the semivolatile samples. Blank analyses were not performed with each 12 hour tune. 2-Chloro-1,3-butadiene was not detected in a continuing calibration standard. Major calibration noncompliances (RRFs < 0.050) were noted for some volatile and semivolatile compounds.

Other Factors Affecting Data Quality: Acetone, chloroform, di-n-butylphthalate, aldrin, and α-BHC were detected in the field quality control blanks. Some samples required re-extraction and/or reanalyses as a result of noncompliant surrogate %R(s) or internal standard areas.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown & Root Environmental
Michelle L. Allen
Chemist/Data Validator

Brown & Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST
SDG NO. 61417W

TABLE 1 - RECOMMENDATION SUMMARY

Sample No. Herbicide	Volatile			Semivolatile	Pesticide/PCB	
BG1SW-01		$R^{1,2}$		$R^{3,4}$		
BG2SW-01	A^1	R^1		$R^{3,4}$		
BG3SW-01		$R^{1,2}$		$R^{3,4}$		
S9SW-01	A^2	$R^{1,2}$		$R^{3,4}$		
S9SW-02		$R^{1,2}$		$R^{3,4}$		
S9SW-03	A^2	$R^{1,2}$		$R^{3,4}$		
S9DPSW-01	A^2	$R^{1,2}$		$R^{3,4}$		
S9SW-04	A^2	$R^{1,2}$		$R^{3,4}$	A^3	
S9SW-05	A^2	$R^{1,2}$	J^2	$R^{3,4}$	A^3	J^1
TB01-012296		$R^{1,2}$				
TB01-012396		$R^{1,2}$				
TB01-012496		$R^{1,2}$				
TB02-012496		$R^{1,2}$				
RB01-012296	J^1	$R^{1,2}$		$R^{3,4}$		
RB01-012496	J^1	$R^{1,2}$		$R^{3,4}$		

A^1 - Accept data, but change positive acetone result to a revised reporting limit as a result of blank contamination.

A^2 - Accept data, but change positive chloroform result to a revised reporting limit as a result of blank contamination.

A^3 - Accept data, but change positive α-BHC result to a revised reporting limit as a result of blank contamination.

J^1 - Estimate, "J", positive results reported below the detection limit.

J^2 - Estimate, "UJ", nondetected results for target compounds as a result of holding time exceedence.

R^1 - Reject, "UR", nondetected results for acrolein and propionitrile as a result of initial and/or continuing calibration RRFs < 0.050.

R^2 - Reject, "UR", nondetected result for 2-chloro-1,3-butadiene due to lack of standardization.

R^3 - Reject, "UR", nondetected results for 3,3'-dimethylbenzidine as a result of initial and/or continuing calibration RRFs < 0.050.

R^4 - Reject, "UR", nondetected results for 4-nitroquinoline-1-oxide as a result of initial and/or continuing calibration RRFs < 0.050.

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory or qualified as a result of blank contamination, and should not be considered present.
J	-	Positive result is estimated as result of various technical reasons (i.e., holding time exceedence, pesticide/PCB continuing calibration %R outside quality control limit, %D between GC columns > 25%, or result below the detection limit).
UJ	-	Nondetected result is considered to be estimated as a result of various technical reasons (i.e., initial calibration %RSD > 50%, continuing calibration %D $\geq$ 25%, low internal standard area, low surrogate %Rs).
UR	-	Nondetected result is rejected as a result of initial and/or continuing calibration RRFs < 0.050 or lack of compound standardization.

APPENDIX A

Qualified Analytical Results

CTO 007 'AS KEY WEST
WATER L..fA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,1-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2,3-TRICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMOETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
2-BUTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
2-CHLORO-1,3-BUTADIENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UR	UG/L	2	UR	UG/L
2-HEXANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
4-METHYL-2-PENTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ACETONE	2	U	UG/L	2	U	UG/L	2	U	UG/L	0.7	J	UG/L	2	U	UG/L
ACETONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACROLEIN	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
ACRYLONITRILE	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
ALLYL CHLORIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
BROMODICHLOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOFORM	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CARBON DISULFIDE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
CARBON TETRACHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORODIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORC ..M	2	U	UG/L	2	U	UG/L	2	U	UG/L	0.4	J	UG/L	0.5	J	UG/L
CHLORC ..HANE	2	U	UG/L	2		UG/L	2	U	UG/L	2	U	UG/L	2		UG/L

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DICHLORODIFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
ETHYLBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
IODOMETHANE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ISOBUTYL ALCOHOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
METHACRYLONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYLENE CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
PROPIONITRILE	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
STYRENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TETRACHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TOLUENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,2-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
TRICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRICHLOROFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
VINYL ACETATE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
VINYL CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
XYLENES, TOTAL	6	U	UG/L	6	U	UG/L	6	U	UG/L	6	U	UG/L	6	U	UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,1-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2,3-TRICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMOETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
2-BUTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
2-CHLORO-1,3-BUTADIENE	2	UR	UG/L	2	UR	UG/L	2	UR	UG/L	2	UR	UG/L	2	UR	UG/L
2-HEXANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
4-METHYL-2-PENTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ACETONE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
ACETONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACROLEIN	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
ACRYLONITRILE	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
ALLYL CHLORIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
BROMODICHLOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOFORM	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CARBON DISULFIDE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
CARBON TETRACHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORODIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORO[illegible]M	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORO[illegible]HANE	2	U	UG/L	2		UG/L	2	U	UG/L	2	U	UG/L	2		UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DICHLORODIFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
ETHYLBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
IODOMETHANE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ISOBUTYL ALCOHOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
METHACRYLONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYLENE CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
PROPIONITRILE	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
STYRENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TETRACHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TOLUENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,2-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
TRICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRICHLOROFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
VINYL ACETATE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
VINYL CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
XYLENES, TOTAL	6	U	UG/L	6	U	UG/L	6	U	UG/L	6	U	UG/L	6	U	UG/L

SAMPLE NUMBER:	S9SW-05			TB01-012296			TB01-012396			TB01-012496			TB02-012496		
SAMPLE DATE:	01/23/96			01/22/96			01/23/96			01/24/96			01/24/96		
LABORATORY ID:	9601417-08			9601417-01			9601417-03			9601417-10			9601417-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,1-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2,3-TRICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMOETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
2-BUTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
2-CHLORO-1,3-BUTADIENE	2	UR	UG/L	2	UR	UG/L	2	UR	UG/L	2	UR	UG/L	2	UR	UG/L
2-HEXANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
4-METHYL-2-PENTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ACETONE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
ACETONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACROLEIN	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
ACRYLONITRILE	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
ALLYL CHLORIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
BROMODICHLOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOFORM	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CARBON DISULFIDE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
CARBON TETRACHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORODIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORO `M	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORO `HANE	2	U	UG/L	2		UG/L	2	U	UG/L	2	U	UG/L	2		UG/L

SAMPLE NUMBER:	S9SW-05			TB01-012296			TB01-012396			TB01-012496			TB02-012496		
SAMPLE DATE:	01/23/96			01/22/96			01/23/96			01/24/96			01/24/96		
LABORATORY ID:	9601417-08			9601417-01			9601417-03			9601417-10			9601417-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DICHLORODIFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
ETHYLBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
IODOMETHANE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ISOBUTYL ALCOHOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
METHACRYLONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYLENE CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
PROPIONITRILE	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
STYRENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TETRACHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TOLUENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,2-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
TRICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRICHLOROFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
VINYL ACETATE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
VINYL CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
XYLENES, TOTAL	6	U	UG/L	6	U	UG/L	6	U	UG/L	6	U	UG/L	6	U	UG/L

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WATER D..TA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1,2,4-TRICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1,2-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1,3,5-TRINITROBENZENE	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L	56	U	UG/L
1,3-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1,3-DINITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1,4-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1,4-DIOXANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1,4-NAPHTHOQUINONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
1-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,3,4,6-TETRACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,4,5-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,4,6-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,4-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,4-DIMETHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,4-DINITROPHENOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	21	U	UG/L	22	U	UG/L
2,4-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,6-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2,6-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-ACETYLAMINOFLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-CHLORONAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-CHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-METHYL-4,6-DINITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-METHYLNAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-NITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
2-PICOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
3 & 4-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
3,3'-DICH[illegible]OBENZIDINE	50	U	UG/L	50	[illegible]	UG/L	50	U	UG/L	53	U	UG/L	56	[illegible]	UG/L
3,3'-DIME[illegible]LBENZIDINE	50	UR	UG/L	50		UG/L	50	UR	UG/L	53	UR	UG/L	56		UG/L

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
3-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-AMINOBIPHENYL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-BROMOPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-CHLORO-3-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-CHLOROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-CHLOROPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-NITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
4-NITROQUINOLINE-1-OXIDE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	11	UR	UG/L
5-NITRO-O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
7,12-DIMETHYLBENZ(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
A,A-DIMETHYLPHENETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ACENAPHTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ACENAPHTHYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ACETOPHENONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ARAMITE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BENZO(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BENZO(A)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BENZO(B)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BENZO(G,H,I)PERYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BENZO(K)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BENZYL ALCOHOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BIS(2-CHLOROETHOXY)METHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BIS(2-CHLOROETHYL)ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
BUTYLBENZYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
CHLOROBENZILATE	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L	56	U	UG/L
CHRYSENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DI-N-BUTYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	35		UG/L

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DIALLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DIBENZO(A,H)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DIBENZOFURAN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DIETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DIMETHOATE	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L	56	U	UG/L
DIMETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DINOSEB	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
DISULFOTON	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ETHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ETHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
FAMPHUR	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
FLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
HEXACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
HEXACHLOROBUTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
HEXACHLOROCYCLOPENTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
HEXACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
HEXACHLOROPROPENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
INDENO(1,2,3-CD)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ISODRIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ISOPHORONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
ISOSAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
KEPONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
METHAPYRILENE	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L	56	U	UG/L
METHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITROSO-DI-N-BUTYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITROSO-DI-N-PROPYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITROSODIETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITRC METHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITRO IPHENYLAMINE	10	U	UG/L	10		UG/L	10	U	UG/L	10	U	UG/L	11		UG/L

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITROSOMORPHOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITROSOPIPERIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
N-NITROSOPYRROLIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
NAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
NITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
O,O,O-TRIETHYLPHOSPHOROTHIOATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
P-DIMETHYLAMINOAZOBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
P-PHENYLENEDIAMINE	20	U	UG/L	20	U	UG/L	20	U	UG/L	21	U	UG/L	22	U	UG/L
PENTACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PENTACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PENTACHLORONITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PENTACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PHENACETIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PHENANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PRONAMIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
PYRIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
SAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
SULFOTEP	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L
THIONAZIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	11	U	UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,2,4-TRICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,2-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,3,5-TRINITROBENZENE	50	U	UG/L	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L
1,3-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,3-DINITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,4-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,4-DIOXANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,4-NAPHTHOQUINONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,3,4,6-TETRACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,4,5-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,4,6-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,4-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,4-DIMETHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,4-DINITROPHENOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	21	U	UG/L
2,4-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,6-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,6-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-ACETYLAMINOFLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-CHLORONAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-CHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-METHYL-4,6-DINITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-METHYLNAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-NITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-PICOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
3 & 4-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
3,3'-DICI OBENZIDINE	50	U	UG/L	50		UG/L	50	U	UG/L	50	U	UG/L	53		UG/L
3,3'-DIME LBENZIDINE	50	UR	UG/L	50		UG/L	50	UR	UG/L	50	UR	UG/L	10		UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
3-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-AMINOBIPHENYL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-BROMOPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-CHLORO-3-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-CHLOROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-CHLOROPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-NITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-NITROQUINOLINE-1-OXIDE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L
5-NITRO-O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
7,12-DIMETHYLBENZ(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
A,A-DIMETHYLPHENETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACENAPHTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACENAPHTHYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACETOPHENONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ARAMITE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(A)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(B)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(G,H,I)PERYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(K)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZYL ALCOHOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BIS(2-CHLOROETHOXY)METHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BIS(2-CHLOROETHYL)ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BUTYLBENZYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
CHLOROBENZILATE	50	U	UG/L	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L
CHRYSENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DI-N-BUTYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIALLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIBENZO(A,H)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIBENZOFURAN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIMETHOATE	50	U	UG/L	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L
DIMETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DINOSEB	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DISULFOTON	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ETHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ETHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
FAMPHUR	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
FLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROBUTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROCYCLOPENTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROPROPENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
INDENO(1,2,3-CD)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ISODRIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ISOPHORONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ISOSAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
KEPONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHAPYRILENE	50	U	UG/L	50	U	UG/L	50	U	UG/L	50	U	UG/L	53	U	UG/L
METHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSO-DI-N-BUTYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSO-DI-N-PROPYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSODIETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITR[illegible]IMETHYLAMINE	10	U	UG/L	10		UG/L	10	U	UG/L	10	U	UG/L	10		UG/L
N-NITRO[illegible]DIPHENYLAMINE	10	U	UG/L	10		UG/L	10	U	UG/L	10	U	UG/L	10		UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSOMORPHOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSOPIPERIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSOPYRROLIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
NAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
NITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
O,O,O-TRIETHYLPHOSPHOROTHIOATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
P-DIMETHYLAMINOAZOBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
P-PHENYLENEDIAMINE	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	21	U	UG/L
PENTACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PENTACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PENTACHLORONITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PENTACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PHENACETIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PHENANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PRONAMIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PYRIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
SAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
SULFOTEP	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
THIONAZIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L

SAMPLE NUMBER:	S9SW-05				
SAMPLE DATE:	01/23/96	/ /	/ /	/ /	/ /
LABORATORY ID:	9601417-08				
QC_TYPE:	Normal				
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES												
1,2,4,5-TETRACHLOROBENZENE	10	UJ	UG/L									
1,2,4-TRICHLOROBENZENE	10	UJ	UG/L									
1,2-DICHLOROBENZENE	10	UJ	UG/L									
1,3,5-TRINITROBENZENE	50	UJ	UG/L									
1,3-DICHLOROBENZENE	10	UJ	UG/L									
1,3-DINITROBENZENE	10	UJ	UG/L									
1,4-DICHLOROBENZENE	10	UJ	UG/L									
1,4-DIOXANE	10	UJ	UG/L									
1,4-NAPHTHOQUINONE	10	UJ	UG/L									
1-NAPHTHYLAMINE	10	UJ	UG/L									
2,3,4,6-TETRACHLOROPHENOL	10	UJ	UG/L									
2,4,5-TRICHLOROPHENOL	10	UJ	UG/L									
2,4,6-TRICHLOROPHENOL	10	UJ	UG/L									
2,4-DICHLOROPHENOL	10	UJ	UG/L									
2,4-DIMETHYLPHENOL	10	UJ	UG/L									
2,4-DINITROPHENOL	20	UJ	UG/L									
2,4-DINITROTOLUENE	10	UJ	UG/L									
2,6-DICHLOROPHENOL	10	UJ	UG/L									
2,6-DINITROTOLUENE	10	UJ	UG/L									
2-ACETYLAMINOFLUORENE	10	UJ	UG/L									
2-CHLORONAPHTHALENE	10	UJ	UG/L									
2-CHLOROPHENOL	10	UJ	UG/L									
2-METHYL-4,6-DINITROPHENOL	10	UJ	UG/L									
2-METHYLNAPHTHALENE	10	UJ	UG/L									
2-METHYLPHENOL	10	UJ	UG/L									
2-NAPHTHYLAMINE	10	UJ	UG/L									
2-NITROANILINE	10	UJ	UG/L									
2-NITROPHENOL	10	UJ	UG/L									
2-PICOLINE	10	UJ	UG/L									
3 & 4-METHYLPHENOL	10	UJ	UG/L									
3,3'-DICH[illegible]ROBENZIDINE	50	UJ	UG/L									
3,3'-DIM[illegible]LBENZIDINE	50	UR	UG/L									

SAMPLE NUMBER:	S9SW-05			/ /			/ /			/ /		
SAMPLE DATE:	01/23/96											
LABORATORY ID:	9601417-08											
QC_TYPE:	Normal											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES												
3-METHYLCHOLANTHRENE	10	UJ	UG/L									
3-NITROANILINE	10	UJ	UG/L									
4-AMINOBIPHENYL	10	UJ	UG/L									
4-BROMOPHENYL PHENYL ETHER	10	UJ	UG/L									
4-CHLORO-3-METHYLPHENOL	10	UJ	UG/L									
4-CHLOROANILINE	10	UJ	UG/L									
4-CHLOROPHENYL PHENYL ETHER	10	UJ	UG/L									
4-NITROANILINE	10	UJ	UG/L									
4-NITROPHENOL	10	UJ	UG/L									
4-NITROQUINOLINE-1-OXIDE	10	UR	UG/L									
5-NITRO-O-TOLUIDINE	10	UJ	UG/L									
7,12-DIMETHYLBENZ(A)ANTHRACENE	10	UJ	UG/L									
A,A-DIMETHYLPHENETHYLAMINE	10	UJ	UG/L									
ACENAPHTHENE	10	UJ	UG/L									
ACENAPHTHYLENE	10	UJ	UG/L									
ACETOPHENONE	10	UJ	UG/L									
ANILINE	10	UJ	UG/L									
ANTHRACENE	10	UJ	UG/L									
ARAMITE	10	UJ	UG/L									
BENZO(A)ANTHRACENE	10	UJ	UG/L									
BENZO(A)PYRENE	10	UJ	UG/L									
BENZO(B)FLUORANTHENE	10	UJ	UG/L									
BENZO(G,H,I)PERYLENE	10	UJ	UG/L									
BENZO(K)FLUORANTHENE	10	UJ	UG/L									
BENZYL ALCOHOL	10	UJ	UG/L									
BIS(2-CHLOROETHOXY)METHANE	10	UJ	UG/L									
BIS(2-CHLOROETHYL)ETHER	10	UJ	UG/L									
BIS(2-ETHYLHEXYL)PHTHALATE	10	UJ	UG/L									
BUTYLBENZYL PHTHALATE	10	UJ	UG/L									
CHLOROBENZILATE	50	UJ	UG/L									
CHRYSENE	10	UJ	UG/L									
DI-N-BUTYL PHTHALATE	10	UJ	UG/L									

SAMPLE NUMBER:	S9SW-05											
SAMPLE DATE:	01/23/96			/ /			/ /			/ /		
LABORATORY ID:	9601417-08											
QC_TYPE:	Normal											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES												
DI-N-OCTYL PHTHALATE	10	UJ	UG/L									
DIALLATE	10	UJ	UG/L									
DIBENZO(A,H)ANTHRACENE	10	UJ	UG/L									
DIBENZOFURAN	10	UJ	UG/L									
DIETHYL PHTHALATE	10	UJ	UG/L									
DIMETHOATE	50	UJ	UG/L									
DIMETHYL PHTHALATE	10	UJ	UG/L									
DINOSEB	10	UJ	UG/L									
DIPHENYLAMINE	10	UJ	UG/L									
DISULFOTON	10	UJ	UG/L									
ETHYL METHACRYLATE	10	UJ	UG/L									
ETHYL METHANESULFONATE	10	UJ	UG/L									
FAMPHUR	10	UJ	UG/L									
FLUORANTHENE	10	UJ	UG/L									
FLUORENE	10	UJ	UG/L									
HEXACHLOROBENZENE	10	UJ	UG/L									
HEXACHLOROBUTADIENE	10	UJ	UG/L									
HEXACHLOROCYCLOPENTADIENE	10	UJ	UG/L									
HEXACHLOROETHANE	10	UJ	UG/L									
HEXACHLOROPROPENE	10	UJ	UG/L									
INDENO(1,2,3-CD)PYRENE	10	UJ	UG/L									
ISODRIN	10	UJ	UG/L									
ISOPHORONE	10	UJ	UG/L									
ISOSAFROLE	10	UJ	UG/L									
KEPONE	10	UJ	UG/L									
METHAPYRILENE	50	UJ	UG/L									
METHYL METHANESULFONATE	10	UJ	UG/L									
N-NITROSO-DI-N-BUTYLAMINE	10	UJ	UG/L									
N-NITROSO-DI-N-PROPYLAMINE	10	UJ	UG/L									
N-NITROSODIETHYLAMINE	10	UJ	UG/L									
N-NITROSODIMETHYLAMINE	10	UJ	UG/L									
N-NITROSODIPHENYLAMINE	10	UJ	UG/L									

SAMPLE NUMBER:	S9SW-05				
SAMPLE DATE:	01/23/96	/ /	/ /	/ /	/ /
LABORATORY ID:	9601417-08				
QC_TYPE:	Normal				
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES												
N-NITROSOMETHYLETHYLAMINE	10	UJ	UG/L									
N-NITROSOMORPHOLINE	10	UJ	UG/L									
N-NITROSOPIPERIDINE	10	UJ	UG/L									
N-NITROSOPYRROLIDINE	10	UJ	UG/L									
NAPHTHALENE	10	UJ	UG/L									
NITROBENZENE	10	UJ	UG/L									
O,O,O-TRIETHYLPHOSPHOROTHIOATE	10	UJ	UG/L									
O-TOLUIDINE	10	UJ	UG/L									
P-DIMETHYLAMINOAZOBENZENE	10	UJ	UG/L									
P-PHENYLENEDIAMINE	20	UJ	UG/L									
PENTACHLOROBENZENE	10	UJ	UG/L									
PENTACHLOROETHANE	10	UJ	UG/L									
PENTACHLORONITROBENZENE	10	UJ	UG/L									
PENTACHLOROPHENOL	10	UJ	UG/L									
PHENACETIN	10	UJ	UG/L									
PHENANTHRENE	10	UJ	UG/L									
PHENOL	10	UJ	UG/L									
PRONAMIDE	10	UJ	UG/L									
PYRENE	10	UJ	UG/L									
PYRIDINE	10	UJ	UG/L									
SAFROLE	10	UJ	UG/L									
SULFOTEP	10	UJ	UG/L									
THIONAZIN	10	UJ	UG/L									

CTO 007 'AS KEY WEST
WATER [illegible]TA
GENERAL ENGINEERING LABS

	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
4,4'-DDE	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
4,4'-DDT	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
ALDRIN	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.049		UG/L
ALPHA-BHC	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.026		UG/L
AROCLOR-1016	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.14	U	UG/L
AROCLOR-1221	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.14	U	UG/L
AROCLOR-1232	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.14	U	UG/L
AROCLOR-1242	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.14	U	UG/L
AROCLOR-1248	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.14	U	UG/L
AROCLOR-1254	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.14	U	UG/L
AROCLOR-1260	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.14	U	UG/L
BETA-BHC	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.022	U	UG/L
CHLORDANE	0.24	U	UG/L	0.25	U	UG/L	0.25	U	UG/L	0.25	U	UG/L	0.27	U	UG/L
DELTA-BHC	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.022	U	UG/L
DIELDRIN	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
ENDOSULFAN I	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.022	U	UG/L
ENDOSULFAN II	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
ENDOSULFAN SULFATE	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
ENDRIN	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
ENDRIN ALDEHYDE	0.039	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.040	U	UG/L	0.043	U	UG/L
GAMMA-BHC (LINDANE)	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.022	U	UG/L
HEPTACHLOR	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.022	U	UG/L
HEPTACHLOR EPOXIDE	0.019	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.022	U	UG/L
METHOXYCHLOR	0.19	U	UG/L	0.20	U	UG/L	0.20	U	UG/L	0.20	U	UG/L	0.22	U	UG/L
METHYL PARATHION	0.048	U	UG/L	0.050	U	UG/L	0.050	U	UG/L	0.050	U	UG/L	0.054	U	UG/L
PARATHION	0.048	U	UG/L	0.050	U	UG/L	0.050	U	UG/L	0.050	U	UG/L	0.054	U	UG/L
PHORATE	0.048	U	UG/L	0.050	U	UG/L	0.050	U	UG/L	0.050	U	UG/L	0.054	U	UG/L
TOXAPHENE	0.97	U	UG/L	1.0	U	UG/L	1.0	U	UG/L	1.0	U	UG/L	1.1	U	UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
4,4'-DDE	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
4,4'-DDT	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
ALDRIN	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
ALPHA-BHC	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
AROCLOR-1016	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L
AROCLOR-1221	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L
AROCLOR-1232	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L
AROCLOR-1242	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L
AROCLOR-1248	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L
AROCLOR-1254	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L
AROCLOR-1260	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L	0.12	U	UG/L
BETA-BHC	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
CHLORDANE	0.24	U	UG/L	0.24	U	UG/L	0.25	U	UG/L	0.24	U	UG/L	0.24	U	UG/L
DELTA-BHC	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
DIELDRIN	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
ENDOSULFAN I	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
ENDOSULFAN II	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
ENDOSULFAN SULFATE	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
ENDRIN	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
ENDRIN ALDEHYDE	0.039	U	UG/L	0.039	U	UG/L	0.040	U	UG/L	0.039	U	UG/L	0.039	U	UG/L
GAMMA-BHC (LINDANE)	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
HEPTACHLOR	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
HEPTACHLOR EPOXIDE	0.020	U	UG/L	0.020	U	UG/L	0.020	U	UG/L	0.019	U	UG/L	0.019	U	UG/L
METHOXYCHLOR	0.20	U	UG/L	0.20	U	UG/L	0.20	U	UG/L	0.19	U	UG/L	0.19	U	UG/L
METHYL PARATHION	0.049	U	UG/L	0.049	U	UG/L	0.050	U	UG/L	0.048	U	UG/L	0.048	U	UG/L
PARATHION	0.049	U	UG/L	0.049	U	UG/L	0.050	U	UG/L	0.048	U	UG/L	0.048	U	UG/L
PHORATE	0.049	U	UG/L	0.049	U	UG/L	0.050	U	UG/L	0.048	U	UG/L	0.048	U	UG/L
TOXAPHENE	0.98	U	UG/L	0.98	U	UG/L	0.99	U	UG/L	0.97	U	UG/L	0.97	U	UG/L

SAMPLE NUMBER:	S9SW-05			/ /			/ /			/ /		
SAMPLE DATE:	01/23/96											
LABORATORY ID:	9601417-08											
QC_TYPE:	Normal											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs												
4,4'-DDD	0.038	U	UG/L									
4,4'-DDE	0.038	U	UG/L									
4,4'-DDT	0.038	U	UG/L									
ALDRIN	0.019	U	UG/L									
ALPHA-BHC	0.019	U	UG/L									
AROCLOR-1016	0.12	U	UG/L									
AROCLOR-1221	0.12	U	UG/L									
AROCLOR-1232	0.12	U	UG/L									
AROCLOR-1242	0.12	U	UG/L									
AROCLOR-1248	0.12	U	UG/L									
AROCLOR-1254	0.12	U	UG/L									
AROCLOR-1260	0.12	U	UG/L									
BETA-BHC	0.019	U	UG/L									
CHLORDANE	0.24	U	UG/L									
DELTA-BHC	0.019	U	UG/L									
DIELDRIN	0.038	U	UG/L									
ENDOSULFAN I	0.019	U	UG/L									
ENDOSULFAN II	0.038	U	UG/L									
ENDOSULFAN SULFATE	0.038	U	UG/L									
ENDRIN	0.038	U	UG/L									
ENDRIN ALDEHYDE	0.038	U	UG/L									
GAMMA-BHC (LINDANE)	0.019	U	UG/L									
HEPTACHLOR	0.019	U	UG/L									
HEPTACHLOR EPOXIDE	0.019	U	UG/L									
METHOXYCHLOR	0.19	U	UG/L									
METHYL PARATHION	0.048	U	UG/L									
PARATHION	0.048	U	UG/L									
PHORATE	0.048	U	UG/L									
TOXAPHENE	0.96	U	UG/L									

CTO 007 'AS KEY WEST
WATER TA
GENERA_ ENGINEERING LABS

SAMPLE NUMBER:	BG1SW-01			BG2SW-01			BG3SW-01			RB01-012296			RB01-012496		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/22/96			01/24/96		
LABORATORY ID:	9601417-18			9601417-19			9601417-20			9601417-02			9601417-12		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	0.190	U	UG/L	0.200	U	UG/L	0.200	U	UG/L	0.210	U	UG/L	0.220	U	UG/L
2,4,5-TP (SILVEX)	0.096	U	UG/L	0.100	U	UG/L	0.098	U	UG/L	0.100	U	UG/L	0.110	U	UG/L
2,4-D	0.190	U	UG/L	0.200	U	UG/L	0.200	U	UG/L	0.210	U	UG/L	0.220	U	UG/L

SAMPLE NUMBER:	S9DPSW-01			S9SW-01			S9SW-02			S9SW-03			S9SW-04		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601417-09			9601417-04			9601417-05			9601417-06			9601417-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	0.200	U	UG/L	0.190	U	UG/L	0.190	U	UG/L	0.190	U	UG/L	0.190	U	UG/L
2,4,5-TP (SILVEX)	0.100	U	UG/L	0.095	U	UG/L	0.096	U	UG/L	0.097	U	UG/L	0.097	U	UG/L
2,4-D	0.200	U	UG/L	0.190	U	UG/L	0.190	U	UG/L	0.190	U	UG/L	0.190	U	UG/L

SAMPLE NUMBER:	S9SW-05			/ /		/ /		/ /	
SAMPLE DATE:	01/23/96								
LABORATORY ID:	9601417-08								
QC_TYPE:	Normal								
% SOLIDS:	0.0 %			100.0 %		100.0 %		100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES												
2,4,5-T	0.200	U	UG/L									
2,4,5-TP (SILVEX)	0.099	U	UG/L									
2,4-D	0.130	J	UG/L									

INORGANIC DATA VALIDATION
SDG 61418S

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-083

TO : KEVIN WALTER

DATE: APRIL 9, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - TAL METALS AND CYANIDE
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG 61418S

20/Soil/	S1SD-01	S1SD-02	S9SD-01
	S9SD-02	S9SD-03	S9SD-04
	S9-SD-05	S1SD-03	S3SD-01
	S3SD-02	S3SD-03	S3SD-04
	S3SD-05	S3DPSD-01	BG1SS-01
	BG1SD-01	BG2SD-01	BG2SS-01
	BG3SD-01	BG3SS-01	

Introduction

Validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. 61418S. Twenty (20) soil samples were included for TAL metals and cyanide analyses. One field duplicate pair (samples S3SD-02 and S3DPSD-01) was included with this SDG. The samples were collected by Brown and Root Environmental on January 22, 23, 24, 25, and 26, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level C and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
• Laboratory Blank Analyses
* • Field Duplicate Results

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method blanks at the maximum concentrations indicated below:

Analyte	Maximum Concentration	Action Level (Soil)
aluminum[1]	5.14 mg/kg	25.7 mg/kg
arsenic	7.8 ug/L	7.8 mg/kg
calcium	20.8 ug/L	20.8 mg/kg
iron	4.2 ug/L	4.2 mg/kg
lead	1.8 ug/L	1.8 mg/kg
magnesium	12.4 ug/L	12.4 mg/kg
sodium	96.1 ug/L	96.1 mg/kg
thallium	-9.5 ug/L	-9.5 mg/kg
cyanide	-2.6/1.7 ug/L	-2.6/1.7 mg/kg

Samples affected : All

[1] Maximum concentration found in a laboratory preparation blank.

An action level of 5X the maximum positive concentration has been established to evaluate the sample data. Sample dilution factors were considered prior to the application of the action levels. Positive results for arsenic and cyanide within the action levels are qualified as nondetected, "U". Negative values > 2X the absolute value of the IDL were found for thallium and cyanide. Positive results and nondetects reported for thallium and cyanide were qualified as estimated, "J", and "UJ", respectively. No actions were required for the remaining analytes as all results were greater than the action level or nondetects.

Notes

Field duplicate results have been summarized and are included within the support documentation. However, no data validation actions were taken.

Executive Summary

Laboratory Performance: Several contaminants were found in the laboratory method blanks.

Other Factors Affecting Data Quality: None.

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG 61418S

TABLE 1 - RECOMMENDATION SUMMARY

Aluminum		Magnesium		
Antimony		Manganese		
Arsenic	A[1]	Mercury		
Barium		Nickel		
Beryllium		Potassium		
Cadmium		Selenium		
Calcium		Silver		
Chromium		Sodium		
Cobalt		Thallium		J[1]
Copper		Vanadium		
Iron		Zinc		
Lead		Cyanide	A[1]	J[1]

If the field is left blank, the qualifier is A - Accept all data.

[1] - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

J[1] - Accept data but qualify positive results and nondetects as estimated, "J", and "UJ", respectively as a result of negative results > 2X IDL in the laboratory method blanks.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO - NAS KEY WEST
SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	3350		MG/KG	3620		MG/KG	2350		MG/KG	993		MG/KG	497		MG/KG
ANTIMONY	1.2	U	MG/KG	0.58	U	MG/KG	3.0	U	MG/KG	0.58	U	MG/KG	0.79	U	MG/KG
ARSENIC	4.3	U	MG/KG	2.7	U	MG/KG	10.2		MG/KG	2.7	U	MG/KG	3.2	U	MG/KG
BARIUM	12.2		MG/KG	13.0		MG/KG	15.2		MG/KG	9.2		MG/KG	5.0		MG/KG
BERYLLIUM	0.14	U	MG/KG	0.07	U	MG/KG	0.35	U	MG/KG	0.07	U	MG/KG	0.09	U	MG/KG
CADMIUM	0.90		MG/KG	0.41		MG/KG	0.47	U	MG/KG	0.09	U	MG/KG	0.12	U	MG/KG
CALCIUM	365000		MG/KG	284000		MG/KG	223000		MG/KG	394000		MG/KG	393000		MG/KG
CHROMIUM	11.7		MG/KG	5.8		MG/KG	5.8		MG/KG	3.2		MG/KG	2.1		MG/KG
COBALT	0.56		MG/KG	0.29		MG/KG	0.93	U	MG/KG	0.18	U	MG/KG	0.24	U	MG/KG
COPPER	34.6		MG/KG	5.1		MG/KG	1.6		MG/KG	1.7		MG/KG	3.2		MG/KG
CYANIDE	0.69	U	MG/KG	1.2	U	MG/KG	1.5	U	MG/KG	0.65	U	MG/KG	1.1	U	MG/KG
IRON	2600		MG/KG	1710		MG/KG	1360		MG/KG	532		MG/KG	363		MG/KG
LEAD	56.5		MG/KG	10.5		MG/KG	5.5		MG/KG	0.40	U	MG/KG	32.6		MG/KG
MAGNESIUM	4680		MG/KG	7660		MG/KG	20000		MG/KG	24600		MG/KG	5820		MG/KG
MANGANESE	38.5		MG/KG	33.7		MG/KG	14.9		MG/KG	15.0		MG/KG	17.3		MG/KG
MERCURY	0.14	U	MG/KG	0.07	U	MG/KG	0.35	U	MG/KG	0.06	U	MG/KG	0.09	U	MG/KG
NICKEL	5.5		MG/KG	2.0		MG/KG	2.3		MG/KG	0.63		MG/KG	0.70		MG/KG
POTASSIUM	661		MG/KG	294		MG/KG	4180		MG/KG	210		MG/KG	517		MG/KG
SELENIUM	2.2	U	MG/KG	1.1	U	MG/KG	5.6	U	MG/KG	1.1	U	MG/KG	1.5	U	MG/KG
SILVER	0.32	U	MG/KG	0.16	U	MG/KG	0.82	U	MG/KG	0.16	U	MG/KG	0.21	U	MG/KG
SODIUM	9650		MG/KG	1620		MG/KG	86900		MG/KG	3170		MG/KG	13100		MG/KG
THALLIUM	2.1	UJ	MG/KG	1.0	UJ	MG/KG	5.2	UJ	MG/KG	1.0	UJ	MG/KG	1.4	UJ	MG/KG
VANADIUM	8.9		MG/KG	3.6		MG/KG	5.4		MG/KG	4.1		MG/KG	2.8		MG/KG
ZINC	58.2		MG/KG	5.9		MG/KG	19.9		MG/KG	0.63		MG/KG	15.7		MG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S3DPSD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/25/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-14		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			12.0 %		
	RESULT	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**
INORGANICS															
ALUMINUM	1640		MG/KG	1040		MG/KG	1650		MG/KG	2060		MG/KG	1700		MG/KG
ANTIMONY	0.67	U	MG/KG	1.3	U	MG/KG	1.9	U	MG/KG	5.0	U	MG/KG	3.6	U	MG/KG
ARSENIC	2.6	U	MG/KG	3.1	U	MG/KG	7.1	U	MG/KG	17.1		MG/KG	9.8		MG/KG
BARIUM	11.2		MG/KG	5.6		MG/KG	8.4		MG/KG	5.3		MG/KG	8.7		MG/KG
BERYLLIUM	0.08	U	MG/KG	0.15	U	MG/KG	0.22	U	MG/KG	0.58	U	MG/KG	0.41	U	MG/KG
CADMIUM	0.27		MG/KG	0.20	U	MG/KG	0.39		MG/KG	0.77	U	MG/KG	0.83		MG/KG
CALCIUM	265000		MG/KG	174000		MG/KG	235000		MG/KG	14500		MG/KG	236000		MG/KG
CHROMIUM	9.3		MG/KG	4.2		MG/KG	6.1		MG/KG	11.5		MG/KG	6.6		MG/KG
COBALT	0.33		MG/KG	0.40	U	MG/KG	0.59	U	MG/KG	1.5	U	MG/KG	1.1	U	MG/KG
COPPER	9.7		MG/KG	39.5		MG/KG	3.3		MG/KG	42.1		MG/KG	19.8		MG/KG
CYANIDE	0.55	U	MG/KG	0.11	U	MG/KG	0.53	U	MG/KG	3.8	J	MG/KG	0.33	U	MG/KG
IRON	2260		MG/KG	735		MG/KG	608		MG/KG	1160		MG/KG	958		MG/KG
LEAD	48.3		MG/KG	15.0		MG/KG	10.4		MG/KG	52.1		MG/KG	21.2		MG/KG
MAGNESIUM	4110		MG/KG	4820		MG/KG	8430		MG/KG	18300		MG/KG	7880		MG/KG
MANGANESE	25.9		MG/KG	6.2		MG/KG	6.5		MG/KG	4.3		MG/KG	16.2		MG/KG
MERCURY	0.08		MG/KG	0.11	U	MG/KG	0.15	U	MG/KG	0.48	U	MG/KG	0.35	U	MG/KG
NICKEL	2.0		MG/KG	2.0		MG/KG	1.9		MG/KG	6.2		MG/KG	2.2		MG/KG
POTASSIUM	497		MG/KG	1060		MG/KG	2200		MG/KG	5150		MG/KG	1360		MG/KG
SELENIUM	1.8		MG/KG	2.4	U	MG/KG	3.6	U	MG/KG	9.2	U	MG/KG	6.6	U	MG/KG
SILVER	0.18	U	MG/KG	0.35	U	MG/KG	0.52	U	MG/KG	1.3	U	MG/KG	0.96	U	MG/KG
SODIUM	4580		MG/KG	16800		MG/KG	41200		MG/KG	108000		MG/KG	19600		MG/KG
THALLIUM	1.2	UJ	MG/KG	2.3	UJ	MG/KG	3.3	UJ	MG/KG	8.7	UJ	MG/KG	6.2	UJ	MG/KG
VANADIUM	3.6		MG/KG	1.9		MG/KG	6.6		MG/KG	31.0		MG/KG	5.2		MG/KG
ZINC	89.1		MG/KG	39.9		MG/KG	25.1		MG/KG	51.8		MG/KG	44.4		MG/KG

SAMPLE NUMBER:	S3SD-01	S3SD-02	S3SD-03	S3SD-04	S3SD-05
SAMPLE DATE:	01/25/96	01/25/96	01/25/96	01/25/96	01/25/96
LABORATORY ID:	9601418-09	9601418-10	9601418-11	9601418-12	9601418-13
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	30.0 %	12.0 %	61.0 %	18.0 %	46.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	1360		MG/KG	1980		MG/KG	1120		MG/KG	3060		MG/KG	1850		MG/KG
ANTIMONY	1.3	U	MG/KG	3.5	U	MG/KG	0.67	U	MG/KG	2.2	U	MG/KG	0.79	U	MG/KG
ARSENIC	4.8	U	MG/KG	10.7		MG/KG	3.7	U	MG/KG	4.2	U	MG/KG	3.9	U	MG/KG
BARIUM	7.9		MG/KG	10.6		MG/KG	8.7		MG/KG	12.3		MG/KG	8.9		MG/KG
BERYLLIUM	0.15	U	MG/KG	0.40	U	MG/KG	0.08	U	MG/KG	0.26	U	MG/KG	0.09	U	MG/KG
CADMIUM	0.62		MG/KG	0.92		MG/KG	0.65		MG/KG	1.1		MG/KG	0.41		MG/KG
CALCIUM	394000		MG/KG	261000		MG/KG	332000		MG/KG	379000		MG/KG	319000		MG/KG
CHROMIUM	5.2		MG/KG	8.5		MG/KG	8.1		MG/KG	13.7		MG/KG	5.6		MG/KG
COBALT	0.41	U	MG/KG	1.1	U	MG/KG	0.58		MG/KG	0.68	U	MG/KG	0.24	U	MG/KG
COPPER	18.2		MG/KG	25.0		MG/KG	163		MG/KG	46.6		MG/KG	8.1		MG/KG
CYANIDE	0.15	U	MG/KG	0.61	U	MG/KG	0.58	U	MG/KG	1.1	U	MG/KG	1.8	J	MG/KG
IRON	684		MG/KG	1160		MG/KG	3500		MG/KG	1340		MG/KG	882		MG/KG
LEAD	16.8		MG/KG	23.3		MG/KG	57.0		MG/KG	32.9		MG/KG	19.9		MG/KG
MAGNESIUM	4970		MG/KG	9700		MG/KG	2600		MG/KG	10900		MG/KG	6640		MG/KG
MANGANESE	9.8		MG/KG	21.5		MG/KG	22.3		MG/KG	17.6		MG/KG	10.5		MG/KG
MERCURY	0.17	U	MG/KG	0.31	U	MG/KG	0.07	U	MG/KG	0.21	U	MG/KG	0.09	U	MG/KG
NICKEL	2.4		MG/KG	2.9		MG/KG	2.5		MG/KG	2.9		MG/KG	2.2		MG/KG
POTASSIUM	592		MG/KG	1680		MG/KG	126		MG/KG	1700		MG/KG	528		MG/KG
SELENIUM	2.5	U	MG/KG	6.5	U	MG/KG	1.2	U	MG/KG	4.1	U	MG/KG	1.4	U	MG/KG
SILVER	0.36	U	MG/KG	0.94	U	MG/KG	0.19		MG/KG	0.60	U	MG/KG	0.21	U	MG/KG
SODIUM	11100		MG/KG	23800		MG/KG	2620		MG/KG	15900		MG/KG	3980		MG/KG
THALLIUM	2.3	UJ	MG/KG	6.0	UJ	MG/KG	1.2	UJ	MG/KG	3.8	UJ	MG/KG	1.4	UJ	MG/KG
VANADIUM	4.1		MG/KG	6.0		MG/KG	2.9		MG/KG	9.4		MG/KG	4.2		MG/KG
ZINC	37.1		MG/KG	51.9		MG/KG	86.1		MG/KG	69.2		MG/KG	28.2		MG/KG

SAMPLE NUMBER:	S9SD-01			S9SD-02			S9SD-03			S9SD-04			S9SD-05		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	9601418-03			9601418-04			9601418-05			9601418-06			9601418-07		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	32.0 %			33.0 %			18.0 %			36.0 %			17.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	2120		MG/KG	1630		MG/KG	3710		MG/KG	774		MG/KG	3570		MG/KG
ANTIMONY	1.6	U	MG/KG	1.5	U	MG/KG	2.8	U	MG/KG	1.4	U	MG/KG	2.9	U	MG/KG
ARSENIC	6.3	U	MG/KG	5.3	U	MG/KG	17.8		MG/KG	6.1	U	MG/KG	12.6		MG/KG
BARIUM	8.5		MG/KG	6.7		MG/KG	19.8		MG/KG	5.7		MG/KG	10.5		MG/KG
BERYLLIUM	0.18	U	MG/KG	0.18	U	MG/KG	0.32	U	MG/KG	0.16	U	MG/KG	0.34	U	MG/KG
CADMIUM	0.24	U	MG/KG	0.28		MG/KG	0.52		MG/KG	0.21	U	MG/KG	0.62		MG/KG
CALCIUM	209000		MG/KG	165000		MG/KG	183000		MG/KG	130000		MG/KG	176000		MG/KG
CHROMIUM	6.4		MG/KG	5.8		MG/KG	11.6		MG/KG	3.3		MG/KG	10.4		MG/KG
COBALT	0.49	U	MG/KG	0.48	U	MG/KG	0.85	U	MG/KG	0.42	U	MG/KG	0.90	U	MG/KG
COPPER	4.7		MG/KG	7.9		MG/KG	14.7		MG/KG	14.3		MG/KG	12.8		MG/KG
CYANIDE	0.91	U	MG/KG	0.61	U	MG/KG	0.90	U	MG/KG	0.77	U	MG/KG	12.1	J	MG/KG
IRON	1380		MG/KG	1170		MG/KG	2680		MG/KG	762		MG/KG	2620		MG/KG
LEAD	9.5		MG/KG	10.4		MG/KG	23.1		MG/KG	6.4		MG/KG	21.1		MG/KG
MAGNESIUM	9230		MG/KG	8970		MG/KG	11300		MG/KG	7600		MG/KG	11500		MG/KG
MANGANESE	11.8		MG/KG	9.5		MG/KG	15.3		MG/KG	6.2		MG/KG	17.1		MG/KG
MERCURY	1.1		MG/KG	0.10	U	MG/KG	0.25	U	MG/KG	0.13	U	MG/KG	0.28	U	MG/KG
NICKEL	1.8		MG/KG	3.2		MG/KG	5.0		MG/KG	1.5		MG/KG	4.3		MG/KG
POTASSIUM	1040		MG/KG	1220		MG/KG	2740		MG/KG	1110		MG/KG	2500		MG/KG
SELENIUM	2.9	U	MG/KG	2.9	U	MG/KG	7.3		MG/KG	2.5	U	MG/KG	5.4	U	MG/KG
SILVER	0.42	U	MG/KG	0.42	U	MG/KG	0.74	U	MG/KG	0.37	U	MG/KG	0.79	U	MG/KG
SODIUM	20400		MG/KG	26100		MG/KG	52000		MG/KG	24800		MG/KG	52400		MG/KG
THALLIUM	2.7	UJ	MG/KG	2.7	UJ	MG/KG	4.8	UJ	MG/KG	2.4	UJ	MG/KG	5.1	UJ	MG/KG
VANADIUM	6.5		MG/KG	6.4		MG/KG	12.8		MG/KG	4.7		MG/KG	13.2		MG/KG
ZINC	12.5		MG/KG	14.0		MG/KG	38.3		MG/KG	16.5		MG/KG	35.0		MG/KG

ORGANIC DATA VALIDATION
SDG 61418S

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661 Andersen Drive
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Brown & Root Environmental

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(412) 921-7090
FAX: (412) 921-4040

C-49-04-6-100

TO: KEVIN WALTER DATE: APRIL 19, 1996

FROM: ANNE K. BATTISTA COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOA/SVOA/PEST/PCB/HERB ORGANICS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG 61418S

SAMPLES: Soils:

S1SD-01	S1SD-02	S1SD-03
S9SD-01	S9SD-02	S9SD-03
S9SD-04	S9SD-05	BG1SS-01
BG1SD-01	BG2SS-01	BG2SD-01
BG3SS-01	BG3SD-01	

The sample set for the CTO 007 NAS Key West site, SDG 61418S, consists of fourteen (14) soil environmental samples. All samples were analyzed for Appendix IX volatile and semivolatile compounds, plus Target Compound List (TCL) pesticide/PCB and herbicide organic compounds. The field crew designated sample S1SD-01 for Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis. A field duplicate pair was not included in this SDG.

The samples were collected by Brown and Root Environmental on January 22nd, 23rd, 24th, and 26th, 1996 and analyzed by General Engineering Laboratories, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Methods 8240, 8270, 8080 and 8150 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- Initial and continuing calibrations
- Laboratory and field blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatiles

Initial and/or continuing calibration Relative Response Factors for acrolein, propionitrile and trans-1,4-dichloro-2-butene were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by these noncompliances. As a result of this major calibration noncompliance, nondetected results for the aforementioned compounds are considered unreliable and were rejected, (UR), in the affected samples.

The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standards analyzed on 01/31/96 (15:38), 02/01/96 (15:43) and 02/02/96(12:10). An additional standard was not analyzed containing this compound (as performed for the previous and following continuing calibrations). Hence, the nondetected results reported for this compound in the samples associated with the aforementioned continuing calibrations were rejected, (UR).

Poor surrogate Percent Recoveries (%Rs) and poor internal standard areas were reported for the samples in this SDG. As a result the laboratory reanalyzed all of the samples and reported similar results in all samples except S9SD-04 and S9SD-05. The laboratory had attributed the poor %Rs and areas to matrix interference. Therefore, the original analyses were chosen for validation for all samples except S9SD-04 and S9SD-05. The reanalyses of these two samples were chosen since improved internal standard areas were reported. No further action was taken.

It should be noted that the laboratory used 20g of sample for each sample analysis. No validation actions were taken.

The laboratory only analyzed three laboratory method blanks, however, five bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. The laboratory indicated that instead of one blank associated with each BFB tune, one method blank was analyzed on a daily basis. This practice does not preclude the possibility of cross-contamination which may be present from standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Since some samples were analyzed within the same day (but with two BFB tunes), the validator was only able to apply three laboratory method blank to all the samples.

It should be noted that acetone was reported as an estimated value, qualified (J), in sample S9SD-05 since this result exceeded the linear calibration range of the instrument.

Methyl methacrylate was analyzed for both volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained in Appendix A - Qualified Analytical Results.

Semivolatiles

Initial and/or continuing calibration RRFs for 4-nitroquinoline-1-oxide, 3,3'-dimethylbenzidine, 4-chloroaniline, a,a-dimethylphenethylamine and 2-naphthylamine were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for the aforementioned compounds are considered unreliable and were rejected, (UR), in the affected samples.

Samples BG3SD-01 and BG3SS-01 failed internal standard recovery criteria. Therefore, the laboratory reanalyzed these samples and reported improved areas for these samples. Hence, the reanalyses for these samples were used in validation. No further action was taken.

Several samples were analyzed at 4 and/or 10-fold dilutions. Hence, reporting limits are elevated.

Pesticide/PCBs

Numerous samples were analyzed at various dilutions. Hence, reporting limits are elevated.

No problems were noted.

Herbicides

All samples were analyzed at 10-fold dilutions. Hence, the reporting levels are elevated.

No problems were noted.

Additional Comments

Positive results reported at concentrations less than the Contract Required Quantitation Limit (CRQL) are are qualified as estimated, (J).

Executive Summary

Laboratory Performance: Initial and/or continuing calibration RRFs for acrolein, propionitrile, trans-1,4-dichloro-2-butene, 4-nitroquinoline-1-oxide, 3,3'-dimethylbenzidine, 4-chloroaniline, a,a-dimethylphenethylamine and 2-naphthylamine were reported less than the 0.050 quality control limit. The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standards analyzed on 01/31/96 (15:38), 02/01/96 (15:43) and 02/02/96 (12:10). The laboratory only analyzed one method blank per day for the volatile analyses.

Other Factors Affecting Data Quality: Poor surrogate %Rs and poor internal standard areas were reported for all samples in this SDG, in the volatile fraction. Samples BG3SD-01 and BG3SS-01 failed semivolatile internal standard recovery criteria.

MEMO TO: KEVIN WALTER
DATE: APRIL 11, 1996 - PAGE 4

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG 61418S

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA	BNA	PEST/PCB	HERB
S1SD-01	R^{1}	$R^{4,7}$	J^{1}	
S1SD-02	J^{1} $R^{1,3}$	$R^{4,7}$	J^{1}	
S1SD-03	R^{1}	$R^{4,5,6}$	J^{1}	
S9SD-01	$R^{1,3}$	$R^{4,7}$		
S9SD-02	$R^{1,3}$	$R^{4,7}$	J^{1}	
S9SD-03	$R^{1,3}$	$R^{4,7}$	J^{1}	
S9SD-04	$R^{1,2,3}$	$R^{4,7}$	J^{1}	
S9SD-05	$R^{1,3}$	$R^{4,7}$	J^{1}	
BG1SS-01	J^{1} R^{1}	$R^{4,5,6}$	J^{1}	
BG1SD-01	J^{1} R^{1}	$R^{4,5,6}$		
BG2SS-01	R^{1}	$R^{4,5,6}$	J^{1}	
BG2SD-01	R^{1}	$R^{4,5,6}$	J^{1}	
BG3SS-01	J^{1} $R^{1,2,3}$	$R^{4,5}$		
BG3SD-01	R^{1}	$R^{4,5}$	J^{1}	

If the field is left blank, the qualifier is A - Accept all data.

J^{1} - Accept data, but qualify positive results reported at concentrations less than the CRQL as estimated, (J).

R^{1} - Reject, (UR), nondetected results for acrolein and propionitrile, as a result of initial and continuing calibration RRFs less than 0.050.

R^{2} - Reject, (UR), nondetected results for trans-1,4-dichloro-2-butene as a result of a continuing calibration RRF less than 0.050.

R^{3} - Reject, (UR), nondetected results for 2-chloro-1,3-butadiene since a calibration standard was not run for this compound during several continuing calibrations.

R^{4} - Reject, (UR), nondetected results for 3,3-dimethylbenzidine as a result of initial and continuing calibration RRFs less than 0.050.

R^{5} - Reject, (UR), nondetected results for 2-naphthylamine as a result of continuing calibration RRFs less than 0.050.

R^{6} - Reject, (UR), nondetected results for 4-chloroaniline and a,a-dimethylphenethylamine as a result of continuing calibration RRFs less than 0.050.

R^{7} - Reject, (UR), nondetected results for 4-nitroquinoline-1-oxide as a result of continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 00 IAS KEY WEST
SOIL [
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,1,1-TRICHLOROETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,1,2-TRICHLOROETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,1-DICHLOROETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,1-DICHLOROETHENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,2,3-TRICHLOROPROPANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,2-DIBROMOETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,2-DICHLOROETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
1,2-DICHLOROPROPANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
2-BUTANONE	17	U	UG/KG	7	U	UG/KG	39	U	UG/KG	6	U	UG/KG	9	U	UG/KG
2-CHLORO-1,3-BUTADIENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
2-HEXANONE	17	U	UG/KG	7	U	UG/KG	39	U	UG/KG	6	U	UG/KG	9	U	UG/KG
4-METHYL-2-PENTANONE	17	U	UG/KG	7	U	UG/KG	39	U	UG/KG	6	U	UG/KG	9	U	UG/KG
ACETONE	4	J	UG/KG	3	U	UG/KG	38		UG/KG	3	U	UG/KG	4	U	UG/KG
ACETONITRILE	33	U	UG/KG	14	U	UG/KG	77	U	UG/KG	13	U	UG/KG	19	U	UG/KG
ACROLEIN	67	UR	UG/KG	27	UR	UG/KG	154	UR	UG/KG	26	UR	UG/KG	38	UR	UG/KG
ACRYLONITRILE	67	U	UG/KG	27	U	UG/KG	154	U	UG/KG	26	U	UG/KG	38	U	UG/KG
ALLYL CHLORIDE	33	U	UG/KG	14	U	UG/KG	77	U	UG/KG	13	U	UG/KG	19	U	UG/KG
BENZENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	67	U	UG/KG	27	U	UG/KG	154	U	UG/KG	26	U	UG/KG	38	U	UG/KG
BROMODICHLOROMETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
BROMOFORM	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
BROMOMETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
CARBON DISULFIDE	17	U	UG/KG	7	U	UG/KG	39	U	UG/KG	6	U	UG/KG	9	U	UG/KG
CARBON TETRACHLORIDE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
CHLOROBENZENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
CHLORODIBROMOMETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
CHLOROETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
CHLOROFORM	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
CHLOROMETHANE	7	U	UG/KG	4		UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG

CTO 00 IAS KEY WEST
SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
DIBROMOMETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
DICHLORODIFLUOROMETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
ETHYLBENZENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
IODOMETHANE	17	U	UG/KG	7	U	UG/KG	39	U	UG/KG	6	U	UG/KG	9	U	UG/KG
ISOBUTYL ALCOHOL	67	U	UG/KG	27	U	UG/KG	154	U	UG/KG	26	U	UG/KG	38	U	UG/KG
METHACRYLONITRILE	33	U	UG/KG	14	U	UG/KG	77	U	UG/KG	13	U	UG/KG	19	U	UG/KG
METHYL METHACRYLATE	33	U	UG/KG	14	U	UG/KG	77	U	UG/KG	13	U	UG/KG	19	U	UG/KG
METHYLENE CHLORIDE	5	J	UG/KG	0.11	J	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
PROPIONITRILE	67	UR	UG/KG	27	UR	UG/KG	154	UR	UG/KG	26	UR	UG/KG	38	UR	UG/KG
STYRENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
TETRACHLOROETHENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
TOLUENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
TRANS-1,2-DICHLOROETHENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	33	U	UG/KG	14	U	UG/KG	77	U	UG/KG	13	U	UG/KG	19	U	UG/KG
TRICHLOROETHENE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
TRICHLOROFLUOROMETHANE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
VINYL ACETATE	17	U	UG/KG	7	U	UG/KG	39	U	UG/KG	6	U	UG/KG	9	U	UG/KG
VINYL CHLORIDE	7	U	UG/KG	3	U	UG/KG	15	U	UG/KG	3	U	UG/KG	4	U	UG/KG
XYLENES, TOTAL	19	U	UG/KG	8	U	UG/KG	46	U	UG/KG	8	U	UG/KG	11	U	UG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,1,1-TRICHLOROETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	4		UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,1,2-TRICHLOROETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,1-DICHLOROETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,1-DICHLOROETHENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,2,3-TRICHLOROPROPANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,2-DIBROMOETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,2-DICHLOROETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
1,2-DICHLOROPROPANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
2-BUTANONE	8	U	UG/KG	13	U	UG/KG	20	U	UG/KG	50	U	UG/KG	16	U	UG/KG
2-CHLORO-1,3-BUTADIENE	3	UR	UG/KG	5	U	UG/KG	8	UR	UG/KG	20	U	UG/KG	6	UR	UG/KG
2-HEXANONE	2	J	UG/KG	13	U	UG/KG	20	U	UG/KG	50	U	UG/KG	16	U	UG/KG
4-METHYL-2-PENTANONE	8	U	UG/KG	13	U	UG/KG	20	U	UG/KG	50	U	UG/KG	16	U	UG/KG
ACETONE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
ACETONITRILE	16	U	UG/KG	26	U	UG/KG	40	U	UG/KG	100	U	UG/KG	31	U	UG/KG
ACROLEIN	32	UR	UG/KG	53	UR	UG/KG	80	UR	UG/KG	200	UR	UG/KG	63	UR	UG/KG
ACRYLONITRILE	32	U	UG/KG	53	U	UG/KG	80	U	UG/KG	200	U	UG/KG	63	U	UG/KG
ALLYL CHLORIDE	16	U	UG/KG	26	U	UG/KG	40	U	UG/KG	100	U	UG/KG	31	U	UG/KG
BENZENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	21	J	UG/KG	53	U	UG/KG	11	J	UG/KG	200	U	UG/KG	63	U	UG/KG
BROMODICHLOROMETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
BROMOFORM	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
BROMOMETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
CARBON DISULFIDE	8	U	UG/KG	13	U	UG/KG	20	U	UG/KG	50	U	UG/KG	16	U	UG/KG
CARBON TETRACHLORIDE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
CHLOROBENZENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
CHLORODIBROMOMETHANE	3	U	UG/KG	5	U	UG/KG	1	J	UG/KG	20	U	UG/KG	6	U	UG/KG
CHLOROETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
CHLOROFORM	1	J	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
CHLOROMETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	21		UG/KG	6	U	UG/KG

CTO 007 ..AS KEY WEST
SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
DIBROMOMETHANE	3	U	UG/KG	5	U	UG/KG	1	J	UG/KG	20	U	UG/KG	6	U	UG/KG
DICHLORODIFLUOROMETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
ETHYLBENZENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
IODOMETHANE	8	U	UG/KG	13	U	UG/KG	20	U	UG/KG	50	U	UG/KG	16	U	UG/KG
ISOBUTYL ALCOHOL	32	U	UG/KG	53	U	UG/KG	80	U	UG/KG	200	U	UG/KG	63	U	UG/KG
METHACRYLONITRILE	16	U	UG/KG	26	U	UG/KG	40	U	UG/KG	100	U	UG/KG	31	U	UG/KG
METHYL METHACRYLATE	16	U	UG/KG	26	U	UG/KG	3	J	UG/KG	100	U	UG/KG	31	U	UG/KG
METHYLENE CHLORIDE	1	J	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
PROPIONITRILE	32	UR	UG/KG	53	UR	UG/KG	80	UR	UG/KG	200	UR	UG/KG	63	UR	UG/KG
STYRENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
TETRACHLOROETHENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
TOLUENE	3	U	UG/KG	5	U	UG/KG	1	J	UG/KG	20	U	UG/KG	6	U	UG/KG
TRANS-1,2-DICHLOROETHENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	16	UR	UG/KG	26	U	UG/KG	40	U	UG/KG	100	U	UG/KG	31	U	UG/KG
TRICHLOROETHENE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
TRICHLOROFLUOROMETHANE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
VINYL ACETATE	8	U	UG/KG	13	U	UG/KG	20	U	UG/KG	50	U	UG/KG	16	U	UG/KG
VINYL CHLORIDE	3	U	UG/KG	5	U	UG/KG	8	U	UG/KG	20	U	UG/KG	6	U	UG/KG
XYLENES, TOTAL	10	U	UG/KG	16	U	UG/KG	24	U	UG/KG	60	U	UG/KG	19	U	UG/KG

SAMPLE NUMBER:	S9SD-02	S9SD-03	S9SD-04	S9SD-05	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	
LABORATORY ID:	9601418-04	9601418-05	9601418-06	9601418-07	
QC_TYPE:	Normal	Normal	Normal	Dilution	
% SOLIDS:	33.0 %	18.0 %	36.0 %	17.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG			
1,1,1-TRICHLOROETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,1,2,2-TETRACHLOROETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,1,2-TRICHLOROETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,1-DICHLOROETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,1-DICHLOROETHENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,2,3-TRICHLOROPROPANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,2-DIBROMO-3-CHLOROPROPANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,2-DIBROMOETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,2-DICHLOROETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
1,2-DICHLOROPROPANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
2-BUTANONE	15	U	UG/KG	28	U	UG/KG	12	U	UG/KG	735 29	U	UG/KG			
2-CHLORO-1,3-BUTADIENE	6	UR	UG/KG	11	UR	UG/KG	6	UR	UG/KG	294 12	UR	UG/KG			
2-HEXANONE	15	U	UG/KG	28	U	UG/KG	12	U	UG/KG	735 29	U	UG/KG			
4-METHYL-2-PENTANONE	15	U	UG/KG	28	U	UG/KG	12	U	UG/KG	735 29	U	UG/KG			
ACETONE	6	U	UG/KG	11	U	UG/KG	275		UG/KG	1950 1890	J	UG/KG			
ACETONITRILE	30	U	UG/KG	56	U	UG/KG	24	U	UG/KG	1470 59	U	UG/KG			
ACROLEIN	61	UR	UG/KG	111	UR	UG/KG	56	UR	UG/KG	2950 118	UR	UG/KG			
ACRYLONITRILE	61	U	UG/KG	111	U	UG/KG	56	U	UG/KG	2950 118	U	UG/KG			
ALLYL CHLORIDE	30	U	UG/KG	56	U	UG/KG	24	U	UG/KG	1470 59	U	UG/KG			
BENZENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG			
BIS(2-CHLOROISOPROPYL) ETHER	61	U	UG/KG	111	U	UG/KG	56	U	UG/KG	2950 118	U	UG/KG			
BROMODICHLOROMETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG			
BROMOFORM	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
BROMOMETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
CARBON DISULFIDE	15	U	UG/KG	28	U	UG/KG	12	U	UG/KG	735 29	U	UG/KG			
CARBON TETRACHLORIDE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG			
CHLOROBENZENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
CHLORODIBROMOMETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
CHLOROETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
CHLOROFORM	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			
CHLOROMETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG			

CTO 00; .AS KEY WEST
SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	S9SD-02			S9SD-03			S9SD-04			S9SD-05						
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			/ /			
LABORATORY ID:	9601418-04			9601418-05			9601418-06			9601418-07						
QC_TYPE:	Normal			Normal			Normal			Dilution						
% SOLIDS:	33.0 %			18.0 %			36.0 %			17.0 %			100.0 %			
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	
VOLATILES																
CIS-1,3-DICHLOROPROPENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG				
DIBROMOMETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
DICHLORODIFLUOROMETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
ETHYLBENZENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
IODOMETHANE	15	U	UG/KG	28	U	UG/KG	12	U	UG/KG	735 29	U	UG/KG				
ISOBUTYL ALCOHOL	61	U	UG/KG	111	U	UG/KG	56	U	UG/KG	2950 118	U	UG/KG				
METHACRYLONITRILE	30	U	UG/KG	56	U	UG/KG	24	U	UG/KG	294 12	U	UG/KG				
METHYL METHACRYLATE	30	U	UG/KG	56	U	UG/KG	24	U	UG/KG	1470 59	U	UG/KG				
METHYLENE CHLORIDE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG				
PROPIONITRILE	61	UR	UG/KG	111	UR	UG/KG	56	UR	UG/KG	2950 118	UR	UG/KG				
STYRENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG				
TETRACHLOROETHENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
TOLUENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
TRANS-1,2-DICHLOROETHENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
TRANS-1,3-DICHLOROPROPENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
TRANS-1,4-DICHLORO-2-BUTENE	30	U	UG/KG	56	U	UG/KG	24	UR	UG/KG	1470 59	UR	UG/KG				
TRICHLOROETHENE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG				
TRICHLOROFLUOROMETHANE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294	U	UG/KG				
VINYL ACETATE	15	U	UG/KG	28	U	UG/KG	12	U	UG/KG	735 29	U	UG/KG				
VINYL CHLORIDE	6	U	UG/KG	11	U	UG/KG	6	U	UG/KG	294 12	U	UG/KG				
XYLENES, TOTAL	18	U	UG/KG	33	U	UG/KG	17	U	UG/KG	882 35	U	UG/KG				

CTO 0[illegible]AS KEY WEST
SOIL D[illegible]A
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC TYPE:	Dilution			Normal			Normal			Normal			Dilution		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1,2,4-TRICHLOROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1,2-DICHLOROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1,3,5-TRINITROBENZENE	21900	U	UG/KG	2280	U	UG/KG	12600	U	UG/KG	2120	U	UG/KG	30700	U	UG/KG
1,3-DICHLOROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1,3-DINITROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1,4-DICHLOROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1,4-DIOXANE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1,4-NAPHTHOQUINONE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
1-NAPHTHYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,4,5-TRICHLOROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,4,6-TRICHLOROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,4-DICHLOROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,4-DIMETHYLPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,4-DINITROPHENOL	8770	U	UG/KG	910	U	UG/KG	5050	U	UG/KG	846	U	UG/KG	12300	U	UG/KG
2,4-DINITROTOLUENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,6-DICHLOROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2,6-DINITROTOLUENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-ACETYLAMINOFLUORENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-CHLORONAPHTHALENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-CHLOROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-METHYLNAPHTHALENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-METHYLPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-NAPHTHYLAMINE	4380	UR	UG/KG	455	UR	UG/KG	2530	UR	UG/KG	423	UR	UG/KG	6150	UR	UG/KG
2-NITROANILINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-NITROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
2-PICOLINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
3 & 4-METHYLPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
3,3'-DICHLOROBENZIDINE	21900	U	UG/KG	2280	U	UG/KG	12600	U	UG/KG	2120	U	UG/KG	30700	U	UG/KG
3,3'-DIMETHYLBENZIDINE	21900	UR	UG/KG	2280	UR	UG/KG	12600	UR	UG/KG	2120	UR	UG/KG	30700	UR	UG/KG

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC_TYPE:	Dilution			Normal			Normal			Normal			Dilution		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
3-NITROANILINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
4-AMINOBIPHENYL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
4-CHLORO-3-METHYLPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
4-CHLOROANILINE	4380	UR	UG/KG	455	UR	UG/KG	2530	UR	UG/KG	423	UR	UG/KG	6150	U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
4-NITROANILINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
4-NITROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
5-NITRO-O-TOLUIDINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	4380	UR	UG/KG	455	UR	UG/KG	2530	UR	UG/KG	423	UR	UG/KG	6150	U	UG/KG
ACENAPHTHENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ACENAPHTHYLENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ACETOPHENONE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ANILINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ANTHRACENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ARAMITE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BENZO(A)ANTHRACENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BENZO(A)PYRENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BENZO(B)FLUORANTHENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BENZO(G,H,I)PERYLENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BENZO(K)FLUORANTHENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BENZYL ALCOHOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
BUTYLBENZYL PHTHALATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
CHLOROBENZILATE	21900	U	UG/KG	2280	U	UG/KG	12600	U	UG/KG	2120	U	UG/KG	30700	U	UG/KG
CHRYSI	4380	U	UG/KG	455		UG/KG	2530	U	UG/KG	423	U	UG/KG	6150		UG/KG
DI-N-BUTYL PHTHALATE	4380	U	UG/KG	455	J	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150		UG/KG

SAMPLE NUMBER:	BG1SD-01	BG1SS-01	BG2SD-01	BG2SS-01	BG3SD-01
SAMPLE DATE:	01/26/96	01/26/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	9601418-16	9601418-15	9601418-17	9601418-18	9601418-19
QC_TYPE:	Dilution	Normal	Normal	Normal	Dilution
% SOLIDS:	30.0 %	73.0 %	13.0 %	78.0 %	53.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DIALLATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DIBENZO(A,H)ANTHRACENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DIBENZOFURAN	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DIETHYL PHTHALATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DIMETHOATE	21900	U	UG/KG	2280	U	UG/KG	12600	U	UG/KG	2120	U	UG/KG	30700	U	UG/KG
DIMETHYL PHTHALATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DINOSEB	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DIPHENYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
DISULFOTON	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ETHYL METHACRYLATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ETHYL METHANESULFONATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
FAMPHUR	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
FLUORANTHENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
FLUORENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
HEXACHLOROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
HEXACHLOROBUTADIENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
HEXACHLOROETHANE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
HEXACHLOROPROPENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
INDENO(1,2,3-CD)PYRENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ISODRIN	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ISOPHORONE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
ISOSAFROLE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
KEPONE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
METHAPYRILENE	21900	U	UG/KG	2280	U	UG/KG	12600	U	UG/KG	2120	U	UG/KG	30700	U	UG/KG
METHYL METHANESULFONATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSODIETHYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSODIMETHYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSODIPHENYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG

CTO 00. JAS KEY WEST
SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC_TYPE:	Dilution			Normal			Normal			Normal			Dilution		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSOMORPHOLINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSOPIPERIDINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
N-NITROSOPYRROLIDINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
NAPHTHALENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
NITROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
O,O,O-TRIETHYLPHOSPHOROTHIOATE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
O-TOLUIDINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
P-PHENYLENEDIAMINE	8770	U	UG/KG	910	U	UG/KG	5050	U	UG/KG	846	U	UG/KG	12300	U	UG/KG
PENTACHLOROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PENTACHLOROETHANE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PENTACHLORONITROBENZENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PENTACHLOROPHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PHENACETIN	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PHENANTHRENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PHENOL	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PRONAMIDE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PYRENE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
PYRIDINE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
SAFROLE	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
SULFOTEP	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG
THIONAZIN	4380	U	UG/KG	455	U	UG/KG	2530	U	UG/KG	423	U	UG/KG	6150	U	UG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Dilution			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1,2,4-TRICHLOROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1,2-DICHLOROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1,3,5-TRINITROBENZENE	26800	U	UG/KG	4350	U	UG/KG	6640	U	UG/KG	16200	U	UG/KG	5200	U	UG/KG
1,3-DICHLOROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1,3-DINITROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1,4-DICHLOROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1,4-DIOXANE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1,4-NAPHTHOQUINONE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
1-NAPHTHYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,4,5-TRICHLOROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,4,6-TRICHLOROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,4-DICHLOROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,4-DIMETHYLPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,4-DINITROPHENOL	10700	U	UG/KG	1740	U	UG/KG	2660	U	UG/KG	6460	U	UG/KG	2080	U	UG/KG
2,4-DINITROTOLUENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,6-DICHLOROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2,6-DINITROTOLUENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-ACETYLAMINOFLUORENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-CHLORONAPHTHALENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-CHLOROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-METHYLNAPHTHALENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-METHYLPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-NAPHTHYLAMINE	5370	UR	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	UR	UG/KG	1040	U	UG/KG
2-NITROANILINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-NITROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
2-PICOLINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
3 & 4-METHYLPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
3,3'-DICHLOROBENZIDINE	26800	U	UG/KG	4350	U	UG/KG	6640	U	UG/KG	16200	U	UG/KG	5200	U	UG/KG
3,3'-DIMETHYLBENZIDINE	26800	UR	UG/KG	4350	UR	UG/KG	6640	UR	UG/KG	16200	UR	UG/KG	5200	UR	UG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Dilution			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
3-NITROANILINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
4-AMINOBIPHENYL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
4-CHLORO-3-METHYLPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
4-CHLOROANILINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	UR	UG/KG	1040	U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
4-NITROANILINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
4-NITROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	5370	U	UG/KG	870	UR	UG/KG	1330	UR	UG/KG	3230	U	UG/KG	1040	UR	UG/KG
5-NITRO-O-TOLUIDINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	UR	UG/KG	1040	U	UG/KG
ACENAPHTHENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ACENAPHTHYLENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ACETOPHENONE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ANILINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ANTHRACENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ARAMITE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BENZO(A)ANTHRACENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BENZO(A)PYRENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BENZO(B)FLUORANTHENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BENZO(G,H,I)PERYLENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BENZO(K)FLUORANTHENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BENZYL ALCOHOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
BUTYLBENZYL PHTHALATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
CHLOROBENZILATE	26800	U	UG/KG	4350	U	UG/KG	6640	U	UG/KG	16200	U	UG/KG	5200	U	UG/KG
CHRYSI	5370	U	UG/KG	870		UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040		UG/KG
DI-N-BUTYL PHTHALATE	5370	U	UG/KG	870	J	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040		UG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Dilution			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DIALLATE	5370	U	UG/KG	4350	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DIBENZO(A,H)ANTHRACENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DIBENZOFURAN	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DIETHYL PHTHALATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DIMETHOATE	26800	U	UG/KG	870	U	UG/KG	6640	U	UG/KG	16200	U	UG/KG	5200	U	UG/KG
DIMETHYL PHTHALATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DINOSEB	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DIPHENYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
DISULFOTON	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ETHYL METHACRYLATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ETHYL METHANESULFONATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
FAMPHUR	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
FLUORANTHENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
FLUORENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
HEXACHLOROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
HEXACHLOROBUTADIENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
HEXACHLOROETHANE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
HEXACHLOROPROPENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
INDENO(1,2,3-CD)PYRENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ISODRIN	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ISOPHORONE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
ISOSAFROLE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
KEPONE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
METHAPYRILENE	26800	U	UG/KG	4350	U	UG/KG	6640	U	UG/KG	16200	U	UG/KG	5200	U	UG/KG
METHYL METHANESULFONATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSODIETHYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSODIMETHYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSODIPHENYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Dilution			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSOMORPHOLINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSOPIPERIDINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
N-NITROSOPYRROLIDINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
NAPHTHALENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
NITROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
O,O,O-TRIETHYLPHOSPHOROTHIOATE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
O-TOLUIDINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
P-PHENYLENEDIAMINE	10700	U	UG/KG	1740	U	UG/KG	2660	U	UG/KG	6460	U	UG/KG	2080	U	UG/KG
PENTACHLOROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PENTACHLOROETHANE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PENTACHLORONITROBENZENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PENTACHLOROPHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PHENACETIN	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PHENANTHRENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PHENOL	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PRONAMIDE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PYRENE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
PYRIDINE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
SAFROLE	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
SULFOTEP	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG
THIONAZIN	5370	U	UG/KG	870	U	UG/KG	1330	U	UG/KG	3230	U	UG/KG	1040	U	UG/KG

SAMPLE NUMBER:	S9SD-02	S9SD-03	S9SD-04	S9SD-05	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	
LABORATORY ID:	9601418-04	9601418-05	9601418-06	9601418-07	
QC_TYPE:	Normal	Normal	Normal	Normal	
% SOLIDS:	33.0 %	18.0 %	36.0 %	17.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1,2,4-TRICHLOROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1,2-DICHLOROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1,3,5-TRINITROBENZENE	5010	U	UG/KG	9060	U	UG/KG	4630	U	UG/KG	9760	U	UG/KG			
1,3-DICHLOROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1,3-DINITROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1,4-DICHLOROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1,4-DIOXANE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1,4-NAPHTHOQUINONE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
1-NAPHTHYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,3,4,6-TETRACHLOROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,4,5-TRICHLOROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,4,6-TRICHLOROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,4-DICHLOROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,4-DIMETHYLPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,4-DINITROPHENOL	2000	U	UG/KG	3620	U	UG/KG	1850	U	UG/KG	3900	U	UG/KG			
2,4-DINITROTOLUENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,6-DICHLOROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2,6-DINITROTOLUENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-ACETYLAMINOFLUORENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-CHLORONAPHTHALENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-CHLOROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-METHYL-4,6-DINITROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-METHYLNAPHTHALENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-METHYLPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-NAPHTHYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-NITROANILINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-NITROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
2-PICOLINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
3 & 4-METHYLPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
3,3'-DICHLOROBENZIDINE	5010	U	UG/KG	9060	U	UG/KG	4630	U	UG/KG	9760	U	UG/KG			
3,3'-DIMETHYLBENZIDINE	5010	UR	UG/KG	9060	UR	UG/KG	4630	UR	UG/KG	9760	UR	UG/KG			

SAMPLE NUMBER:	S9SD-02	S9SD-03	S9SD-04	S9SD-05	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	
LABORATORY ID:	9601418-04	9601418-05	9601418-06	9601418-07	
QC_TYPE:	Normal	Normal	Normal	Normal	
% SOLIDS:	33.0 %	18.0 %	36.0 %	17.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
3-NITROANILINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-AMINOBIPHENYL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-BROMOPHENYL PHENYL ETHER	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-CHLORO-3-METHYLPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-CHLOROANILINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-CHLOROPHENYL PHENYL ETHER	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-NITROANILINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-NITROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
4-NITROQUINOLINE-1-OXIDE	1000	UR	UG/KG	1810	UR	UG/KG	925	UR	UG/KG	1950	UR	UG/KG			
5-NITRO-O-TOLUIDINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
7,12-DIMETHYLBENZ(A)ANTHRACENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
A,A-DIMETHYLPHENETHYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ACENAPHTHENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ACENAPHTHYLENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ACETOPHENONE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ANILINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ANTHRACENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ARAMITE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BENZO(A)ANTHRACENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BENZO(A)PYRENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BENZO(B)FLUORANTHENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BENZO(G,H,I)PERYLENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BENZO(K)FLUORANTHENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BENZYL ALCOHOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BIS(2-CHLOROETHOXY)METHANE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BIS(2-CHLOROETHYL)ETHER	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BIS(2-ETHYLHEXYL)PHTHALATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
BUTYLBENZYL PHTHALATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
CHLOROBENZILATE	5010	U	UG/KG	9060	U	UG/KG	4630	U	UG/KG	9760	U	UG/KG			
CHRYS[illegible]	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DI-N-BU[illegible] PHTHALATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			

SAMPLE NUMBER:	S9SD-02	S9SD-03	S9SD-04	S9SD-05	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	
LABORATORY ID:	9601418-04	9601418-05	9601418-06	9601418-07	
QC_TYPE:	Normal	Normal	Normal	Normal	
% SOLIDS:	33.0 %	18.0 %	36.0 %	17.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DIALLATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DIBENZO(A,H)ANTHRACENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DIBENZOFURAN	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DIETHYL PHTHALATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DIMETHOATE	5010	U	UG/KG	9060	U	UG/KG	4630	U	UG/KG	9760	U	UG/KG			
DIMETHYL PHTHALATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DINOSEB	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DIPHENYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
DISULFOTON	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ETHYL METHACRYLATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ETHYL METHANESULFONATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
FAMPHUR	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
FLUORANTHENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
FLUORENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
HEXACHLOROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
HEXACHLOROBUTADIENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
HEXACHLOROCYCLOPENTADIENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
HEXACHLOROETHANE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
HEXACHLOROPROPENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
INDENO(1,2,3-CD)PYRENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ISODRIN	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ISOPHORONE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
ISOSAFROLE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
KEPONE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
METHAPYRILENE	5010	U	UG/KG	9060	U	UG/KG	4630	U	UG/KG	9760	U	UG/KG			
METHYL METHANESULFONATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
N-NITROSO-DI-N-BUTYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
N-NITROSO-DI-N-PROPYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
N-NITROSODIETHYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
N-NITROSODIMETHYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			
N-NITROSODIPHENYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG			

SAMPLE NUMBER:	S9SD-02			S9SD-03			S9SD-04			S9SD-05			
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			/ /
LABORATORY ID:	9601418-04			9601418-05			9601418-06			9601418-07			
QC_TYPE:	Normal			Normal			Normal			Normal			
% SOLIDS:	33.0 %			18.0 %			36.0 %			17.0 %			100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS
SEMIVOLATILES													
N-NITROSOMETHYLETHYLAMINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
N-NITROSOMORPHOLINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
N-NITROSOPIPERIDINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
N-NITROSOPYRROLIDINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
NAPHTHALENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
NITROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
O,O,O-TRIETHYLPHOSPHOROTHIOATE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
O-TOLUIDINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
P-DIMETHYLAMINOAZOBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
P-PHENYLENEDIAMINE	2000	U	UG/KG	3620	U	UG/KG	1850	U	UG/KG	3900	U	UG/KG	
PENTACHLOROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PENTACHLOROETHANE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PENTACHLORONITROBENZENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PENTACHLOROPHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PHENACETIN	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PHENANTHRENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PHENOL	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PRONAMIDE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PYRENE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
PYRIDINE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
SAFROLE	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
SULFOTEP	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	
THIONAZIN	1000	U	UG/KG	1810	U	UG/KG	925	U	UG/KG	1950	U	UG/KG	

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GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC_TYPE:	Normal			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	4.4	U	UG/KG	36.2	U	UG/KG	205	U	UG/KG	8.4	U	UG/KG	24.9	U	UG/KG
4,4'-DDE	28.8		UG/KG	25.1	J	UG/KG	149	J	UG/KG	6.6	J	UG/KG	20.4	J	UG/KG
4,4'-DDT	4.4	U	UG/KG	36.2	U	UG/KG	205	U	UG/KG	8.4	U	UG/KG	24.9	U	UG/KG
ALDRIN	2.4		UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	12.4	U	UG/KG
ALPHA-BHC	2.2	U	UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	12.4	U	UG/KG
AROCLOR-1016	13.8	U	UG/KG	113	U	UG/KG	641	U	UG/KG	26.4	U	UG/KG	77.8	U	UG/KG
AROCLOR-1221	13.8	U	UG/KG	113	U	UG/KG	641	U	UG/KG	26.4	U	UG/KG	77.8	U	UG/KG
AROCLOR-1232	13.8	U	UG/KG	113	U	UG/KG	641	U	UG/KG	26.4	U	UG/KG	77.8	U	UG/KG
AROCLOR-1242	13.8	U	UG/KG	113	U	UG/KG	641	U	UG/KG	26.4	U	UG/KG	77.8	U	UG/KG
AROCLOR-1248	13.8	U	UG/KG	113	U	UG/KG	641	U	UG/KG	26.4	U	UG/KG	77.8	U	UG/KG
AROCLOR-1254	13.8	U	UG/KG	113	U	UG/KG	641	U	UG/KG	26.4	U	UG/KG	77.8	U	UG/KG
AROCLOR-1260	40.8		UG/KG	113	U	UG/KG	641	U	UG/KG	26.4	U	UG/KG	77.8	U	UG/KG
BETA-BHC	2.2	U	UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	12.4	U	UG/KG
CHLORDANE	27.5	U	UG/KG	226	U	UG/KG	1280	U	UG/KG	52.7	U	UG/KG	156	U	UG/KG
DELTA-BHC	2.2	U	UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	15.7		UG/KG
DIELDRIN	4.4	U	UG/KG	36.2	U	UG/KG	205	U	UG/KG	8.4	U	UG/KG	24.9	U	UG/KG
ENDOSULFAN I	2.2	U	UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	12.4	U	UG/KG
ENDOSULFAN II	4.4	U	UG/KG	36.2	U	UG/KG	205	U	UG/KG	8.4	U	UG/KG	24.9	U	UG/KG
ENDOSULFAN SULFATE	4.4	U	UG/KG	36.2	U	UG/KG	205	U	UG/KG	8.4	U	UG/KG	24.9	U	UG/KG
ENDRIN	4.4	U	UG/KG	36.2	U	UG/KG	205	U	UG/KG	8.4	U	UG/KG	24.9	U	UG/KG
ENDRIN ALDEHYDE	4.4	U	UG/KG	36.2	U	UG/KG	205	U	UG/KG	8.4	U	UG/KG	24.9	U	UG/KG
GAMMA-BHC (LINDANE)	2.2	U	UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	12.4	U	UG/KG
HEPTACHLOR	2.2	U	UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	12.4	U	UG/KG
HEPTACHLOR EPOXIDE	2.2	U	UG/KG	18.1	U	UG/KG	102	U	UG/KG	4.2	U	UG/KG	12.4	U	UG/KG
METHOXYCHLOR	22.0	U	UG/KG	181	U	UG/KG	1020	U	UG/KG	42.2	U	UG/KG	124	U	UG/KG
METHYL PARATHION	5.5	U	UG/KG	45.3	U	UG/KG	256	U	UG/KG	10.5	U	UG/KG	31.1	U	UG/KG
PARATHION	5.5	U	UG/KG	45.3	U	UG/KG	256	U	UG/KG	10.5	U	UG/KG	31.1	U	UG/KG
PHORATE	5.5	U	UG/KG	45.3	U	UG/KG	256	U	UG/KG	10.5	U	UG/KG	31.1	U	UG/KG
TOXAPHENE	110	U	UG/KG	906	U	UG/KG	5130	U	UG/KG	211	U	UG/KG	623	U	UG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	21.3	U	UG/KG	34.0	U	UG/KG	52.4	U	UG/KG	65.2	U	UG/KG	20.7	U	UG/KG
4,4'-DDE	21.3	U	UG/KG	41.9		UG/KG	41.9	J	UG/KG	52.9	J	UG/KG	20.7	U	UG/KG
4,4'-DDT	21.3	U	UG/KG	34.0	U	UG/KG	52.4	U	UG/KG	65.2	U	UG/KG	20.7	U	UG/KG
ALDRIN	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
ALPHA-BHC	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
AROCLOR-1016	66.5	U	UG/KG	106	U	UG/KG	164	U	UG/KG	204	U	UG/KG	64.8	U	UG/KG
AROCLOR-1221	66.5	U	UG/KG	106	U	UG/KG	164	U	UG/KG	204	U	UG/KG	64.8	U	UG/KG
AROCLOR-1232	66.5	U	UG/KG	106	U	UG/KG	164	U	UG/KG	204	U	UG/KG	64.8	U	UG/KG
AROCLOR-1242	66.5	U	UG/KG	106	U	UG/KG	164	U	UG/KG	204	U	UG/KG	64.8	U	UG/KG
AROCLOR-1248	66.5	U	UG/KG	106	U	UG/KG	164	U	UG/KG	204	U	UG/KG	64.8	U	UG/KG
AROCLOR-1254	66.5	U	UG/KG	106	U	UG/KG	164	U	UG/KG	204	U	UG/KG	64.8	U	UG/KG
AROCLOR-1260	66.5	U	UG/KG	106	U	UG/KG	164	U	UG/KG	204	U	UG/KG	64.8	U	UG/KG
BETA-BHC	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
CHLORDANE	133	U	UG/KG	212	U	UG/KG	327	U	UG/KG	408	U	UG/KG	130	U	UG/KG
DELTA-BHC	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
DIELDRIN	21.3	U	UG/KG	34.0	U	UG/KG	52.4	U	UG/KG	65.2	U	UG/KG	20.7	U	UG/KG
ENDOSULFAN I	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
ENDOSULFAN II	21.3	U	UG/KG	34.0	U	UG/KG	52.4	U	UG/KG	65.2	U	UG/KG	20.7	U	UG/KG
ENDOSULFAN SULFATE	21.3	U	UG/KG	34.0	U	UG/KG	52.4	U	UG/KG	65.2	U	UG/KG	20.7	U	UG/KG
ENDRIN	21.3	U	UG/KG	34.0	U	UG/KG	52.4	U	UG/KG	65.2	U	UG/KG	20.7	U	UG/KG
ENDRIN ALDEHYDE	21.3	U	UG/KG	34.0	U	UG/KG	52.4	U	UG/KG	65.2	U	UG/KG	20.7	U	UG/KG
GAMMA-BHC (LINDANE)	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
HEPTACHLOR	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
HEPTACHLOR EPOXIDE	10.6	U	UG/KG	17.0	U	UG/KG	26.2	U	UG/KG	32.6	U	UG/KG	10.4	U	UG/KG
METHOXYCHLOR	106	U	UG/KG	170	U	UG/KG	262	U	UG/KG	326	U	UG/KG	104	U	UG/KG
METHYL PARATHION	26.6	U	UG/KG	35.5	J	UG/KG	65.4	U	UG/KG	81.5	U	UG/KG	25.9	U	UG/KG
PARATHION	26.6	U	UG/KG	42.5	U	UG/KG	65.4	U	UG/KG	81.5	U	UG/KG	25.9	U	UG/KG
PHORATE	26.6	U	UG/KG	42.5	U	UG/KG	65.4	U	UG/KG	81.5	U	UG/KG	25.9	U	UG/KG
TOXAPHENE	532	U	UG/KG	850	U	UG/KG	1310	U	UG/KG	1630	U	UG/KG	518	U	UG/KG

SAMPLE NUMBER:	S9SD-02	S9SD-03	S9SD-04	S9SD-05	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	
LABORATORY ID:	9601418-04	9601418-05	9601418-06	9601418-07	
QC_TYPE:	Dilution	Dilution	Dilution	Normal	
% SOLIDS:	33.0 %	18.0 %	36.0 %	17.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	19.7	U	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	7.8	U	UG/KG			
4,4'-DDE	14.3	J	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	6.4	J	UG/KG			
4,4'-DDT	19.7	U	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	7.8	U	UG/KG			
ALDRIN	9.9	U	UG/KG	17.9	U	UG/KG	9.0	U	UG/KG	3.9	U	UG/KG			
ALPHA-BHC	9.9	U	UG/KG	17.9	U	UG/KG	9.0	U	UG/KG	3.9	U	UG/KG			
AROCLOR-1016	61.7	U	UG/KG	112	U	UG/KG	56.6	U	UG/KG	24.5	U	UG/KG			
AROCLOR-1221	61.7	U	UG/KG	112	U	UG/KG	56.6	U	UG/KG	24.5	U	UG/KG			
AROCLOR-1232	61.7	U	UG/KG	112	U	UG/KG	56.6	U	UG/KG	24.5	U	UG/KG			
AROCLOR-1242	61.7	U	UG/KG	112	U	UG/KG	56.6	U	UG/KG	24.5	U	UG/KG			
AROCLOR-1248	61.7	U	UG/KG	112	U	UG/KG	56.6	U	UG/KG	24.5	U	UG/KG			
AROCLOR-1254	61.7	U	UG/KG	112	U	UG/KG	56.6	U	UG/KG	24.5	U	UG/KG			
AROCLOR-1260	61.7	U	UG/KG	112	U	UG/KG	56.6	U	UG/KG	24.5	U	UG/KG			
BETA-BHC	9.9	U	UG/KG	17.9	U	UG/KG	9.0	U	UG/KG	3.9	U	UG/KG			
CHLORDANE	123	U	UG/KG	224	U	UG/KG	113	U	UG/KG	49.0	U	UG/KG			
DELTA-BHC	9.9	U	UG/KG	17.9	U	UG/KG	14.2		UG/KG	11.3		UG/KG			
DIELDRIN	19.7	U	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	7.8	U	UG/KG			
ENDOSULFAN I	9.9	U	UG/KG	17.9	U	UG/KG	9.0	U	UG/KG	3.9	U	UG/KG			
ENDOSULFAN II	19.7	U	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	7.8	U	UG/KG			
ENDOSULFAN SULFATE	19.7	U	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	7.8	U	UG/KG			
ENDRIN	19.7	U	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	7.8	U	UG/KG			
ENDRIN ALDEHYDE	19.7	U	UG/KG	35.9	U	UG/KG	18.1	U	UG/KG	7.8	U	UG/KG			
GAMMA-BHC (LINDANE)	9.9	U	UG/KG	17.9	U	UG/KG	9.0	U	UG/KG	3.9	U	UG/KG			
HEPTACHLOR	9.9	U	UG/KG	17.9	U	UG/KG	9.0	U	UG/KG	3.9	U	UG/KG			
HEPTACHLOR EPOXIDE	9.9	U	UG/KG	17.9	U	UG/KG	9.0	U	UG/KG	3.9	U	UG/KG			
METHOXYCHLOR	98.7	U	UG/KG	179	U	UG/KG	90.6	U	UG/KG	39.2	U	UG/KG			
METHYL PARATHION	24.7	U	UG/KG	14.8	J	UG/KG	38.8	J	UG/KG	9.8	U	UG/KG			
PARATHION	24.7	U	UG/KG	44.8	U	UG/KG	22.6	U	UG/KG	9.8	U	UG/KG			
PHORATE	24.7	U	UG/KG	44.8	U	UG/KG	22.6	U	UG/KG	9.8	U	UG/KG			
TOXAPHENE	494	U	UG/KG	897	U	UG/KG	453	U	UG/KG	196	U	UG/KG			

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SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SD-01			BG1SS-01			BG2SD-01			BG2SS-01			BG3SD-01		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	9601418-16			9601418-15			9601418-17			9601418-18			9601418-19		
QC_TYPE:	Normal Dilution 5			Normal			Normal			Normal			Normal		
% SOLIDS:	30.0 %			73.0 %			13.0 %			78.0 %			53.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	133	U	UG/KG	54.8	U	UG/KG	308	U	UG/KG	51.3	U	UG/KG	75.5	U	UG/KG
2,4,5-TP (SILVEX)	66.7	U	UG/KG	27.4	U	UG/KG	154	U	UG/KG	25.6	U	UG/KG	37.7	U	UG/KG
2,4-D	133	U	UG/KG	54.8	U	UG/KG	308	U	UG/KG	51.3	U	UG/KG	75.5	U	UG/KG

SAMPLE NUMBER:	BG3SS-01			S1SD-01			S1SD-02			S1SD-03			S9SD-01		
SAMPLE DATE:	01/26/96			01/22/96			01/22/96			01/24/96			01/23/96		
LABORATORY ID:	9601418-20			9601418-01			9601418-02			9601418-08			9601418-03		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	62.0 %			38.0 %			25.0 %			10.0 %			32.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	64.5	U	UG/KG	105	U	UG/KG	160	U	UG/KG	400	U	UG/KG	125	U	UG/KG
2,4,5-TP (SILVEX)	32.2	U	UG/KG	52.6	U	UG/KG	80.0	U	UG/KG	200	U	UG/KG	62.5	U	UG/KG
2,4-D	64.5	U	UG/KG	105	U	UG/KG	160	U	UG/KG	400	U	UG/KG	125	U	UG/KG

SAMPLE NUMBER:	S9SD-02			S9SD-03			S9SD-04			S9SD-05			
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			/ /
LABORATORY ID:	9601418-04			9601418-05			9601418-06			9601418-07			
QC_TYPE:	~~Normal~~ Duplicate			Normal			Normal			Normal			
% SOLIDS:	33.0 %			18.0 %			36.0 %			17.0 %			100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS
HERBICIDES													
2,4,5-T	121	U	UG/KG	222	U	UG/KG	111	U	UG/KG	235	U	UG/KG	
2,4,5-TP (SILVEX)	60.6	U	UG/KG	111	U	UG/KG	55.6	U	UG/KG	118	U	UG/KG	
2,4-D	121	U	UG/KG	222	U	UG/KG	111	U	UG/KG	235	U	UG/KG	

INORGANIC DATA VALIDATION
SDG 61527W

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-03-6-231

TO : KEVIN WALTER

DATE: APRIL 19, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: **INORGANIC DATA VALIDATION - TAL METALS AND CYANIDE**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG 61527W

14/ Aqueous/	S3SW-05	S2MW-6	S2MW-7
	S2MW-5	S2MW-4	S2MW-1
	MW5-1	S2DPGW-01	S1MW-4
	S1MW-5	S1MW-6	S1MW-3
	S1DPGW-01	FB03-013196	

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. 61527W; fourteen (14) aqueous samples were included for TAL metals and cyanide analyses. Two field duplicate pairs were included with this SDG (samples S1DPGW-01 & S1MW-3 and S2DPGW-01 & S2MW-1. These samples were analyzed for Target Analyte List (TAL) metals and cyanide. The samples were collected by Brown and Root Environmental on January 25, 28, 30 and 31, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level C and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
• Laboratory Blank Analyses
• ICP Interference Check Sample Results
• Matrix Spike Results
* • Laboratory and Field Duplicate Analysis Results
* • Laboratory Control Sample Results
• ICP Serial Dilution Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method and field quality control blanks at the maximum concentrations indicated below:

Analyte	Maximum Concentration	Action Level (Aqueous)
aluminum	40.3 ug/L	201.5 ug/L
antimony	6.0 ug/L	30.0 ug/L
barium	0.7 ug/L	3.5 ug/L
beryllium	0.6 ug/L	3.0 ug/L
cadmium	0.6 ug/L	3.0 ug/L
calcium	27.4 ug/L	137.0 ug/L
iron	14.2 ug/L	71.0 ug/L
magnesium	31.2 ug/L	156.0 ug/L
nickel[1]	2.506 ug/L	12.5 ug/L
silver	1.1 ug/L	5.5 ug/L
sodium[1]	35.4 ug/L	176.8 ug/L
vanadium	1.2 ug/L	6.0 ug/L
cyanide	-3.3 ug/L	-16.5 ug/L

Samples affected : All

[1] Contaminant was detected at a maximum concentration in an aqueous preparation blank.

An action level of 5X the maximum positive concentration has been established to evaluate the sample data. Sample dilution factors were considered prior to the application of the action levels. Positive results for aluminum, antimony, cadmium, iron, nickel, silver, and vanadium within the action levels are qualified as nondetected, "U". Positive and nondetected results for cyanide have been qualified as estimated "J" and "UJ", respectively, due to negative instrument results. No actions were required for the remaining analytes as all results were greater than the action level or nondetects.

ICP Interference Check Sample Results

The interfering analyte magnesium was present in sample S3SW-5 at a concentration which was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for barium, cadmium, copper, manganese, selenium, thallium, and vanadium in the affected sample. Positive results reported for barium and thallium in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium, copper, manganese and vanadium in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

. ne interfering analyte magnesium was present in sample S2MW-6 at a concentration which was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, cadmium, copper, manganese, selenium and thallium in the affected sample. Positive results reported for arsenic, manganese and thallium in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium and copper in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

The interfering analyte magnesium was present in sample S2MW-7 at a concentration which was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, barium, cadmium, copper, manganese, selenium, thallium and vanadium in the affected sample. Positive results reported for arsenic, barium, thallium and vanadium in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium, copper and manganese in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

The interfering analyte magnesium was present in sample S2MW-5 at a concentration which was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, barium, cadmium, copper, manganese, selenium, thallium and vanadium in the affected sample. Positive results reported for arsenic, barium, manganese, thallium and vanadium in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium and copper in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

The interfering analyte magnesium was present in sample S2MW-4 at a concentration which was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for cadmium, copper, manganese, selenium, thallium and vanadium in the affected sample. The positive result reported for manganese in the affected sample was qualified as estimated, "J". Nondetected results reported for cadmium, copper, thallium and vanadium in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

The interfering analytes calcium and magnesium were present in sample S1MW-4 at a concentrations which were comparable to the level of calcium and magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, barium, copper, selenium, thallium and vanadium in the affected sample. Positive results reported for arsenic, barium, copper and thallium in the affected sample were qualified as estimated, "J". The nondetected result reported for vanadium in the affected sample was qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

The interfering analytes calcium and magnesium were present in sample S1MW-5 at a concentrations which were comparable to the level of calcium and magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, barium, cadmium, copper, manganese, selenium, thallium and vanadium in the affected sample. Positive results reported for arsenic, barium, manganese and thallium in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium, copper and vanadium in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

The interfering analytes calcium and magnesium were present in sample S1MW-6 at a concentrations which were comparable to the level of calcium and magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, barium, cadmium, copper, manganese, selenium and thallium in the affected sample. Positive results reported for arsenic, barium and manganese in the affected sample were qualified as estimated, "J". Nondetected result reported for cadmium, copper and thallium in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

The interfering analyte magnesium was present in sample S1MW-3 at a concentration which was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, barium, cadmium, copper, manganese, selenium, thallium and vanadium in the affected sample. Positive results reported for arsenic, barium and thallium in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium, copper, manganese, and vanadium in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

ne interfering analyte magnesium was present in sample S1DPGW-01 at a concentration which was comparable to the level of magnesium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, arsenic, barium, cadmium, copper, lead, manganese, potassium, selenium, silver, sodium, thallium, vanadium and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for arsenic, barium, cadmium, copper, manganese, selenium, thallium and vanadium in the affected sample. Positive results reported for arsenic and barium in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium, copper, manganese, thallium and vanadium in the affected sample were qualified as estimated, "UJ. No actions were necessary for selenium as the result was previously rejected, "UR", as a result of extremely low MS %R.

Matrix Spike Results

The Matrix Spike (MS) Percent Recoveries (%Rs) for barium, cadmium, lead, nickel and thallium were below the lower quality control limits. Positive results and nondetects reported for the aforementioned analytes were qualified as estimated, "J", and "UJ", respectively.

The MS %R for selenium was extremely low, <30%. Only nondetcted results were reported for selenium and these results were qualified as rejected, "R".

ICP Serial Dilution Results

he ICP Serial Dilution Percent Difference for barium, calcium, iron and manganese exceeded 10%. Positive sults and nondetects reported for the aforementioned analytes were qualified as estimated, "J", and "UJ", respectively.

Executive Summary

Laboratory Performance: Several contaminants were found in the laboratory method blanks. The ICP Serial Dilution %D for several analytes were outside quality control limits.

Other Factors Affecting Data Quality: The MS %R for selenium was extremely low, < 30%. The MS %R for several analytes were low. ICP Interference was noted for several analytes in several samples.

No other problems were encountered in this case.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG 61527W

TABLE 1 - RECOMMENDATION SUMMARY

Aluminum	A[1]		Magnesium			
Antimony	A[1]		Manganese		J[2,3]	
Arsenic		J[3]	Mercury			
Barium		J[1,2,3]	Nickel	A[1]	J[1]	
Beryllium			Potassium			
Cadmium	A[1]	J[1,3]	Selenium			R[1]
Calcium		J[2]	Silver	A[1]		
Chromium			Sodium			
Cobalt			Thallium		J[1,3]	
Copper		J[3]	Vanadium	A[1]	J[3]	
Iron	A[1]	J[2]	Zinc			
Lead		J[1]	Cyanide		J[4]	

If the field is left blank, the qualifier is A - Accept all data.

A[1] - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

- Accept data but qualify positive results and nondetects as estimated, "J", and "UJ", respectively as a result of poor MS %R.

J[2] - Accept data but qualify positive results and nondetects as estimated, "J", and "UJ", respectively as a result of ICP Serial Dilution outside quality control limits.

J[3] - Accept data but qualify positive results and nondetects as estimated, "J", and "UJ", respectively as a result of ICP Interference.

J[4] - Accept data but qualify positive and nondetected results as estimated, "J", and "UJ", respectively, due to instrument drift as evidenced by negative blank results

R[1] - Data is qualified as rejected, "UR", as a result of extremely low MS %R.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO 007 - NAS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	FB03-013196			MW5-1			S1DPGW-01			S1MW-3			S1MW-4		
SAMPLE DATE:	01/31/96			01/28/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-08			9601527-14			9601527-13			9601527-10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	145	U	UG/L	29.7	U	UG/L	11.1	U	UG/L	11.1	U	UG/L	11.1	U	UG/L
ANTIMONY	2.6	U	UG/L	2.6	U	UG/L	3.4	U	UG/L	3.7	U	UG/L	6.6	U	UG/L
ARSENIC	6.7		UG/L	21.4		UG/L	11.4		UG/L	12.1		UG/L	17.0		UG/L
BARIUM	15.1	J	UG/L	12.6	J	UG/L	19.1	J	UG/L	19.6	J	UG/L	44.1	J	UG/L
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L
CADMIUM	0.40	UJ	UG/L	0.40	UJ	UG/L	0.40	UJ	UG/L	0.40	UJ	UG/L	0.66	U	UG/L
CALCIUM	45600	J	UG/L	147000	J	UG/L	242000	J	UG/L	244000	J	UG/L	346000	J	UG/L
CHROMIUM	1.9		UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L
COPPER	3.9		UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2		UG/L
CYANIDE	0.80	UJ	UG/L	14.2	J	UG/L	0.80	UJ	UG/L	8.7	J	UG/L	1.5	J	UG/L
IRON	29.2	U	UG/L	3.0	UJ	UG/L	79.1	J	UG/L	76.2	J	UG/L	320	J	UG/L
LEAD	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L
MAGNESIUM	4940		UG/L	246000		UG/L	806000		UG/L	825000		UG/L	1390000		UG/L
MANGANESE	0.92	J	UG/L	2.7	J	UG/L	0.60	UJ	UG/L	0.60	UJ	UG/L	321	J	UG/L
MERCURY	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L
NICKEL	2.1	U	UG/L	3.2	U	UG/L	1.3	UJ	UG/L	1.3	U	UG/L	4.2	U	UG/L
POTASSIUM	15500		UG/L	84500		UG/L	181000		UG/L	182000		UG/L	425000		UG/L
SELENIUM	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L
SILVER	1.6	U	UG/L	1.1	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
SODIUM	25600		UG/L	2070000		UG/L	6510000		UG/L	6650000		UG/L	12300000		UG/L
THALLIUM	4.5	UJ	UG/L	4.5	UJ	UG/L	4.5	UJ	UG/L	7.0	J	UG/L	20.1	J	UG/L
VANADIUM	2.5	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
ZINC	13.4		UG/L	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L

SAMPLE NUMBER:	S1MW-5			S1MW-6			S2DPGW-01			S2MW-1			S2MW-4		
SAMPLE DATE:	01/30/96			01/30/96			01/28/96			01/28/96			01/28/96		
LABORATORY ID:	9601527-11			9601527-12			9601527-09			9601527-07			9601527-06		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	11.1	U	UG/L	11.1	U	UG/L	65.6	U	UG/L	93.9	U	UG/L	11.1	U	UG/L
ANTIMONY	5.7	U	UG/L	5.2	U	UG/L	2.6	U	UG/L	2.6	U	UG/L	2.6	U	UG/L
ARSENIC	18.3		UG/L	33.3		UG/L	4.9	U	UG/L	4.9	U	UG/L	4.9	U	UG/L
BARIUM	19.4	J	UG/L	24.0	J	UG/L	10.4	J	UG/L	10.6	J	UG/L	16.5	J	UG/L
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L
CADMIUM	0.40	UJ	UG/L	0.40	UJ	UG/L	0.40	UJ	UG/L	0.40	UJ	UG/L	0.40	UJ	UG/L
CALCIUM	345000	J	UG/L	260000	J	UG/L	115000	J	UG/L	114000	J	UG/L	184000	J	UG/L
CHROMIUM	0.90	U	UG/L	1.2		UG/L	0.90	U	UG/L	0.97		UG/L	0.90	U	UG/L
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L
COPPER	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L
CYANIDE	2.3	J	UG/L	1.1	J	UG/L	0.60	UJ	UG/L	0.60	UJ	UG/L	2.4	J	UG/L
IRON	37.1	U	UG/L	50.3	U	UG/L	14.4	U	UG/L	37.0	U	UG/L	97.4	J	UG/L
LEAD	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L
MAGNESIUM	1070000		UG/L	744000		UG/L	123000		UG/L	124000		UG/L	355000		UG/L
MANGANESE	2.0	J	UG/L	44.1	J	UG/L	3.4	J	UG/L	4.1	J	UG/L	10.3	J	UG/L
MERCURY	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.10	U	UG/L	0.13		UG/L
NICKEL	2.5	U	UG/L	1.8	U	UG/L	2.0	U	UG/L	2.7	U	UG/L	1.7	U	UG/L
POTASSIUM	217000		UG/L	174000		UG/L	38400		UG/L	39000		UG/L	112000		UG/L
SELENIUM	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L
SILVER	1.2	U	UG/L	1.7	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L
SODIUM	8780000		UG/L	5900000		UG/L	974000		UG/L	985000		UG/L	3420000		UG/L
THALLIUM	10.9	J	UG/L	4.5	UJ	UG/L	4.5	UJ	UG/L	4.5	UJ	UG/L	4.5	UJ	UG/L
VANADIUM	0.70	U	UG/L	0.92	U	UG/L	0.88	U	UG/L	0.88	U	UG/L	0.70	U	UG/L
ZINC	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L	5.2		UG/L	1.4	U	UG/L

SAMPLE NUMBER:	S2MW-5			S2MW-6			S2MW-7			S3SW-05			/ /		
SAMPLE DATE:	01/28/96			01/28/96			01/28/96			01/25/96					
LABORATORY ID:	9601527-05			9601527-03			9601527-04			9601527-02					
QC_TYPE:	Normal			Normal			Normal			Normal					
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	11.1	U	UG/L	11.1	U	UG/L	11.1	U	UG/L	24.6	U	UG/L			
ANTIMONY	2.6	U	UG/L	2.6	U	UG/L	4.2	U	UG/L	2.6	U	UG/L			
ARSENIC	11.2		UG/L	10.9		UG/L	14.5		UG/L	4.9	U	UG/L			
BARIUM	21.1	J	UG/L	34.3	J	UG/L	18.7	J	UG/L	8.0	J	UG/L			
BERYLLIUM	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L	0.30	U	UG/L			
CADMIUM	0.40	UJ	UG/L	0.40	UJ	UG/L	0.40	UJ	UG/L	0.40	UJ	UG/L			
CALCIUM	192000	J	UG/L	243000	J	UG/L	210000	J	UG/L	151000	J	UG/L			
CHROMIUM	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L	0.90	U	UG/L			
COBALT	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L	0.80	U	UG/L			
COPPER	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L	1.2	U	UG/L			
CYANIDE	0.80	UJ	UG/L	0.80	UJ	UG/L	0.80	UJ	UG/L	0.80	UJ	UG/L			
IRON	90.8	J	UG/L	179	J	UG/L	3.0	UJ	UG/L	27.3	U	UG/L			
LEAD	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L	1.8	UJ	UG/L			
MAGNESIUM	585000		UG/L	719000		UG/L	653000		UG/L	303000		UG/L			
MANGANESE	25.1	J	UG/L	11.8	J	UG/L	0.60	UJ	UG/L	0.60	UJ	UG/L			
MERCURY	0.13		UG/L	0.10	U	UG/L	0.13		UG/L	0.10	U	UG/L			
NICKEL	6.0	U	UG/L	6.2	U	UG/L	6.2	U	UG/L	1.3	UJ	UG/L			
POTASSIUM	153000		UG/L	178000		UG/L	169000		UG/L	103000		UG/L			
SELENIUM	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L	4.8	UR	UG/L			
SILVER	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L	0.70	U	UG/L			
SODIUM	4830000		UG/L	6010000		UG/L	5460000		UG/L	2770000		UG/L			
THALLIUM	6.7	J	UG/L	10.5	J	UG/L	11.7	J	UG/L	4.8	J	UG/L			
VANADIUM	0.70	U	UG/L	4.5	U	UG/L	0.70	U	UG/L	0.70	U	UG/L			
ZINC	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L	1.4	U	UG/L			

ORGANIC DATA VALIDATION
SDG 61527W

Brown & Root Environmental

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C-49-04-6-010

TO:	KEVIN WALTER	DATE:	APRIL 19, 1996
FROM:	ANNE K. BATTISTA	COPIES:	DV FILE

SUBJECT: **ORGANIC DATA VALIDATION - VOA/SVOA/PEST/PCB/HERB ORGANICS**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG 61527W

SAMPLES: Waters:

S1MW-3	S1MW-4	S1MW-5
S1MW-6	S1DPGW-01	S2MW-1
S2MW-4	S2MW-5	S2MW-6
S2MW-7	S2DPGW-01	MW5-1
TB01-012696	TB01-013096	FB03-013196

The sample set for the CTO 007 NAS Key West site, SDG 61527W, consists of twelve (12) aqueous environmental samples, two (2) trip blanks and one (1) field blank. The samples were analyzed for Appendix IX volatile and semivolatile compounds, plus Target Compound List (TCL) pesticide/PCB and herbicide organic compounds. Each sample was not analyzed for all four parameters. The field crew designated sample S1MW-4 for Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis. Two field duplicate pairs were included in this SDG(S1DPGW-01/S1MW-3 and S2DPGW-01/S2MW-1).

The samples were collected by Brown and Root Environmental on January 26th, 28th, 30th and 31st, 1996 and analyzed by General Engineering Laboratories, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Methods 8240, 8270, 8080 and 8150 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Data completeness
- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- * Laboratory and field blank analyses
- * Surrogate spike recoveries
- * Matrix Spike/Matrix Spike Duplicate analysis
- * Blank Spike/Blank Spike Duplicate results
- * Internal Standards
- * Field Duplicate Precision
- Instrument Performance
- Compound Identification
- Compound Quantitation
- Detection limits

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1

summarizes the validation qualifications.

Volatiles

The laboratory case narrative states that samples S1MW-3 and S1MW-6 were not preserved. Therefore, these samples must be analyzed within 7 days as noted in the 2/94 guidelines. The original analyses of the aforementioned samples were used in validation since the holding time was not exceeded.

Initial and continuing calibration Relative Response Factors for acrolein, propionitrile and trans-1,4-dichloro-2-butene were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by these noncompliances. As a result of this major calibration noncompliance, nondetected results for the aforementioned compounds are considered unreliable and were rejected, (UR), in the affected samples.

An initial calibration Percent Relative Standard Deviation (%RSD) greater than the 30% quality control limit was reported for chloromethane. Only positive results are affected by this noncompliance. A positive result for chloromethane in sample S1MW-4 was qualified as estimated, (J). No action was taken in the other affected samples since no positive results were reported for this compound.

The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 02/06/96 (18:02). An additional standard was not analyzed containing this compound (as performed for the previous and following continuing calibrations). Hence, the nondetected results reported for this compound in the samples associated with this continuing calibration were rejected, (UR).

Continuing calibration Percent Differences (%Ds) greater than the 25% quality control limit were reported for the following compounds: chloromethane, bromomethane, chloroethane, trichlorofluoromethane, acrolein, acetone, iodomethane, carbon disulfide, propionitrile(ethyl cyanide), 1,1,1-trichloroethane, carbon tetrachloride, bromodichloromethane, cis-1,3-dichloropropene, bis(2-chloroisopropyl)ether, xylenes, 1,2-dibromo-3-chloropropane and 1,2,3-trichloropropane. Positive and nondetected results are affected by these noncompliances. No action was taken for propionitrile(ethyl cyanide) or acrolein since results for these compounds were previously qualified for a more severe noncompliance in all samples. Positive and nondetected results for the other aforementioned compounds were qualified as estimated, (J) and (UJ), in the affected samples.

The following volatile compounds were detected in the laboratory method and field quality control blanks at the maximum concentrations indicated below:

Compound	Maximum Concentration	Action Level
2-Hexanone	0.52 µg/L	2.6 µg/L
Methylene Chloride	0.76 µg/L	7.6 µg/L
Bromodichloromethane*	3 µg/L	15 µg/L
Bromoform*	13 µg/L	65 µg/L
Chlorodibromomethane*	7 µg/L	35 µg/L
Chloroform*	1 µg/L	5 µg/L

* - Maximum concentration of contaminant detected in a field quality control blank.

Samples Affected: All.

Sample aliquot size and dilution factors were taken into consideration during the application of all action levels. Positive results for methylene chloride and chloroform reported at concentrations below the detection limit were replaced with revised detection limits and qualified nondetected, (U). No action was taken for 2-hexanone, bromodichloromethane, bromoform or chlorodibromomethane since no positive results were reported for these compounds. It should be noted that field quality control blanks are not qualified based on field quality control blank contamination.

Low surrogate Percent Recoveries (%Rs) were reported for toluene-d8 (TOL) in samples TB01-013096, S1MW-5 and VBLK02MS. The laboratory reanalyzed sample S1MW-5, however, similar results were obtained. Therefore, the original analysis of sample S1MW-5 was used in validation. Positive and nondetected results in samples TB01-013096 and S1MW-5 were qualified as estimated, (J) and (UJ). No action was taken for VBLK02MS since this sample is a quality control sample.

The Blank Spike sample (BS) VBLK01 yielded a high %R for trichloroethene. Positive results only are affected by this noncompliance. No action was necessary sine no positive results were reported for this compound.

Poor internal standard areas for 1,4-dichlorobenzene-d4 were reported in samples S1MW-5, S1MW-6, S1MW-3 and S1DPGW-01. The laboratory reanalyzed these samples and found improved areas in the aforementioned samples except S1MW-5. However, only the reanalysis of sample S1DPGW-01 was used in validation. The original analyses of samples S1MW-3 and S1MW-6 were used in validation since the reanalyses were performed outside of holding time. The original analysis of sample S1MW-5 was used in validation also. No action was necessary for sample S1DPGW-01. Positive and nondetected results quantitated by the internal standard 1,4-dichlorobenzene-d4 were qualified as estimated, (J) and (UJ), in samples S1MW-3, S1MW-5 and S1MW-6.

It should be noted that the laboratory used 20ml of sample for each sample analysis. No validation actions were taken.

The laboratory only analyzed two laboratory method blanks, however, three bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. The laboratory indicated that instead of one blank associated with each BFB tune, one method blank was analyzed on a daily basis. This practice does not preclude the possibility of cross-contamination which may be present from standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Since many samples were analyzed within the same day (but with two BFB tunes), the validator was only able to apply two laboratory method blank to all the samples.

Methyl methacrylate was analyzed for both volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained in Appendix A - Qualified Analytical Results.

Semivolatiles

A continuing calibration RRF for 4-nitroquinoline-1-oxide was reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these 4-nitroquinoline are considered unreliable and were rejected, (UR), in the affected samples.

Sample aliquot size and dilution factors were taken into consideration during the application of all action levels. Positive results for methylene chloride and chloroform reported at concentrations below the detection limit were replaced with revised detection limits and qualified nondetected, (U). No action was taken for 2-hexanone, bromodichloromethane, bromoform or chlorodibromomethane since no positive results were reported for these compounds. It should be noted that field quality control blanks are not qualified based on field quality control blank contamination.

Low surrogate Percent Recoveries (%Rs) were reported for toluene-d8 (TOL) in samples TB01-013096, S1MW-5 and VBLK02MS. The laboratory reanalyzed sample S1MW-5, however, similar results were obtained. Therefore, the original analysis of sample S1MW-5 was used in validation. Positive and nondetected results in samples TB01-013096 and S1MW-5 were qualified as estimated, (J) and (UJ). No action was taken for VBLK02MS since this sample is a quality control sample.

The Blank Spike sample (BS) VBLK01 yielded a high %R for trichloroethene. Positive results only are affected by this noncompliance. No action was necessary sine no positive results were reported for this compound.

Poor internal standard areas for 1,4-dichlorobenzene-d4 were reported in samples S1MW-5, S1MW-6, S1MW-3 and S1DPGW-01. The laboratory reanalyzed these samples and found improved areas in the aforementioned samples except S1MW-5. However, only the reanalysis of sample S1DPGW-01 was used in validation. The original analyses of samples S1MW-3 and S1MW-6 were used in validation since the reanalyses were performed outside of holding time. The original analysis of sample S1MW-5 was used in validation also. No action was necessary for sample S1DPGW-01. Positive and nondetected results quantitated by the internal standard 1,4-dichlorobenzene-d4 were qualified as estimated, (J) and (UJ), in samples S1MW-3, S1MW-5 and S1MW-6.

It should be noted that the laboratory used 20ml of sample for each sample analysis. No validation actions were taken.

The laboratory only analyzed two laboratory method blanks, however, three bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. The laboratory indicated that instead of one blank associated with each BFB tune, one method blank was analyzed on a daily basis. This practice precludes the possibility of cross-contamination which may be present from standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Since many samples were analyzed within the same day (but with two BFB tunes), the validator was only able to apply two laboratory method blank to all the samples.

Methyl methacrylate was analyzed for both volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained in Appendix A - Qualified Analytical Results.

Semivolatiles

A continuing calibration RRF for 4-nitroquinoline-1-oxide was reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these 4-nitroquinoline are considered unreliable and were rejected, (UR), in the affected samples.

Initial calibration %RSDs greater than 50% were reported for 1,4-naphthoquinone, o-toluidine, a,a-dimethylphenethylamine, 4-aminobiphenyl, 3,3-dimethylbenzidine and famphur. Positive and nondetected results are affected by these noncompliances. Nondetected results for 1,4-naphthoquinone only were qualified as estimated, (UJ), in the affected samples. No action was taken for the other aforementioned compounds since the affected samples were not used in validation.

Initial calibration %RSDs greater than the 30% quality control limit were reported for a,a-dimethylphenethylamine, p-phenylenediamine, 1,3,5-trinitrobenzene, methyl methanesulfonate, 3-methylphenol, pronamide and kepone. Positive results only are affected by these noncompliances. No action was taken since nondetected results were reported for the aforementioned compounds in the affected samples.

The following compounds had continuing calibration %Ds greater than the 25% quality control limit: di-n-butylphthalate, 3,3'-dichlorobenzidine, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, n-nitrosopiperdine, 1,3,5-trinitrobenzene, disulfoton, n-nitrosomopholine, a,a-dimethylphenethylamine, 1,4-naphthoquinone, pentachlorobenzene, pentachloronitrobenzene, 4-nitroquinoline-1-oxide, 7,12-dimethylbenz(a)anthracene, 3-methylcholanthrene and p-phenylenediamine. Positive and nondetected results are affected by these noncompliances. Nondetected results for all of the aforementioned compounds except 4-nitroquinoline-1-oxide were qualified as estimated, (UJ), in the affected samples. No action was taken for 4-nitroquinoline-1-oxide since all samples were previously qualified for a more severe noncompliance.

2-Methylnaphthalene and naphthalene were reported at concentrations which exceeded the linear calibration range of the instrument in sample S1MW-4. As a result, the laboratory reanalyzed this sample at a 10-fold dilution. The original data, with the exception of the positive results for 2-methylnaphthalene and naphthalene, were used in validation. The diluted results for the aforementioned compounds were transposed over the undiluted results and used in validation. No further action was taken.

Low surrogate %Rs for 2-fluorophenol and phenol-d5 were reported in samples S1MW-3 and FB03-013196. Zero %Rs for all three acid-fraction surrogates were reported in sample S1MW-6. As a result, the laboratory re-extracted and reanalyzed these samples, however the re-extraction was performed grossly outside of the 7 day holding period. Therefore, the original analyses of the aforementioned samples were chosen for validation. Nondetected results for acid fraction compounds were qualified as estimated, (UJ), in samples S1MW-3 and FB03-013196. Nondetected results in sample S1MW-6 were considered unreliable and were rejected, (UR).

A low internal standard are for perylene-d12 (PRY) was reported in sample S1DPGW-01. Nondetected results quantitated by the internal standard PRY were qualified as estimated, (UJ).

No other problems were noted.

Pesticide/PCBs

The Individual Standard Mixtures A and B contained numerous compounds with %Rs below the lower quality control limits. However, the noncompliant recoveries occurred on one column only. No action was taken since the recoveries for each compound were compliant on at least one column.

Sample S2MW-6 was analyzed at a 10-fold dilution due to high concentrations of target analytes. However, the concentration for 4,4'-DDT still exceeded the linear calibration range of the instrument. As a result, the laboratory reanalyzed this sample at a 20-fold dilution. The original data, with the exception of the positive result for 4,4'DDT, were used in validation. The diluted results for 4,4'-DDT was transposed

over to the undiluted result and used in validation. No further action was taken.

It should be noted that the laboratory failed to analyze method blanks after samples which required a dilution. As a result, cross contamination is a possibility.

The following pesticide compounds were detected in the field quality control blank at the maximum concentrations indicated below:

Compound	Maximum Concentration	Action Level
alpha-BHC	0.025 µg/L	0.125 µg/L
Dieldrin	0.046 µg/L	0.23 µg/L
Endrin	0.034 µg/L	0.17 µg/L

Sample aliquot size and dilution factors were taken into consideration during the application of all action levels. Positive results for the aforementioned compounds reported at concentrations below the detection limit were replaced with revised detection limits and qualified nondetected, (U). It should be noted that field quality control blanks are not qualified based on field quality control blank contamination.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample S1MW-4 yielded low recoveries for Aldrin, Dieldrin and Endrin. High Relative Percent Differences (RPDs) were also reported for the aforementioned compounds, plus gamma-BHC, Heptachlor and 4,4'-DDT. Positive and nondetected results for Aldrin and Endrin were qualified as estimated, (J) and (UJ), in the unspiked sample. No action was taken for Dieldrin since this result was qualified for blank contamination. No action was taken for those compounds with high RPDs only.

Samples MW5-1, FB03-013196, S1MW-4 and S2MW-5 had high %Ds between positive results on columns 1 and 2 for several pesticide compounds. As a result, positive results for the affected single component pesticides were qualified as estimated, (J), in samples FB03-013196, S1MW-4 and S2MW-5. No action was taken in sample MW5-1 since the affected compounds, alpha-BHC and Endrin, were qualified for blank contamination. No action was taken for Dieldrin or Endrin in samples S1MW-4 and S2MW-5, respectively, since these compounds were qualified for blank contamination.

It should be noted that samples S1MW-3, S1MW-5, S1MW-6, S2MW-6, S2MW-7 and MW5-1 were analyzed at various dilutions. Therefore, reporting levels are elevated.

No other problems were noted.

Herbicides

2,4,5-T had high recoveries reported on column DB-608 for the continuing calibration on 02/26/96. No action was taken since the %Rs were compliant on column DB-5.

Samples MW5-1, S2DPGW-01, S1MW-4 adn S1MW-6 were analyzed at various dilutions. Hence, the reporting levels are elevated.

No other problems were noted.

MEMO TO: KEVIN WALTER
DATE: APRIL 19, 1996 - PAGE 6

Additional Comments

Positive results reported at concentrations less than the Contract Required Quantitation Limit (CRQL) are are qualified as estimated,(J).

It should be noted that the laboratory was inconsistent when labeling samples S1MW-3, S1MW-4, S1MW-5 and S1MW-6. The case narrative uses a "1" when identifying these samples. All other laboratory Forms identify the samples with an "I". Based on the chain of custody forms the correct identification is with a "1".

Executive Summary

Laboratory Performance: Initial and/or continuing calibration RRFs for acrolein, propionitrile, trans-1,4-dichloro-2-butene and 4-nitroquinoline-1-oxide were reported less than the 0.050 quality control limit. An initial calibration %RSD greater than 30% was reported for chloromethane. The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 02/06/96 (18:02). Initial calibration %RSDs greater than 50% were reported for 1,4-naphthoquinone, o-toluidine, a,a-dimethylphenethylamine, 4-aminobiphenyl, 3,3-dimethylbenzidine and famphur. Initial calibration %RSDs greater than 30% were reported for several semivolatile compounds. Numerous volatile and semivolatile compounds had continuing calibration %Ds greater than 25% reported. Methylene chloride and 2-hexanone were reported in volatile laboratory method blank. Low surrogate %Rs were reported for TOL in samples TB01-013096 and S1MW-5. The BS sample VBLK01 yielded a high %R for trichloroethene. Low surrogate %Rs for 2-fluorophenol and phenol-d5 were reported in samples S1MW-3 and FB03-013196. Zero %Rs for all three acid-fraction surrogates were reported in sample S1MW-6. The Individual Standard Mixtures A and B contained numerous compounds with %Rs below the lower quality control limits. 2,4,5-T had high recoveries reported on column DB-608 for the continuing calibration on 02/26/96.

Other Factors Affecting Data Quality: Bromodichloromethane, bromoform, chlorodibromomethane, chloroform, alpha-BHC, Dieldrin and Endrin were detected in the field quality control blanks. The MS/MSD analyses of sample S1MW-4 yielded low recoveries for Aldrin, Dieldrin and Endrin. High RPDs were also reported for the aforementioned compounds, plus gamma-BHC, Heptachlor and 4,4'-DDT. Poor volatile internal standard areas were reported in samples S1MW-5, S1MW-6, S1MW-3 and S1DPGW-01. A low internal standard are for perylene-d12 (PRY) was reported in sample S1DPGW-01. Samples MW5-1, FB03-013196, S1MW-4 and S2MW-5 had high %Ds between positive results on columns 1 and 2 for several pesticide compounds.

MEMO TO: KEVIN WALTER
DATE: APRIL 19, 1996 - PAGE 7

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG 61527W

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA			BNA		PEST/PCB		HERB
S1MW-3		$J^{3,6,15}$	$R^{1,2}$	$J^{7,8,9}$	R^{3}			
S1MW-4	A^{2}	$J^{1,2,16}$	R^{1}	$J^{7,8,16}$	R^{3}	A^{4}	$J^{11,14}$	
S1MW-5		$J^{3,5,6,16}$	$R^{1,2}$	$J^{7,8}$	R^{3}			
S1MW-6		$J^{3,6,16}$	$R^{1,2}$	$J^{7,8}$	$R^{3,4}$			
S1DPGW-01		$J^{4,15}$	R^{1}	$J^{7,8,10}$	R^{3}			
S2MW-1								
S2MW-4								
S2MW-5						A^{5}	J^{13}	
S2MW-6								
S2MW-7								
S2DPGW-01								
MW5-1						$A^{3,5}$		
TB01-012696		J^{3}	$R^{1,2}$					
TB01-013096	A^{1}	$J^{3,5}$	$R^{1,2}$					
FB01-013196		$J^{3,16}$	$R^{1,2}$	$J^{7,8,9}$	R^{3}		$J^{12,16}$	

If the field is left blank, the qualifier is A - Accept all data.

A^{1} - Accept data, but change positive results for methylene chloride to a revised detection limit and qualify as nondetected, (U), as a result of laboratory method blank contamination.

A^{2} - Accept data, but change a positive result for chloroform to a revised detection limit and qualify as nondetected, (U), as a result of field quality control blank contamination.

A^{3} - Accept data, but change a positive result for alpha-BHC to a revised detected limit and qualify as nondetected, (U), as a result of field quality control blank contamination.

A^{4} - Accept data, but change a positive result for Dieldrin to a revised detected limit and qualify as nondetected, (U), as a result of field quality control blank contamination.

A^{5} - Accept data, but change positive results for Endrin to a revised detected limit and qualify as nondetected, (U), as a result of field quality control blank contamination.

J^{1} - Accept data, but qualify a positive result for chloromethane as estimated, (J), as a result of an initial calibration %RSD greater than 30%.

J^{2} - Accept data, but qualify positive and nondetected results for chloroethane, acetone, iodomethane, 1,1,1-trichloroethane, carbon tetrachloride and 1,2,3-trichloropropane as estimated, (J) and (UJ), as a result of continuing calibration %Ds greater than 25%.

J^{3} - Accept data, but qualify positive and nondetected results for chloromethane, trichlorofluoromethane, acetone, iodomethane, carbon disulfide, 1,1,1-trichloroethane,

carbon tetrachloride, bromodichloromethane, cis-1,3-dichloropropene, 1,2,3-trichloropropane, bis(2-chloroisopropyl)ether and 1,2-dibromo-3-chloropropane as estimated, (J) and (UJ), as a result of continuing calibration %Ds greater than 25%.

J[4] - Accept data, but qualify nondetected results for chloromethane, bromomethane, chloroethane, trichlorofluoromethane, iodomethane, carbon disulfide, 1,1,1-trichloroethane, carbon tetrachloride and xylene as estimated, (UJ), as a result of continuing calibration %Ds greater than 25%.

J[5] - Accept data, but qualify positive and nondetected results as estimated, (J) and (UJ), as a result of a low surrogate %R for TOL.

J[6] - Accept data, but qualify positive and nondetected results quantitated by the internal standard 1,4-dichlorobenzene-d4 as estimated, (J) and (UJ), as a result of poor internal standard recoveries.

J[7] - Accept data, but qualify nondetected results for 1,4-naphthoquinone as estimated, (UJ), as a result of an initial calibration %RSD greater than 50%.

J[8] - Accept data, but qualify nondetected results for di-n-butylphthalate, 3,3'-dichlorobenzidine, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, n-nitrosopiperdine, 1,3,5-trinitrobenzene, disulfoton, n-nitrosomopholine, a,a-dimethylphenethylamine, 1,4-naphthoquinone, pentachlorobenzene, pentachloronitrobenzene, 4-nitroquinoline-1-oxide, 7,12-dimethylbenz(a)anthracene, 3-methylcholanthrene and p-phenylenediamine as estimated, (UJ), as a result of continuing calibration %Ds greater than 25%.

J[9] - Accept data, but qualify nondetected results for the acid fraction compounds as estimated, (UJ), as a result of low surrogate recoveries.

J[10] - Accept data, but qualify nondetected results quantitated by the internal standard PRY as estimated, (UJ), as a result of a poor internal standard recovery.

J[11] - Accept data, but qualify positive and nondetected results for Aldrin and Endrin as estimated, (J) and (UJ), as a result of poor MS/MSD %Rs.

J[12] - Accept data, but qualify a positive result for Dieldrin as estimated, (J), as a result of a high %D between positive results on columns 1 and 2.

J[13] - Accept data, but qualify a positive result for 4,4'-DDE and Endosulfan I as estimated, (J), as a result of high %Ds between positive results on columns 1 and 2.

J[14] - Accept data, but qualify a positive result for Aldrin and Methyl Parathion as estimated, (J), as a result of high %Ds between positive results on columns 1 and 2.

J[15] - Accept data, but qualify positive and nondetected results for acetone as estimated, (J) and (UJ), as a result of poor field duplicate precision.

J[16] - Accept data, but qualify positive results reported at concentrations less than the CRQL as estimated, (J).

R[1] - Reject, (UR), nondetected results for acrolein, propionitrile and trans-1,4-dichloro-2-butene, as a result of initial and continuing calibration RRFs less than 0.050.

R^2 - Reject, (UR), nondetected results for 2-chloro-1,3-butadiene since a calibration standard was not run for this compound during a particular continuing calibration.

R^3 - Reject, (UR), nondetected results for 4-nitroquinoline-1-oxide, as a result of a continuing calibration RRF less than 0.050.

R^4 - Reject, (UR), nondetected results for the acid fraction compounds, as a result of 0% surrogate recoveries.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 `IAS KEY WEST
WATER `TA
GENER. ENGINEERING LABS

SAMPLE NUMBER:	FB03-013196			S1DPGW01			S1MW-3			S1MW-4			S1MW-5		
SAMPLE DATE:	01/31/96			01/30/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-14			9601527-13			9601527-10			9601527-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
1,1,1-TRICHLOROETHANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L
1,1,2,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L
1,1,2-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
1,1-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
1,1-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
1,2,3-TRICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L
1,2-DIBROMOETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
1,2-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
1,2-DICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
2-BUTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	UJ	UG/L
2-CHLORO-1,3-BUTADIENE	2	UR	UG/L	2	U	UG/L	2	UR	UG/L	2	U	UG/L	2	UR	UG/L
2-HEXANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	UJ	UG/L
4-METHYL-2-PENTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	23		UG/L	5	UJ	UG/L
ACETONE	2	UJ	UG/L	4	J	UG/L	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L
ACETONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	UJ	UG/L
ACROLEIN	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
ACRYLONITRILE	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	UJ	UG/L
ALLYL CHLORIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	UJ	UG/L
BENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	25		UG/L	2	UJ	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	20	UJ	UG/L	20	U	UG/L	20	UJ	UG/L	20	U	UG/L	20	UJ	UG/L
BROMODICHLOROMETHANE	3	J	UG/L	2	U	UG/L	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L
BROMOFORM	13		UG/L	2	U	UG/L	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L
BROMOMETHANE	2	U	UG/L	2	UJ	UG/L	2	U	UG/L	5		UG/L	2	UJ	UG/L
CARBON DISULFIDE	5	UJ	UG/L	5	UJ	UG/L	5	UJ	UG/L	7		UG/L	5	UJ	UG/L
CARBON TETRACHLORIDE	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L
CHLOROBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	1	J	UG/L	2	UJ	UG/L
CHLORODIBROMOMETHANE	7		UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
CHLOROETHANE	2	U	UG/L	2	UJ	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
CHLOROFORM	1	J	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
CHLOROMETHANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L	2	J	UG/L	2	UJ	UG/L

SAMPLE NUMBER:	FB03-013196			S1DPGW01			S1MW-3			S1MW-4			S1MW-5		
SAMPLE DATE:	01/31/96			01/30/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-14			9601527-13			9601527-10			9601527-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L
DIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
DICHLORODIFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
ETHYL CYANIDE	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
ETHYLBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	6		UG/L	2	UJ	UG/L
IODOMETHANE	5	UJ	UG/L	5	UJ	UG/L	5	UJ	UG/L	3	J	UG/L	2	J	UG/L
ISOBUTYL ALCOHOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	UJ	UG/L
METHACRYLONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	UJ	UG/L
METHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	UJ	UG/L
METHYLENE CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
STYRENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	J	UG/L	2	UJ	UG/L
TETRACHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
TOLUENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	7		UG/L	3	J	UG/L
TRANS-1,2-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
TRANS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L
TRICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	UJ	UG/L
TRICHLOROFLUOROMETHANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L
VINYL ACETATE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	UJ	UG/L
VINYL CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	1	J	UG/L	2	UJ	UG/L
XYLENES, TOTAL	6	U	UG/L	6	UJ	UG/L	6	U	UG/L	6	U	UG/L	6	UJ	UG/L

SAMPLE NUMBER:	S1MW-6			TB01-012696			TB01-013096			/ /			/ /		
SAMPLE DATE:	01/30/96			01/26/96			01/30/96								
LABORATORY ID:	9601527-12			9601527-01			9601527-16								
QC_TYPE:	Normal			Normal			Normal								
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
1,1,1-TRICHLOROETHANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L						
1,1,2,2-TETRACHLOROETHANE	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L						
1,1,2-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
1,1-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
1,1-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
1,2,3-TRICHLOROPROPANE	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L						
1,2-DIBROMO-3-CHLOROPROPANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L						
1,2-DIBROMOETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
1,2-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
1,2-DICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
2-BUTANONE	5	U	UG/L	5	U	UG/L	5	UJ	UG/L						
2-CHLORO-1,3-BUTADIENE	2	UR	UG/L	2	UR	UG/L	2	UR	UG/L						
2-HEXANONE	5	U	UG/L	5	U	UG/L	5	UJ	UG/L						
4-METHYL-2-PENTANONE	5	U	UG/L	5	U	UG/L	5	UJ	UG/L						
ACETONE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L						
ACETONITRILE	10	U	UG/L	10	U	UG/L	10	UJ	UG/L						
ACROLEIN	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L						
ACRYLONITRILE	20	U	UG/L	20	U	UG/L	20	UJ	UG/L						
ALLYL CHLORIDE	10	U	UG/L	10	U	UG/L	10	UJ	UG/L						
BENZENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
BIS(2-CHLOROISOPROPYL) ETHER	20	UJ	UG/L	20	UJ	UG/L	20	UJ	UG/L						
BROMODICHLOROMETHANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L						
BROMOFORM	2	UJ	UG/L	2	U	UG/L	2	UJ	UG/L						
BROMOMETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
CARBON DISULFIDE	5	J	UG/L	5	UJ	UG/L	5	UJ	UG/L						
CARBON TETRACHLORIDE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L						
CHLOROBENZENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
CHLORODIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
CHLOROETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
CHLOROFORM	2	U	UG/L	2	U	UG/L	2	UJ	UG/L						
CHLOROMETHANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L						

SAMPLE NUMBER:	S1MW-6			TB01-012696			TB01-013096			/ /		/ /
SAMPLE DATE:	01/30/96			01/26/96			01/30/96					
LABORATORY ID:	9601527-12			9601527-01			9601527-16					
QC_TYPE:	Normal			Normal			Normal					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT QUAL UNITS
VOLATILES												
CIS-1,3-DICHLOROPROPENE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L			
DIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
DICHLORODIFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
ETHYL CYANIDE	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L			
ETHYLBENZENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
IODOMETHANE	3	J	UG/L	5	UJ	UG/L	5	UJ	UG/L			
ISOBUTYL ALCOHOL	20	U	UG/L	20	U	UG/L	20	UJ	UG/L			
METHACRYLONITRILE	10	U	UG/L	10	U	UG/L	10	UJ	UG/L			
METHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	UJ	UG/L			
METHYLENE CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L			
STYRENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
TETRACHLOROETHENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
TOLUENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
TRANS-1,2-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
TRANS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
TRANS-1,4-DICHLORO-2-BUTENE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L			
TRICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
TRICHLOROFLUOROMETHANE	2	UJ	UG/L	2	UJ	UG/L	2	UJ	UG/L			
VINYL ACETATE	5	U	UG/L	5	U	UG/L	5	UJ	UG/L			
VINYL CHLORIDE	2	U	UG/L	2	U	UG/L	2	UJ	UG/L			
XYLENES, TOTAL	6	U	UG/L	6	U	UG/L	6	UJ	UG/L			

SAMPLE NUMBER:	FB03-013196			S1DPGW-01			S1MW-3			S1MW-4			S1MW-5		
SAMPLE DATE:	01/31/96			01/30/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-14			9601527-13			9601527-10			9601527-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,2,4-TRICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,2-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,3,5-TRINITROBENZENE	50	UJ	UG/L	50	UJ	UG/L	51	UJ	UG/L	50	UJ	UG/L	50	UJ	UG/L
1,3-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,3-DINITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,4-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,4-DIOXANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
1,4-NAPHTHOQUINONE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
1-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,3,4,6-TETRACHLOROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2,4,5-TRICHLOROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2,4,6-TRICHLOROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2,4-DICHLOROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2,4-DIMETHYLPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2,4-DINITROPHENOL	20	UJ	UG/L	20	U	UG/L	20	UJ	UG/L	20	U	UG/L	20	U	UG/L
2,4-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2,6-DICHLOROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2,6-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-ACETYLAMINOFLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-CHLORONAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-CHLOROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2-METHYL-4,6-DINITROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2-METHYLNAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	268		UG/L	10	U	UG/L
2-METHYLPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
2-NITROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
2-PICOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
3 & 4-METHYLPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
3,3'-DICHLOROBENZIDINE	50	UJ	UG/L	50	UJ	UG/L	51	UJ	UG/L	50	UJ	UG/L	50	UJ	UG/L
3,3'-DIMETHYLBENZIDINE	50	U	UG/L	50	U	UG/L	51	U	UG/L	50	U	UG/L	50	U	UG/L

SAMPLE NUMBER:	FB03-013196			S1DPGW-01			S1MW-3			S1MW-4			S1MW-5		
SAMPLE DATE:	01/31/96			01/30/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-14			9601527-13			9601527-10			9601527-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
3-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-AMINOBIPHENYL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-BROMOPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-CHLORO-3-METHYLPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
4-CHLOROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-CHLOROPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
4-NITROPHENOL	20	UJ	UG/L	20	U	UG/L	20	UJ	UG/L	20	U	UG/L	20	U	UG/L
4-NITROQUINOLINE-1-OXIDE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L
5-NITRO-O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
7,12-DIMETHYLBENZ(A)ANTHRACENE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
A,A-DIMETHYLPHENETHYLAMINE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
ACENAPHTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	18		UG/L	10	U	UG/L
ACENAPHTHYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACETOPHENONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ARAMITE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(A)PYRENE	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(B)FLUORANTHENE	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZO(G,H,I)PERYLENE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
BENZO(K)FLUORANTHENE	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZYL ALCOHOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BIS(2-CHLOROETHOXY)METHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BIS(2-CHLOROETHYL)ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BUTYLBENZYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
CHLOROBENZILATE	50	U	UG/L	50	U	UG/L	51	U	UG/L	50	U	UG/L	50	U	UG/L
CHRYSE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DI-N-BU HTHALATE	10	UJ	UG/L	10		UG/L	10	UJ	UG/L	10	UJ	UG/L	10		UG/L

SAMPLE NUMBER:	FB03-013196			S1DPGW-01			S1MW-3			S1MW-4			S1MW-5		
SAMPLE DATE:	01/31/96			01/30/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-14			9601527-13			9601527-10			9601527-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIALLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIBENZO(A,H)ANTHRACENE	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIBENZOFURAN	10	U	UG/L	10	U	UG/L	10	U	UG/L	8	J	UG/L	10	U	UG/L
DIETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DIMETHOATE	50	U	UG/L	50	U	UG/L	51	U	UG/L	50	U	UG/L	50	U	UG/L
DIMETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DINOSEB	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
DIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
DISULFOTON	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
ETHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ETHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
FAMPHUR	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	8	J	UG/L	10	U	UG/L
FLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	36		UG/L	10	U	UG/L
HEXACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROBUTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROCYCLOPENTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
HEXACHLOROPROPENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
INDENO(1,2,3-CD)PYRENE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
ISODRIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ISOPHORONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ISOSAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
KEPONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHAPYRILENE	50	U	UG/L	50	U	UG/L	51	U	UG/L	50	U	UG/L	50	U	UG/L
METHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSO-DI-N-BUTYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSO-DI-N-PROPYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSODIETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSODIMETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSODIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L

SAMPLE NUMBER:	FB03-013196			S1DPGW-01			S1MW-3			S1MW-4			S1MW-5		
SAMPLE DATE:	01/31/96			01/30/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-14			9601527-13			9601527-10			9601527-11		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
N-NITROSOMORPHOLINE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
N-NITROSOPIPERIDINE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
N-NITROSOPYRROLIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
NAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	725		UG/L	10	U	UG/L
NITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
O,O,O-TRIETHYLPHOSPHOROTHIOATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
P-DIMETHYLAMINOAZOBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
P-PHENYLENEDIAMINE	20	UJ	UG/L	20	UJ	UG/L	20	UJ	UG/L	20	UJ	UG/L	20	UJ	UG/L
PENTACHLOROBENZENE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
PENTACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PENTACHLORONITROBENZENE	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L	10	UJ	UG/L
PENTACHLOROPHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
PHENACETIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PHENANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	51		UG/L	10	U	UG/L
PHENOL	10	UJ	UG/L	10	U	UG/L	10	UJ	UG/L	10	U	UG/L	10	U	UG/L
PRONAMIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	8	J	UG/L	10	U	UG/L
PYRIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
SAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
SULFOTEP	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
THIONAZIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L

SAMPLE NUMBER:	S1MW-6			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/30/96									
LABORATORY ID:	9601527-12									
QC_TYPE:	Normal									
% SOLIDS:	0.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT QUAL UNITS
SEMIVOLATILES										
1,2,4,5-TETRACHLOROBENZENE	10	U	UG/L							
1,2,4-TRICHLOROBENZENE	10	U	UG/L							
1,2-DICHLOROBENZENE	10	U	UG/L							
1,3,5-TRINITROBENZENE	50	UJ	UG/L							
1,3-DICHLOROBENZENE	10	U	UG/L							
1,3-DINITROBENZENE	10	U	UG/L							
1,4-DICHLOROBENZENE	10	U	UG/L							
1,4-DIOXANE	10	U	UG/L							
1,4-NAPHTHOQUINONE	10	UJ	UG/L							
1-NAPHTHYLAMINE	10	U	UG/L							
2,3,4,6-TETRACHLOROPHENOL	10	UR	UG/L							
2,4,5-TRICHLOROPHENOL	10	UR	UG/L							
2,4,6-TRICHLOROPHENOL	10	UR	UG/L							
2,4-DICHLOROPHENOL	10	UR	UG/L							
2,4-DIMETHYLPHENOL	10	UR	UG/L							
2,4-DINITROPHENOL	20	UR	UG/L							
2,4-DINITROTOLUENE	10	U	UG/L							
2,6-DICHLOROPHENOL	10	UR	UG/L							
2,6-DINITROTOLUENE	10	U	UG/L							
2-ACETYLAMINOFLUORENE	10	U	UG/L							
2-CHLORONAPHTHALENE	10	U	UG/L							
2-CHLOROPHENOL	10	UR	UG/L							
2-METHYL-4,6-DINITROPHENOL	10	UR	UG/L							
2-METHYLNAPHTHALENE	10	U	UG/L							
2-METHYLPHENOL	10	UR	UG/L							
2-NAPHTHYLAMINE	10	U	UG/L							
2-NITROANILINE	10	U	UG/L							
2-NITROPHENOL	10	UR	UG/L							
2-PICOLINE	10	U	UG/L							
3 & 4-METHYLPHENOL	10	UR	UG/L							
3,3'-DICHLOROBENZIDINE	50	UJ	UG/L							
3,3'-DIMETHYLBENZIDINE	50	U	UG/L							

SAMPLE NUMBER:	S1MW-6			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/30/96									
LABORATORY ID:	9601527-12									
QC_TYPE:	Normal									
% SOLIDS:	0.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT QUAL UNITS
SEMIVOLATILES										
3-METHYLCHOLANTHRENE	10	UJ	UG/L							
3-NITROANILINE	10	U	UG/L							
4-AMINOBIPHENYL	10	U	UG/L							
4-BROMOPHENYL PHENYL ETHER	10	U	UG/L							
4-CHLORO-3-METHYLPHENOL	10	UR	UG/L							
4-CHLOROANILINE	10	U	UG/L							
4-CHLOROPHENYL PHENYL ETHER	10	U	UG/L							
4-NITROANILINE	10	U	UG/L							
4-NITROPHENOL	20	UR	UG/L							
4-NITROQUINOLINE-1-OXIDE	10	UR	UG/L							
5-NITRO-O-TOLUIDINE	10	U	UG/L							
7,12-DIMETHYLBENZ(A)ANTHRACENE	10	UJ	UG/L							
A,A-DIMETHYLPHENETHYLAMINE	10	UJ	UG/L							
ACENAPHTHENE	10	U	UG/L							
ACENAPHTHYLENE	10	U	UG/L							
ACETOPHENONE	10	U	UG/L							
ANILINE	10	U	UG/L							
ANTHRACENE	10	U	UG/L							
ARAMITE	10	U	UG/L							
BENZO(A)ANTHRACENE	10	U	UG/L							
BENZO(A)PYRENE	10	U	UG/L							
BENZO(B)FLUORANTHENE	10	U	UG/L							
BENZO(G,H,I)PERYLENE	10	UJ	UG/L							
BENZO(K)FLUORANTHENE	10	U	UG/L							
BENZYL ALCOHOL	10	U	UG/L							
BIS(2-CHLOROETHOXY)METHANE	10	U	UG/L							
BIS(2-CHLOROETHYL)ETHER	10	U	UG/L							
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	UG/L							
BUTYLBENZYL PHTHALATE	10	U	UG/L							
CHLOROBENZILATE	50	U	UG/L							
CHRYSI	10	U	UG/L							
DI-N-BU. PHTHALATE	10	UJ	UG/L							

SAMPLE NUMBER:	S1MW-6			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/30/96									
LABORATORY ID:	9601527-12									
QC_TYPE:	Normal									
% SOLIDS:	0.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
SEMIVOLATILES										
DI-N-OCTYL PHTHALATE	10	U	UG/L							
DIALLATE	10	U	UG/L							
DIBENZO(A,H)ANTHRACENE	10	U	UG/L							
DIBENZOFURAN	10	U	UG/L							
DIETHYL PHTHALATE	10	U	UG/L							
DIMETHOATE	50	U	UG/L							
DIMETHYL PHTHALATE	10	U	UG/L							
DINOSEB	10	UR	UG/L							
DIPHENYLAMINE	10	U	UG/L							
DISULFOTON	10	UJ	UG/L							
ETHYL METHACRYLATE	10	U	UG/L							
ETHYL METHANESULFONATE	10	U	UG/L							
FAMPHUR	10	U	UG/L							
FLUORANTHENE	10	U	UG/L							
FLUORENE	10	U	UG/L							
HEXACHLOROBENZENE	10	U	UG/L							
HEXACHLOROBUTADIENE	10	U	UG/L							
HEXACHLOROCYCLOPENTADIENE	10	U	UG/L							
HEXACHLOROETHANE	10	U	UG/L							
HEXACHLOROPROPENE	10	U	UG/L							
INDENO(1,2,3-CD)PYRENE	10	UJ	UG/L							
ISODRIN	10	U	UG/L							
ISOPHORONE	10	U	UG/L							
ISOSAFROLE	10	U	UG/L							
KEPONE	10	U	UG/L							
METHAPYRILENE	50	U	UG/L							
METHYL METHANESULFONATE	10	U	UG/L							
N-NITROSO-DI-N-BUTYLAMINE	10	U	UG/L							
N-NITROSO-DI-N-PROPYLAMINE	10	U	UG/L							
N-NITROSODIETHYLAMINE	10	U	UG/L							
N-NITROSODIMETHYLAMINE	10	U	UG/L							
N-NITROSODIPHENYLAMINE	10	U	UG/L							

SAMPLE NUMBER:	S1MW-6			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/30/96									
LABORATORY ID:	9601527-12									
QC_TYPE:	Normal									
% SOLIDS:	0.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	10	U	UG/L												
N-NITROSOMORPHOLINE	10	UJ	UG/L												
N-NITROSOPIPERIDINE	10	UJ	UG/L												
N-NITROSOPYRROLIDINE	10	U	UG/L												
NAPHTHALENE	10	U	UG/L												
NITROBENZENE	10	U	UG/L												
O,O,O-TRIETHYLPHOSPHOROTHIOATE	10	U	UG/L												
O-TOLUIDINE	10	U	UG/L												
P-DIMETHYLAMINOAZOBENZENE	10	U	UG/L												
P-PHENYLENEDIAMINE	20	UJ	UG/L												
PENTACHLOROBENZENE	10	UJ	UG/L												
PENTACHLOROETHANE	10	U	UG/L												
PENTACHLORONITROBENZENE	10	UJ	UG/L												
PENTACHLOROPHENOL	10	UR	UG/L												
PHENACETIN	10	U	UG/L												
PHENANTHRENE	10	U	UG/L												
PHENOL	10	UR	UG/L												
PRONAMIDE	10	U	UG/L												
PYRENE	10	U	UG/L												
PYRIDINE	10	U	UG/L												
SAFROLE	10	U	UG/L												
SULFOTEP	10	U	UG/L												
THIONAZIN	10	U	UG/L												

CTO 00[illegible] 'AS KEY WEST
WATE[illegible]TA
GENER[illegible] ENGINEERING LABS

SAMPLE NUMBER:	FB03-013196			MW5-1			S1DPGW-01			S1MW-3			S1MW-4		
SAMPLE DATE:	01/31/96			01/28/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-08			9601527-14			9601527-13			9601527-10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	0.040	U	UG/L	12.7		UG/L	0.040	U	UG/L	0.43	U	UG/L	0.049	U	UG/L
4,4'-DDE	0.040	U	UG/L	2.0	U	UG/L	0.040	U	UG/L	0.43	U	UG/L	0.049	U	UG/L
4,4'-DDT	0.040	U	UG/L	2.0	U	UG/L	0.040	U	UG/L	0.43	U	UG/L	0.049	U	UG/L
ALDRIN	0.020	U	UG/L	1.0	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.036	J	UG/L
ALPHA-BHC	0.025		UG/L	1.1	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.024	U	UG/L
AROCLOR-1016	0.12	U	UG/L	6.4	U	UG/L	0.12	U	UG/L	1.4	U	UG/L	0.15	U	UG/L
AROCLOR-1221	0.12	U	UG/L	6.4	U	UG/L	0.12	U	UG/L	1.4	U	UG/L	0.15	U	UG/L
AROCLOR-1232	0.12	U	UG/L	6.4	U	UG/L	0.12	U	UG/L	1.4	U	UG/L	0.15	U	UG/L
AROCLOR-1242	0.12	U	UG/L	6.4	U	UG/L	0.12	U	UG/L	1.4	U	UG/L	0.15	U	UG/L
AROCLOR-1248	0.12	U	UG/L	6.4	U	UG/L	0.12	U	UG/L	1.4	U	UG/L	0.15	U	UG/L
AROCLOR-1254	0.12	U	UG/L	6.4	U	UG/L	0.12	U	UG/L	1.4	U	UG/L	0.15	U	UG/L
AROCLOR-1260	0.12	U	UG/L	6.4	U	UG/L	0.12	U	UG/L	1.4	U	UG/L	0.15	U	UG/L
BETA-BHC	0.020	U	UG/L	1.0	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.024	U	UG/L
CHLORDANE	0.25	U	UG/L	12.8	U	UG/L	0.25	U	UG/L	2.7	U	UG/L	0.30	U	UG/L
DELTA-BHC	0.020	U	UG/L	1.0	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.024	U	UG/L
DIELDRIN	0.046	J	UG/L	2.0	U	UG/L	0.040	U	UG/L	0.43	U	UG/L	0.068	U	UG/L
ENDOSULFAN I	0.020	U	UG/L	1.0	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.024	U	UG/L
ENDOSULFAN II	0.040	U	UG/L	2.0	U	UG/L	0.040	U	UG/L	0.43	U	UG/L	0.049	U	UG/L
ENDOSULFAN SULFATE	0.040	U	UG/L	2.0	U	UG/L	0.040	U	UG/L	0.43	U	UG/L	0.049	U	UG/L
ENDRIN	0.034	J	UG/L	2.0	U	UG/L	0.040	U	UG/L	0.43	U	UG/L	0.049	UJ	UG/L
ENDRIN ALDEHYDE	0.040	U	UG/L	2.0	U	UG/L	0.040	U	UG/L	0.43	U	UG/L	0.049	U	UG/L
GAMMA-BHC (LINDANE)	0.020	U	UG/L	1.0	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.024	U	UG/L
HEPTACHLOR	0.020	U	UG/L	1.0	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.024	U	UG/L
HEPTACHLOR EPOXIDE	0.020	U	UG/L	1.0	U	UG/L	0.020	U	UG/L	0.22	U	UG/L	0.024	U	UG/L
METHOXYCHLOR	0.20	U	UG/L	10.2	U	UG/L	0.20	U	UG/L	2.2	U	UG/L	0.24	U	UG/L
METHYL PARATHION	0.050	U	UG/L	2.6	U	UG/L	0.050	U	UG/L	0.54	U	UG/L	0.020	J	UG/L
PARATHION	0.050	U	UG/L	2.6	U	UG/L	0.050	U	UG/L	0.54	U	UG/L	0.061	U	UG/L
PHORATE	0.050	U	UG/L	2.6	U	UG/L	0.050	U	UG/L	0.54	U	UG/L	0.061	U	UG/L
TOXAPHENE	1.0	U	UG/L	51.3	U	UG/L	1.0	U	UG/L	10.9	U	UG/L	1.2	U	UG/L

CTO 007 'AS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	S1MW-5			S1MW-6			S2DPGW-01			S2MW-1			S2MW-4		
SAMPLE DATE:	01/30/96			01/30/96			01/28/96			01/28/96			01/28/96		
LABORATORY ID:	9601527-11			9601527-12			9601527-09			9601527-07			9601527-06		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
4,4'-DDE	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
4,4'-DDT	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
ALDRIN	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
ALPHA-BHC	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
AROCLOR-1016	2.7	U	UG/L	2.4	U	UG/L	0.13	U	UG/L	0.12	U	UG/L	0.13	U	UG/L
AROCLOR-1221	2.7	U	UG/L	2.4	U	UG/L	0.13	U	UG/L	0.12	U	UG/L	0.13	U	UG/L
AROCLOR-1232	2.7	U	UG/L	2.4	U	UG/L	0.13	U	UG/L	0.12	U	UG/L	0.13	U	UG/L
AROCLOR-1242	2.7	U	UG/L	2.4	U	UG/L	0.13	U	UG/L	0.12	U	UG/L	0.13	U	UG/L
AROCLOR-1248	2.7	U	UG/L	2.4	U	UG/L	0.13	U	UG/L	0.12	U	UG/L	0.13	U	UG/L
AROCLOR-1254	2.7	U	UG/L	2.4	U	UG/L	0.13	U	UG/L	0.12	U	UG/L	0.13	U	UG/L
AROCLOR-1260	2.7	U	UG/L	2.4	U	UG/L	0.13	U	UG/L	0.12	U	UG/L	0.13	U	UG/L
BETA-BHC	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
CHLORDANE	5.4	U	UG/L	4.8	U	UG/L	0.26	U	UG/L	0.25	U	UG/L	0.26	U	UG/L
DELTA-BHC	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
DIELDRIN	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
ENDOSULFAN I	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
ENDOSULFAN II	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
ENDOSULFAN SULFATE	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
ENDRIN	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
ENDRIN ALDEHYDE	0.86	U	UG/L	0.78	U	UG/L	0.041	U	UG/L	0.039	U	UG/L	0.042	U	UG/L
GAMMA-BHC (LINDANE)	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
HEPTACHLOR	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
HEPTACHLOR EPOXIDE	0.43	U	UG/L	0.39	U	UG/L	0.021	U	UG/L	0.020	U	UG/L	0.021	U	UG/L
METHOXYCHLOR	4.3	U	UG/L	3.9	U	UG/L	0.21	U	UG/L	0.20	U	UG/L	0.21	U	UG/L
METHYL PARATHION	1.1	U	UG/L	0.97	U	UG/L	0.052	U	UG/L	0.049	U	UG/L	0.053	U	UG/L
PARATHION	1.1	U	UG/L	0.97	U	UG/L	0.052	U	UG/L	0.049	U	UG/L	0.053	U	UG/L
PHORATE	1.1	U	UG/L	0.97	U	UG/L	0.052	U	UG/L	0.049	U	UG/L	0.053	U	UG/L
TOXAPHENE	21.5	U	UG/L	19.4	U	UG/L	1.0	U	UG/L	0.98	U	UG/L	1.0	U	UG/L

SAMPLE NUMBER:	S2MW-5			S2MW-6			S2MW-7				
SAMPLE DATE:	01/28/96			01/28/96			01/28/96			/ /	/ /
LABORATORY ID:	9601527-05			9601527-03			9601527-04				
QC_TYPE:	Normal			Normal			Normal				
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %	100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS	RESULT QUAL UNITS
PESTICIDES/PCBs											
4,4'-DDD	0.040	U	UG/L	0.41	U	UG/L	0.82	U	UG/L		
4,4'-DDE	0.044	J	UG/L	0.41	U	UG/L	0.82	U	UG/L		
4,4'-DDT	0.040	U	UG/L	4.8		UG/L	0.82	U	UG/L		
ALDRIN	0.020	U	UG/L	0.20	U	UG/L	0.41	U	UG/L		
ALPHA-BHC	0.020	U	UG/L	0.20	U	UG/L	0.41	U	UG/L		
AROCLOR-1016	0.13	U	UG/L	1.3	U	UG/L	2.6	U	UG/L		
AROCLOR-1221	0.13	U	UG/L	1.3	U	UG/L	2.6	U	UG/L		
AROCLOR-1232	0.13	U	UG/L	1.3	U	UG/L	2.6	U	UG/L		
AROCLOR-1242	0.13	U	UG/L	1.3	U	UG/L	2.6	U	UG/L		
AROCLOR-1248	0.13	U	UG/L	1.3	U	UG/L	2.6	U	UG/L		
AROCLOR-1254	0.13	U	UG/L	1.3	U	UG/L	2.6	U	UG/L		
AROCLOR-1260	0.13	U	UG/L	1.3	U	UG/L	2.6	U	UG/L		
BETA-BHC	0.020	U	UG/L	0.20	U	UG/L	0.41	U	UG/L		
CHLORDANE	0.25	U	UG/L	2.6	U	UG/L	5.1	U	UG/L		
DELTA-BHC	0.020	U	UG/L	0.20	U	UG/L	0.41	U	UG/L		
DIELDRIN	0.040	U	UG/L	0.41	U	UG/L	0.82	U	UG/L		
ENDOSULFAN I	0.039	J	UG/L	0.20	U	UG/L	0.41	U	UG/L		
ENDOSULFAN II	0.040	U	UG/L	0.41	U	UG/L	0.82	U	UG/L		
ENDOSULFAN SULFATE	0.040	U	UG/L	0.41	U	UG/L	0.82	U	UG/L		
ENDRIN	0.040	U	UG/L	0.41	U	UG/L	0.82	U	UG/L		
ENDRIN ALDEHYDE	0.040	U	UG/L	0.41	U	UG/L	0.82	U	UG/L		
GAMMA-BHC (LINDANE)	0.020	U	UG/L	0.20	U	UG/L	0.41	U	UG/L		
HEPTACHLOR	0.020	U	UG/L	0.20	U	UG/L	0.41	U	UG/L		
HEPTACHLOR EPOXIDE	0.020	U	UG/L	0.20	U	UG/L	0.41	U	UG/L		
METHOXYCHLOR	0.20	U	UG/L	2.0	U	UG/L	4.1	U	UG/L		
METHYL PARATHION	0.050	U	UG/L	0.51	U	UG/L	1.0	U	UG/L		
PARATHION	0.050	U	UG/L	0.51	U	UG/L	1.0	U	UG/L		
PHORATE	0.050	U	UG/L	0.51	U	UG/L	1.0	U	UG/L		
TOXAPHENE	1.0	U	UG/L	10.2	U	UG/L	20.4	U	UG/L		

CTO 007 NAS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	FB03-013196			MW5-1			S1DPGW-01			S1MW-3			S1MW-4		
SAMPLE DATE:	01/31/96			01/28/96			01/30/96			01/30/96			01/30/96		
LABORATORY ID:	9601527-15			9601527-08			9601527-14			9601527-13			9601527-10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	0.21	U	UG/L	4.1	U	UG/L	0.21	U	UG/L	0.21	U	UG/L	4.2	U	UG/L
2,4,5-TP (SILVEX)	0.11	U	UG/L	2.0	U	UG/L	0.11	U	UG/L	0.10	U	UG/L	2.1	U	UG/L
2,4-D	0.21	U	UG/L	4.1	U	UG/L	0.21	U	UG/L	0.21	U	UG/L	4.2	U	UG/L

SAMPLE NUMBER:	S1MW-5			S1MW-6			S2DPGW-01			S2MW-1			S2MW-4		
SAMPLE DATE:	01/30/96			01/30/96			01/28/96			01/28/96			01/28/96		
LABORATORY ID:	9601527-11			9601527-12			9601527-09			9601527-07			9601527-06		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	0.21	U	UG/L	4.2	U	UG/L	4.2	U	UG/L	0.21	U	UG/L	0.21	U	UG/L
2,4,5-TP (SILVEX)	0.10	U	UG/L	2.1	U	UG/L	2.1	U	UG/L	0.10	U	UG/L	0.10	U	UG/L
2,4-D	0.21	U	UG/L	4.2	U	UG/L	4.2	U	UG/L	0.21	U	UG/L	0.21	U	UG/L

SAMPLE NUMBER:	S2MW-5			S2MW-6			S2MW-7				
SAMPLE DATE:	01/28/96			01/28/96			01/28/96			/ /	/ /
LABORATORY ID:	9601527-05			9601527-03			9601527-04				
QC_TYPE:	Normal			Normal			Normal				
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %	100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS	RESULT QUAL UNITS
HERBICIDES											
2,4,5-T	0.21	U	UG/L	0.21	U	UG/L	0.21	U	UG/L		
2,4,5-TP (SILVEX)	0.10	U	UG/L	0.10	U	UG/L	0.11	U	UG/L		
2,4-D	0.21	U	UG/L	0.21	U	UG/L	0.21	U	UG/L		

INORGANIC DATA VALIDATION
SDG 62001S

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-03-6-253

TO : **KEVIN WALTER** **DATE:** **APRIL 19, 1996**

FROM: **WILLIAM J. BROTZ** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION - TAL METALS AND CYANIDE**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG 62001S

6/Soil/	BG2SS-02	BG2SS-03	BG1SS-02
	BG1SS-03	BG3SS-02	BG3SS-03

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. 62001S; six (6) soil samples were included for TAL metals and cyanide analyses. No field duplicate pairs or field quality control samples were included with this SDG. The samples were collected by Brown and Root Environmental on January 31 and February 2, 1996.

analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

*	• Data Completeness
*	• Holding Times
*	• Calibration Verifications
	• Laboratory Blank Analyses
	• ICP Interference Check Sample Results
	• Matrix Spike Results
*	• Laboratory and Field Duplicate Analysis Results
*	• Laboratory Control Sample Results
	• ICP Serial Dilution Results
*	• Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method and field quality control blanks at the maximum concentrations indicated below:

Analyte	Maximum Concentration	Action Level (Soil)
aluminum	22.8 ug/L	22.8 mg/kg
antimony	3.7 ug/L	3.7 mg/kg
beryllium	0.5 ug/L	0.5 mg/kg
cadmium	0.5 ug/L	0.5 mg/kg
calcium	16.8 ug/L	16.8 mg/kg
iron	8.9 ug/L	8.9 mg/kg
magnesium	17.6 ug/L	17.6 mg/kg
nickel	1.4 ug/L	1.4 mg/kg
sodium	10.3 ug/L	10.3 mg/kg
thallium	5.8 ug/L	5.8 mg/kg
cyanide	1.4 ug/L	1.4 mg/kg

Samples affected : All

An action level of 5X the maximum positive concentration has been established to evaluate the sample data. Sample dilution factors were considered prior to the application of the action levels. Positive results for beryllium, cadmium, nickel, thallium and cyanide within the action levels are qualified as nondetected, "U". No actions were required for the remaining analytes as all results were greater than the action level or nondetects.

ICP Interference Check Sample Results

The interfering analyte calcium was present in sample BG1SS-02 at a concentration which was comparable to the level of calcium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, barium, cadmium, cobalt, copper, lead, manganese, potassium, selenium, sodium, thallium, and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for cobalt, copper, lead, manganese, thallium and zinc in the affected sample. Positive results reported for cobalt, copper, lead, manganese, and zinc in the affected sample were qualified as estimated, "J". The nondetected result reported for thallium in the affected sample was qualified as estimated, "UJ".

The interfering analyte calcium was present in sample BG1SS-03 at a concentration which was comparable to the level of calcium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, barium, cadmium, cobalt, copper, lead, manganese, potassium, selenium, sodium, thallium, and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for cobalt, copper, lead, manganese, selenium, thallium and zinc in the affected sample. Positive results reported for cobalt, copper, lead, manganese selenium, and zinc in the affected sample were qualified as estimated, "J". The nondetected result reported for thallium in the affected samp was qualified as estimated, "UJ".

The interfering analyte calcium was present in sample BG2SS-02 at a concentration which was comparable to the level of calcium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, barium, cadmium, cobalt, copper, lead, manganese, potassium, selenium, sodium, thallium, and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for barium, copper, lead, manganese, potassium, thallium and zinc in the affected sample. Positive results reported for barium, copper, lead, manganese, potassium, and zinc in the affected sample were qualified as estimated, "J". The nondetected result reported for thallium in the affected sample was qualified as estimated, "UJ".

The interfering analyte calcium was present in sample BG2SS-03 at a concentration which was comparable to the level of calcium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, barium, cadmium, cobalt, copper, lead, manganese, potassium, selenium, sodium, thallium, and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for copper, lead, manganese, thallium and zinc in the affected sample. Positive results reported for copper, lead, manganese, and zinc in the affected sample were qualified as estimated, "J". The nondetected result reported for thallium in the affected sample was qualified as estimated, "UJ".

The interfering analyte calcium was present in sample BG3SS-02 at a concentration which was comparable to the level of calcium in the Interference Check Sample (ICS) solution. Several analytes namely, antimony, barium, cadmium, cobalt, copper, lead, manganese, potassium, selenium, sodium, thallium, and zinc were present in the ICS solution at concentrations which exceeded the Instrument Detection Limit (IDL). Interference affects exist for cadmium, copper, lead, manganese, thallium and zinc in the affected sample. Positive results reported for copper, lead, manganese, and zinc in the affected sample were qualified as estimated, "J". Nondetected results reported for cadmium and thallium in the affected sample were qualified as estimated, "UJ".

Matrix Spike Results

The Matrix Spike (MS) Percent Recovery (%R) for selenium was below the lower quality control limits. Positive results and nondetects reported for selenium was qualified as estimated, "J", and "UJ", respectively.

ICP Serial Dilution Results

The ICP Serial Dilution Percent Difference for potassium exceeded 10%. Positive results reported for potassium was qualified as estimated, "J".

Executive Summary

Laboratory Performance: Several contaminants were found in the laboratory method blanks. The ICP Serial Dilution %D for potassium was outside quality control limits.

Other Factors Affecting Data Quality: The MS %R for selenium was low.

No other problems were encountered in this case.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
LEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG 62001S

TABLE 1 - RECOMMENDATION SUMMARY

Aluminum			Magnesium		
Antimony			Manganese		J^3
Arsenic			Mercury		
Barium		J^3	Nickel	A^1	
Beryllium	A^1		Potassium		$J^{2,3}$
Cadmium	A^1	J^3	Selenium		$J^{1,3}$
Calcium			Silver		
Chromium			Sodium		
Cobalt		J^3	Thallium		J^3
Copper		J^3	Vanadium		
Iron			Zinc		J^3
Lead		J^3	Cyanide	A^1	

If the field is left blank, the qualifier is A - Accept all data.

^{1} - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

J^1 - Accept data but qualify positive results and nondetects as estimated, "J", and "UJ", respectively as a result of poor MS %R.

J^2 - Accept data but qualify positive results and nondetects as estimated, "J", as a result of ICP Serial Dilution outside quality control limits.

J^3 - Accept data but qualify positive results and nondetects as estimated, "J", as a result of ICP Interference.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO [illegible] - NAS KEY WEST
SOIL [illegible]TA
GENE[illegible]AL ENGINEERING LABS

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ALUMINUM	3950		MG/KG	4250		MG/KG	145		MG/KG	120		MG/KG	216		MG/KG
ANTIMONY	0.49	U	MG/KG	0.64	U	MG/KG	0.42	U	MG/KG	0.60	U	MG/KG	0.48	U	MG/KG
ARSENIC	0.95		MG/KG	2.7		MG/KG	1.8		MG/KG	1.1	U	MG/KG	0.91	U	MG/KG
BARIUM	15.6		MG/KG	17.7		MG/KG	7.3	J	MG/KG	7.9		MG/KG	6.5		MG/KG
BERYLLIUM	0.06	U	MG/KG	0.08	U	MG/KG	0.05	U	MG/KG	0.07	U	MG/KG	0.06	U	MG/KG
CADMIUM	0.08	U	MG/KG	0.40	U	MG/KG	0.07	U	MG/KG	0.12	U	MG/KG	0.07	U	MG/KG
CALCIUM	359000		MG/KG	347000		MG/KG	449000		MG/KG	426000		MG/KG	442000		MG/KG
CHROMIUM	5.5		MG/KG	9.5		MG/KG	1.9		MG/KG	2.0		MG/KG	2.1		MG/KG
COBALT	0.32	J	MG/KG	0.43	J	MG/KG	0.13	U	MG/KG	0.18	U	MG/KG	0.15	U	MG/KG
COPPER	4.3	J	MG/KG	15.6	J	MG/KG	4.0	J	MG/KG	2.2	J	MG/KG	2.3	J	MG/KG
CYANIDE	0.23	U	MG/KG	0.18	U	MG/KG	0.07	U	MG/KG	0.25	U	MG/KG	0.31	U	MG/KG
IRON	1730		MG/KG	2250		MG/KG	758		MG/KG	118		MG/KG	98.1		MG/KG
LEAD	6.1	J	MG/KG	43.5	J	MG/KG	34.4	J	MG/KG	1.4	J	MG/KG	0.82	J	MG/KG
MAGNESIUM	13000		MG/KG	4710		MG/KG	4740		MG/KG	8980		MG/KG	1340		MG/KG
MANGANESE	28.1	J	MG/KG	30.0	J	MG/KG	5.5	J	MG/KG	6.1	J	MG/KG	2.6	J	MG/KG
MERCURY	0.06	U	MG/KG	0.07	U	MG/KG	0.05	U	MG/KG	0.05	U	MG/KG	0.06	U	MG/KG
NICKEL	2.1		MG/KG	3.3		MG/KG	0.68	U	MG/KG	0.44	U	MG/KG	0.76	U	MG/KG
POTASSIUM	944	J	MG/KG	395	J	MG/KG	48.6	J	MG/KG	325	J	MG/KG	258	J	MG/KG
SELENIUM	0.90	UJ	MG/KG	1.5	J	MG/KG	0.78	UJ	MG/KG	1.1	UJ	MG/KG	0.89	UJ	MG/KG
SILVER	0.13	U	MG/KG	0.17	U	MG/KG	0.11	U	MG/KG	0.16	U	MG/KG	0.13	U	MG/KG
SODIUM	18700		MG/KG	2030		MG/KG	2360		MG/KG	7990		MG/KG	6390		MG/KG
THALLIUM	0.84	UJ	MG/KG	1.1	UJ	MG/KG	0.74	UJ	MG/KG	1.0	UJ	MG/KG	0.83	UJ	MG/KG
VANADIUM	3.7		MG/KG	7.8		MG/KG	2.1		MG/KG	1.0		MG/KG	0.80		MG/KG
ZINC	6.5	J	MG/KG	36.6	J	MG/KG	3.8	J	MG/KG	2.5	J	MG/KG	4.1	J	MG/KG

CTO [illegible] NAS KEY WEST
SOIL DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG3SS-03							
SAMPLE DATE:	02/02/96		/ /		/ /		/ /	
LABORATORY ID:	9602001-06							
QC_TYPE:	Normal							
% SOLIDS:	59.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
INORGANICS								
ALUMINUM	35600	MG/KG						
ANTIMONY	0.66	U MG/KG						
ARSENIC	9.3	MG/KG						
BARIUM	36.5	MG/KG						
BERYLLIUM	1.0	U MG/KG						
CADMIUM	0.10	U MG/KG						
CALCIUM	202000	MG/KG						
CHROMIUM	57.4	MG/KG						
COBALT	1.5	MG/KG						
COPPER	4.5	MG/KG						
CYANIDE	0.45	U MG/KG						
IRON	20600	MG/KG						
LEAD	22.4	MG/KG						
MAGNESIUM	26500	MG/KG						
MANGANESE	77.0	MG/KG						
MERCURY	0.08	U MG/KG						
NICKEL	14.9	MG/KG						
POTASSIUM	2160	J MG/KG						
SELENIUM	2.1	J MG/KG						
SILVER	0.18	U MG/KG						
SODIUM	20400	MG/KG						
THALLIUM	2.6	U MG/KG						
VANADIUM	40.7	MG/KG						
ZINC	19.1	MG/KG						

ORGANIC DATA VALIDATION
SDG 62001S

Brown & Root Environmental INTERNAL CORRESPONDENCE

C-49-04-6-198

TO: **MR. KEVIN WALTER** **DATE:** **APRIL 19, 1996**

FROM: **MICHELLE L. ALLEN** **CC:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - TCL VOCs/SVOCs/PEST/PCBs/HERB**
CTO 007, NAS KEY WEST, FLORIDA
SDG 62001S

SAMPLES: Soil:

BG1SS-02	BG1SS-03	BG2SS-02	BG2SS-03
BG3SS-02	BG3SS-03		

General Engineering Laboratories (GEL) Inc. analyzed six environmental soil samples for Appendix IX Target Compound List (TCL) volatile, semivolatile, and pesticide/PCB organic compounds. In addition, the six samples were analyzed for TCL herbicide organic compounds. No field duplicate pairs or field quality control blanks were included in this SDG.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8240/8270/8080/8150 analytical and reporting protocols and were evaluated according to the following parameters:

	• Data completeness
*	• Holding times
	• GC/MS tuning and mass calibration
*	• Initial and continuing calibrations
*	• Laboratory blank analyses
*	• Surrogate spike recoveries
*	• Matrix spike/matrix spike duplicate results
	• Laboratory control sample/Laboratory control sample duplicate results
*	• Internal standard performances
	• Detection limits
	• Sample identification
	• Sample quantitation
*	• Laboratory Performance

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatile Fraction

The initial calibration contained Relative Response Factors (RRFs) for acrolein, propionitrile, and trans-1,4-dichloro-2-butene which were less than 0.050. In addition, the subsequent continuing calibration RRFs for acrolein and propionitrile were below the 0.050 quality control limit. Failure to meet this quality control criteria indicates that the laboratory's instruments could not achieve satisfactory sensitivity for these compounds, and therefore, the associated positive and nondetected results for these compounds are severely compromised. Only nondetected results were reported for these compounds in the affected samples and these nondetects are considered to be unreliable and are rejected, "UR". These results are biased very low.

The compound 2-chloro-1,3-butadiene was not detected in the continuing calibration standard analyzed on 02/13/96 (16:15). An additional standard was not analyzed containing this compound (as performed for the previous continuing calibration). Hence, the nondetected results reported for this compound in the samples associated with this continuing calibration are rejected, qualified, "UR".

The initial calibration Percent Relative Standard Deviations (%RSDs) for benzene and xylenes (total) were greater than the 30% quality control limit. Only positive results are affected by this noncompliance. No actions were necessary since only nondetected results were reported for these compounds in the environmental samples and these nondetects are not compromised.

Some continuing calibration Percent Differences (%Ds) for cis-1,3-dichloropropene, tetrachloroethene, and xylenes (total) were greater than the 25% quality control limit. The nondetected results reported for these compounds in the affected samples were qualified as estimated, "UJ".

The laboratory method blank analysis yielded the following contaminant at the maximum concentration indicated:

Compound	Maximum Concentration	Action Level
Benzene	1 µg/Kg	5 µg/Kg

Percent moisture, sample aliquot size, and dilution factors were considered prior to the application of the action level. The positive results for benzene reported above the detection limit but below the action level were qualified as undetected, "U". Positive results for benzene found below the detection limit have been deleted and replaced by the detection limit value, then qualified as undetected, "U".

The Percent Recovery (%R) for toluene-d8 (TOL) was above the upper quality control limit in sample BG1SS-03. The %R for TOL was acceptable in the reanalysis, hence, the results from this analysis were used in the data validation. No qualification was necessary.

Low areas were noted for the internal standards chlorobenzene-d5 (CBZ) and 1,4-dichlorobenzene-d4 (DCB) in samples BG1SS-02, BG1SS-03, and BG3SS-03. No improvements were noted in the reanalyses of these samples. The results from the original analyses for samples BG1SS-02 and BG3SS-03 were used in the validation of the data. The results from the reanalysis of sample BG1SS-03 were used in the data validation as a result of a surrogate noncompliance. Only nondetected results were reported for the target compounds associated with these noncompliant internal standards and these nondetects are qualified as estimated, "UJ".

It should be noted that the laboratory used 20g of sample for each sample analyses. No validation actions were taken.

The laboratory only analyzed one laboratory method blank, however, two bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. The laboratory indicated that instead of one blank associated with each BFB tune, one method blank was analyzed on a daily basis. This practice precludes the possibility of cross-contamination which may be present from standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Since all samples were analyzed within one day (but with two BFB tunes), the validator was only able to apply one laboratory method blank to all the samples.

Methyl methacrylate was analyzed for both the volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained in Appendix A - Qualified Analytical Results.

Semivolatile Fraction

The initial calibration Relative Response Factors (RRFs) for 4-chloroaniline and 3-nitroaniline were less than 0.050. Failure to meet this quality control criterion indicates the laboratory's instruments could not achieve satisfactory sensitivity for these compounds, and therefore, the associated positive and nondetected results for these compounds are severely compromised. Only nondetected results were reported for these compounds in the environmental samples and these nondetects are considered to be unreliable and are rejected, qualified "UR". These results are biased very low.

The continuing calibration RRFs for 2-naphthylamine, 4-nitroquinoline-1-oxide, and 3,3'-dimethylbenzidine were below the 0.050 quality control limit. The nondetected results reported for these compounds in the environmental samples were qualified as rejected, "UR". These results are biased low.

The initial calibration %RSDs for o-toluidine, famphur and 3,3'-dimethylbenzidine exceeded the 50% validation quality control limit. Positive and nondetected results are affected by this noncompliance. No action was taken for 3,3'-dimethylbenzidine since results for this compound were qualified for a more severe noncompliance. Only nondetects were reported for o-toluidine and famphur in the affected samples and these nondetects are qualified as estimated, "UJ".

The initial calibration %RSDs for methyl methansulfonate, 3-methylphenol, p-phenylenediamine, 1,3,5-trinitrobenzene, pronamide, and kepone were greater than 30%. No qualifications were warranted since the nondetected results reported for these compounds in the environmental samples were not compromised by this calibration noncompliance.

The continuing calibration %Ds for N-nitroso-dimethylamine, 4-chloroaniline, 3-nitroaniline, 4-nitrophenol, 3,3'-dichlorobenzidine, dibenz(a,h)anthracene, 1,4-dioxane, N-nitrosopiperdine, 1,3,5-trinitrobenzene, kepone, ethyl methacrylate, N-nitrosomethylethylamine, methyl methanesulfonate, o-toluidine, 1,4-naphthaquinone, 2-naphthylamine, 4-nitroquinoline-1-oxide, aramite, 3,3'-dimethylbenzidine, 7,12-dimethylbenz(a)anthracene, 3-methylcholanthrene, p-phenylenediamine, and dimethoate exceeded the 25% quality control criteria. Only nondetected results were reported for these compounds in the affected samples and these nondetects (not rejected due to more severe calibration noncompliances) are qualified as estimated, "UJ".

Pesticide/PCB fraction

The 14 day holding time from date of collection to date of extraction was exceeded in samples BG2SS-02 and BG2SS-03. The positive and nondetected results reported for the target compounds in these samples are qualified as estimated, ""J" and UJ", respectively.

Some continuing calibration %Rs for Endosulfan I, Dieldrin, Endrin, 4,4'-DDD, 4,4'-DDT, Endrin aldehyde, Methoxychlor, and the surrogate tetrachloro-m-xylene (TCX) were outside the quality control limits on column DB5. Only positive results are affected by this noncompliance. The positive results reported for 4,4'-DDT in the associated samples are qualified as estimated, "J".

The %Rs for the surrogate spike compounds TCX and dibutylchlorendate (DBC) were below the low quality control limits in samples BG2SS-03DL1, BG1SS-03DL1, BG3SS-03DL1, and BG1SS-02DL1. No action was taken since the surrogates were diluted out.

A high Relative Percent Difference (RPD) for 4,4'-DDT was noted in the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses performed on sample BG3SS-02. No action was taken since no positive result was reported for this pesticide in the unspiked sample.

Positive sample results for Methyl Parathion in sample BG2SS-02 had a %D between the two GC analytical columns that was greater than 25%. This performance may indicate that the quantitation of this compound may not be exact. The positive result for this compound was qualified as estimated, "J".

The Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) and MS samples had %Ds between GC columns greater than 25%. No action was taken since these are quality control samples.

4,4'-DDE was detected at a high concentration in sample BG1SS-02. The result from the dilution was used in the data validation.

The laboratory stated that samples BG1SS-3, BG2SS-03, and BG3SS-03 were diluted prior to analyses due to high concentrations of target compounds. However, no positive results were reported for target compounds in samples BG1SS-03 and BG2SS-03.

Herbicide fraction

Some continuing calibration %Rs for 2,4-D and 2,4,5-T were above the upper quality control limits on column DB608. No action was taken since no positive results were reported for these compounds in the affected samples.

The surrogate %R for 2,4-dichlorophenylacetic acid was low in sample BG1SS-02. The nondetected results reported for the target compounds in this sample were qualified as estimated, "UJ".

The LCS/LCSD and MS samples had %Ds for Silvex between GC columns greater than 25%. No action was taken since these are quality control samples.

Additional Comments

Results reported below the detection limit in the volatile and semivolatile fractions were estimated, qualified, "J".

Executive Summary

Laboratory Performance: Major calibration noncompliances (RRFs < 0.050) were noted for several volatile and semivolatile compounds. The laboratory only analyzed one method blank per day for the volatile analyses. The volatile and semivolatile fractions had some noncompliant initial and continuing calibration %RSDs and %Ds. Some pesticide/PCB and herbicide continuing calibration %Rs were outside the quality control limits. Benzene was detected the laboratory method blank. Some %Ds between GC columns were greater than 25% in the LCS/LCSD and MS/MSD pesticide/PCB and herbicide samples.

Other Factors Affecting Data Quality: One environmental sample exhibited a high volatile surrogate %R. Some pesticide/PCB surrogate %Rs were diluted out. The pesticide/PCB MS/MSD analyses yielded a high RPD. Some noncompliant internal standard areas were noted in the volatile fraction. Many compounds were reported below the detection limit. Some pesticide/PCB samples required dilutions prior to analyses. One pesticide compound was detected at a high concentration, requiring further dilution. A %D between GC columns was greater than 25%.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
Michelle L. Allen
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG NO. 62001S

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA			SVOA		Pest/PCB	Herb
BG1SS-02	A^{1}	$J^{1,2,9}$	$R^{1,2}$	$J^{3,4}$	R^{1}	J^{5}	J^{8}
BG1SS-03	A^{1}	$J^{1,2,9}$	$R^{1,2}$	$J^{3,4,9}$	R^{1}		
BG2SS-02	A^{1}	J^{1}	$R^{1,2}$	$J^{3,4}$	R^{1}	$J^{5,6,7}$	
BG2SS-03	A^{1}	$J^{1,9}$	$R^{1,2}$	$J^{3,4}$	R^{1}	J^{7}	
BG3SS-02	A^{1}	J^{1}	R^{1}	$J^{3,4}$	R^{1}		
BG3SS-03	A^{1}	$J^{1,2,9}$	$R^{1,2}$	$J^{3,4}$	R^{1}		

A^{1} - Accept data, but change positive benzene result to a revised reporting limit as a result of blank contamination.

J^{1} - Estimate, "UJ", nondetected results for volatile compounds in which continuing calibration %Ds $\geq$ 25%.

J^{2} - Estimate, "UJ", nondetected results for target compounds as a result of low internal standard areas.

J^{3} - Estimate, "UJ", nondetected results for o-toluidine and famphur as a result of initial calibration %RSDs > 50%.

J^{4} - Estimate, "UJ", nondetected results for semivolatile compounds in which continuing calibration %Ds $\geq$ 25%.

J^{5} - Estimate, "J", positive result for 4,4'-DDT as a result of continuing calibration %Rs outside quality control limit.

J^{6} - Estimate, "J", positive result for Methyl Parathion as a result of %D between GC columns > 25%.

J^{7} - Estimate, "J" and "UJ", positive and nondetected results as a result of holding time exceedence.

J^{8} - Estimate, "UJ", nondetected result for target compounds as a result of low herbicide surrogate %R.

J^{9} - Estimate, "J", positive results reported at concentrations below the detection limit.

R^{1} - Reject, "UR", nondetected results as a result of initial and/or continuing calibration RRFs < 0.050.

R^{2} - Reject, "UR", nondetected result for 2-chloro-1,3-butadiene due to lack of standardization.

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory or qualified as a result of blank contamination, and should not be considered present.
J	-	Positive result is estimated as result of various technical reasons (i.e., holding time exceedence, pesticide/PCB continuing calibration %R outside quality control limit, %D between GC columns > 25%, or result below the detection limit).
UJ	-	Nondetected result is considered to be estimated as a result of various technical reasons (i.e., initial calibration %RSD > 50%, continuing calibration %D $\geq$ 25%, low internal standard area, low surrogate %Rs).
UR	-	Nondetected result is rejected as a result of initial and/or continuing calibration RRFs < 0.050 or lack of compound standardization.

APPENDIX A

Qualified Analytical Results

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,1,1-TRICHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,1,2-TRICHLOROETHANE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,1-DICHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,1-DICHLOROETHENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,2,3-TRICHLOROPROPANE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,2-DIBROMOETHANE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,2-DICHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
1,2-DICHLOROPROPANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
2-BUTANONE	6	U	UG/KG	8	U	UG/KG	5	U	UG/KG	8	U	UG/KG	6	U	UG/KG
2-CHLORO-1,3-BUTADIENE	2	UR	UG/KG	3	UR	UG/KG	2	UR	UG/KG	3	UR	UG/KG	2	U	UG/KG
2-HEXANONE	6	UJ	UG/KG	8	UJ	UG/KG	5	U	UG/KG	8	U	UG/KG	6	U	UG/KG
4-METHYL-2-PENTANONE	6	UJ	UG/KG	8	UJ	UG/KG	5	U	UG/KG	8	U	UG/KG	6	U	UG/KG
ACETONE	6	U	UG/KG	8	U	UG/KG	5	U	UG/KG	8	U	UG/KG	6	U	UG/KG
ACETONITRILE	12	U	UG/KG	15	U	UG/KG	11	U	UG/KG	15	U	UG/KG	12	U	UG/KG
ACROLEIN	25	UR	UG/KG	30	UR	UG/KG	22	UR	UG/KG	30	UR	UG/KG	24	UR	UG/KG
ACRYLONITRILE	25	U	UG/KG	30	U	UG/KG	22	U	UG/KG	30	U	UG/KG	24	U	UG/KG
ALLYL CHLORIDE	12	U	UG/KG	15	U	UG/KG	11	U	UG/KG	15	U	UG/KG	12	U	UG/KG
BENZENE	3	U	UG/KG	4	U	UG/KG	2	U	UG/KG	3	U	UG/KG	3	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	25	UJ	UG/KG	30	UJ	UG/KG	22	U	UG/KG	30	U	UG/KG	24	U	UG/KG
BROMODICHLOROMETHANE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
BROMOFORM	2	U	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
BROMOMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
CARBON DISULFIDE	6	U	UG/KG	8	U	UG/KG	5	U	UG/KG	8	U	UG/KG	6	U	UG/KG
CARBON TETRACHLORIDE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
CHLOROBENZENE	2	U	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
CHLORODIBROMOMETHANE	2	U	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
CHLOROETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
CHLOROFORM	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
CHLOI THANE	2	U	UG/KG	3		UG/KG	2	U	UG/KG	3	U	UG/KG	2		UG/KG

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	UJ	UG/KG	3	UJ	UG/KG	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG
DIBROMOMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
DICHLORODIFLUOROMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
ETHYLBENZENE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
IODOMETHANE	6	U	UG/KG	8	U	UG/KG	5	U	UG/KG	8	U	UG/KG	6	U	UG/KG
ISOBUTYL ALCOHOL	25	U	UG/KG	30	U	UG/KG	22	U	UG/KG	30	U	UG/KG	24	U	UG/KG
METHACRYLONITRILE	12	U	UG/KG	15	U	UG/KG	11	U	UG/KG	15	U	UG/KG	12	U	UG/KG
METHYL METHACRYLATE	12	UJ	UG/KG	15	UJ	UG/KG	11	U	UG/KG	15	U	UG/KG	12	U	UG/KG
METHYLENE CHLORIDE	1	J	UG/KG	2	J	UG/KG	5	U	UG/KG	1	J	UG/KG	6	U	UG/KG
PROPIONITRILE	25	UR	UG/KG	30	UR	UG/KG	22	UR	UG/KG	30	UR	UG/KG	24	UR	UG/KG
STYRENE	2	UJ	UG/KG	3	UJ	UG/KG	2	UJ	UG/KG	3	U	UG/KG	2	U	UG/KG
TETRACHLOROETHENE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	UJ	UG/KG	2	U	UG/KG
TOLUENE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
TRANS-1,2-DICHLOROETHENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	2	UJ	UG/KG	3	UJ	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	12	UR	UG/KG	15	UR	UG/KG	11	UR	UG/KG	15	UR	UG/KG	12	UR	UG/KG
TRICHLOROETHENE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
TRICHLOROFLUOROMETHANE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
VINYL ACETATE	6	U	UG/KG	8	U	UG/KG	5	U	UG/KG	8	U	UG/KG	6	U	UG/KG
VINYL CHLORIDE	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG	3	U	UG/KG	2	U	UG/KG
XYLENES, TOTAL	8	UJ	UG/KG	9	UJ	UG/KG	7	UJ	UG/KG	9	UJ	UG/KG	7	UJ	UG/KG

SAMPLE NUMBER:	BG3SS-03								
SAMPLE DATE:	02/02/96		/ /		/ /		/ /		/ /
LABORATORY ID:	9602001-06								
QC_TYPE:	Normal								
% SOLIDS:	59.0 %		100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
VOLATILES									
1,1,1,2-TETRACHLOROETHANE	3	UJ UG/KG							
1,1,1-TRICHLOROETHANE	3	U UG/KG							
1,1,2,2-TETRACHLOROETHANE	3	UJ UG/KG							
1,1,2-TRICHLOROETHANE	3	UJ UG/KG							
1,1-DICHLOROETHANE	3	U UG/KG							
1,1-DICHLOROETHENE	3	U UG/KG							
1,2,3-TRICHLOROPROPANE	3	UJ UG/KG							
1,2-DIBROMO-3-CHLOROPROPANE	3	UJ UG/KG							
1,2-DIBROMOETHANE	3	UJ UG/KG							
1,2-DICHLOROETHANE	3	U UG/KG							
1,2-DICHLOROPROPANE	3	U UG/KG							
2-BUTANONE	8	U UG/KG							
2-CHLORO-1,3-BUTADIENE	3	UR UG/KG							
2-HEXANONE	8	UJ UG/KG							
4-METHYL-2-PENTANONE	8	UJ UG/KG							
ACETONE	8	U UG/KG							
ACETONITRILE	17	U UG/KG							
ACROLEIN	34	UR UG/KG							
ACRYLONITRILE	34	U UG/KG							
ALLYL CHLORIDE	17	U UG/KG							
BENZENE	4	U UG/KG							
BIS(2-CHLOROISOPROPYL) ETHER	34	UJ UG/KG							
BROMODICHLOROMETHANE	3	UJ UG/KG							
BROMOFORM	3	UJ UG/KG							
BROMOMETHANE	3	U UG/KG							
CARBON DISULFIDE	8	U UG/KG							
CARBON TETRACHLORIDE	3	U UG/KG							
CHLOROBENZENE	3	UJ UG/KG							
CHLORODIBROMOMETHANE	3	UJ UG/KG							
CHLOROETHANE	3	U UG/KG							
CHLOROFORM	3	U UG/KG							
CHLOR THANE	3	U UG/KG							

SAMPLE NUMBER:	BG3SS-03				
SAMPLE DATE:	02/02/96	/ /	/ /	/ /	/ /
LABORATORY ID:	9602001-06				
QC_TYPE:	Normal				
% SOLIDS:	59.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	3	UJ	UG/KG												
DIBROMOMETHANE	3	U	UG/KG												
DICHLORODIFLUOROMETHANE	3	U	UG/KG												
ETHYLBENZENE	3	UJ	UG/KG												
IODOMETHANE	8	U	UG/KG												
ISOBUTYL ALCOHOL	34	U	UG/KG												
METHACRYLONITRILE	17	U	UG/KG												
METHYL METHACRYLATE	17	UJ	UG/KG												
METHYLENE CHLORIDE	2	J	UG/KG												
PROPIONITRILE	34	UR	UG/KG												
STYRENE	3	UJ	UG/KG												
TETRACHLOROETHENE	3	UJ	UG/KG												
TOLUENE	3	UJ	UG/KG												
TRANS-1,2-DICHLOROETHENE	3	U	UG/KG												
TRANS-1,3-DICHLOROPROPENE	3	UJ	UG/KG												
TRANS-1,4-DICHLORO-2-BUTENE	17	UR	UG/KG												
TRICHLOROETHENE	3	U	UG/KG												
TRICHLOROFLUOROMETHANE	3	U	UG/KG												
VINYL ACETATE	8	U	UG/KG												
VINYL CHLORIDE	3	U	UG/KG												
XYLENES, TOTAL	10	UJ	UG/KG												

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
1,2,4-TRICHLOROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
1,2-DICHLOROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
1,3,5-TRINITROBENZENE	2000	UJ	UG/KG	2500	UJ	UG/KG	1800	UJ	UG/KG	2500	UJ	UG/KG	2000	UJ	UG/KG
1,3-DICHLOROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
1,3-DINITROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
1,4-DICHLOROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
1,4-DIOXANE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
1,4-NAPHTHOQUINONE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
1-NAPHTHYLAMINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,4,5-TRICHLOROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,4,6-TRICHLOROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,4-DICHLOROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,4-DIMETHYLPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,4-DINITROPHENOL	820	U	UG/KG	1000	U	UG/KG	720	U	UG/KG	1000	U	UG/KG	800	U	UG/KG
2,4-DINITROTOLUENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,6-DICHLOROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2,6-DINITROTOLUENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-ACETYLAMINOFLUORENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-CHLORONAPHTHALENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-CHLOROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-METHYLNAPHTHALENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-METHYLPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-NAPHTHYLAMINE	410	UR	UG/KG	500	UR	UG/KG	360	UR	UG/KG	500	UR	UG/KG	400	UR	UG/KG
2-NITROANILINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-NITROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
2-PICOLINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
3 & 4-METHYLPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
3,3'-DICHLOROBENZIDINE	2000	UJ	UG/KG	2500	UJ	UG/KG	1800	UJ	UG/KG	2500	UJ	UG/KG	2000	UJ	UG/KG
3,3'-DIM YLBENZIDINE	2000	UR	UG/KG	2500	?	UG/KG	1800	UR	UG/KG	2500	UR	UG/KG	2000	'	UG/KG

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
3-NITROANILINE	410	UR	UG/KG	500	UR	UG/KG	360	UR	UG/KG	500	UR	UG/KG	400	UR	UG/KG
4-AMINOBIPHENYL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
4-CHLORO-3-METHYLPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
4-CHLOROANILINE	410	UR	UG/KG	500	UR	UG/KG	360	UR	UG/KG	500	UR	UG/KG	400	UR	UG/KG
4-CHLOROPHENYL PHENYL ETHER	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
4-NITROANILINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
4-NITROPHENOL	820	U	UG/KG	1000	U	UG/KG	720	U	UG/KG	1000	U	UG/KG	800	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	410	UR	UG/KG	500	UR	UG/KG	360	UR	UG/KG	500	UR	UG/KG	400	UR	UG/KG
5-NITRO-O-TOLUIDINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ACENAPHTHENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ACENAPHTHYLENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ACETOPHENONE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ANILINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ANTHRACENE	410	U	UG/KG	390	J	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ARAMITE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
BENZO(A)ANTHRACENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BENZO(A)PYRENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BENZO(B)FLUORANTHENE	410	U	UG/KG	390	J	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BENZO(G,H,I)PERYLENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BENZO(K)FLUORANTHENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BENZYL ALCOHOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
BUTYLBENZYL PHTHALATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
CHLOROBENZILATE	2000	U	UG/KG	2500	U	UG/KG	1800	U	UG/KG	2500	U	UG/KG	2000	U	UG/KG
CHRYSENE	410	U	UG/KG	280	J	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DI-N-BUTYL PHTHALATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG

SAMPLE NUMBER:	BG1SS-02	BG1SS-03	BG2SS-02	BG2SS-03	BG3SS-02
SAMPLE DATE:	02/02/96	02/02/96	01/31/96	01/31/96	02/02/96
LABORATORY ID:	9602001-03	9602001-04	9602001-01	9602001-02	9602001-05
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	80.0 %	66.0 %	92.0 %	66.0 %	83.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DIALLATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DIBENZO(A,H)ANTHRACENE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
DIBENZOFURAN	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DIETHYL PHTHALATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DIMETHOATE	2000	UJ	UG/KG	2500	UJ	UG/KG	1800	UJ	UG/KG	2500	UJ	UG/KG	2000	UJ	UG/KG
DIMETHYL PHTHALATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DINOSEB	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DIPHENYLAMINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
DISULFOTON	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ETHYL METHACRYLATE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
ETHYL METHANESULFONATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
FAMPHUR	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
FLUORANTHENE	410	U	UG/KG	660		UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
FLUORENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
HEXACHLOROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
HEXACHLOROBUTADIENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
HEXACHLOROETHANE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
HEXACHLOROPROPENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
INDENO(1,2,3-CD)PYRENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ISODRIN	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ISOPHORONE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
ISOSAFROLE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
KEPONE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
METHAPYRILENE	2000	U	UG/KG	2500	U	UG/KG	1800	U	UG/KG	2500	U	UG/KG	2000	U	UG/KG
METHYL METHANESULFONATE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
N-NITROSODIETHYLAMINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
N-NITROSODIMETHYLAMINE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
N-NITR(IPHENYLAMINE	410	U	UG/KG	500		UG/KG	360	U	UG/KG	500	U	UG/KG	400		UG/KG

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
N-NITROSOMORPHOLINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
N-NITROSOPIPERIDINE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
N-NITROSOPYRROLIDINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
NAPHTHALENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
NITROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
O,O,O-TRIETHYLPHOSPHOROTHIOATE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
O-TOLUIDINE	410	UJ	UG/KG	500	UJ	UG/KG	360	UJ	UG/KG	500	UJ	UG/KG	400	UJ	UG/KG
P-DIMETHYLAMINOAZOBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
P-PHENYLENEDIAMINE	820	UJ	UG/KG	1000	UJ	UG/KG	720	UJ	UG/KG	1000	UJ	UG/KG	800	UJ	UG/KG
PENTACHLOROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PENTACHLOROETHANE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PENTACHLORONITROBENZENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PENTACHLOROPHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PHENACETIN	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PHENANTHRENE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PHENOL	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PRONAMIDE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PYRENE	410	U	UG/KG	470	J	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
PYRIDINE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
SAFROLE	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
SULFOTEP	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG
THIONAZIN	410	U	UG/KG	500	U	UG/KG	360	U	UG/KG	500	U	UG/KG	400	U	UG/KG

SAMPLE NUMBER:	BG3SS-03									
SAMPLE DATE:	02/02/96		/ /		/ /		/ /		/ /	
LABORATORY ID:	9602001-06									
QC_TYPE:	Normal									
% SOLIDS:	59.0 %		100.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES												
1,2,4,5-TETRACHLOROBENZENE	560	U	UG/KG									
1,2,4-TRICHLOROBENZENE	560	U	UG/KG									
1,2-DICHLOROBENZENE	560	U	UG/KG									
1,3,5-TRINITROBENZENE	2800	UJ	UG/KG									
1,3-DICHLOROBENZENE	560	U	UG/KG									
1,3-DINITROBENZENE	560	U	UG/KG									
1,4-DICHLOROBENZENE	560	U	UG/KG									
1,4-DIOXANE	560	UJ	UG/KG									
1,4-NAPHTHOQUINONE	560	UJ	UG/KG									
1-NAPHTHYLAMINE	560	U	UG/KG									
2,3,4,6-TETRACHLOROPHENOL	560	U	UG/KG									
2,4,5-TRICHLOROPHENOL	560	U	UG/KG									
2,4,6-TRICHLOROPHENOL	560	U	UG/KG									
2,4-DICHLOROPHENOL	560	U	UG/KG									
2,4-DIMETHYLPHENOL	560	U	UG/KG									
2,4-DINITROPHENOL	1100	U	UG/KG									
2,4-DINITROTOLUENE	560	U	UG/KG									
2,6-DICHLOROPHENOL	560	U	UG/KG									
2,6-DINITROTOLUENE	560	U	UG/KG									
2-ACETYLAMINOFLUORENE	560	U	UG/KG									
2-CHLORONAPHTHALENE	560	U	UG/KG									
2-CHLOROPHENOL	560	U	UG/KG									
2-METHYL-4,6-DINITROPHENOL	560	U	UG/KG									
2-METHYLNAPHTHALENE	560	U	UG/KG									
2-METHYLPHENOL	560	U	UG/KG									
2-NAPHTHYLAMINE	560	UR	UG/KG									
2-NITROANILINE	560	U	UG/KG									
2-NITROPHENOL	560	U	UG/KG									
2-PICOLINE	560	U	UG/KG									
3 & 4-METHYLPHENOL	560	U	UG/KG									
3,3'-DICHLOROBENZIDINE	2800	UJ	UG/KG									
3,3'-DIMETHYLBENZIDINE	2800	UR	UG/KG									

SAMPLE NUMBER:	BG3SS-03			/ /		/ /		/ /		/ /
SAMPLE DATE:	02/02/96									
LABORATORY ID:	9602001-06									
QC_TYPE:	Normal									
% SOLIDS:	59.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT QUAL UNITS
SEMIVOLATILES										
3-METHYLCHOLANTHRENE	560	UJ	UG/KG							
3-NITROANILINE	560	UR	UG/KG							
4-AMINOBIPHENYL	560	U	UG/KG							
4-BROMOPHENYL PHENYL ETHER	560	U	UG/KG							
4-CHLORO-3-METHYLPHENOL	560	U	UG/KG							
4-CHLOROANILINE	560	UR	UG/KG							
4-CHLOROPHENYL PHENYL ETHER	560	U	UG/KG							
4-NITROANILINE	560	U	UG/KG							
4-NITROPHENOL	1100	U	UG/KG							
4-NITROQUINOLINE-1-OXIDE	560	UR	UG/KG							
5-NITRO-O-TOLUIDINE	560	U	UG/KG							
7,12-DIMETHYLBENZ(A)ANTHRACENE	560	UJ	UG/KG							
A,A-DIMETHYLPHENETHYLAMINE	560	U	UG/KG							
ACENAPHTHENE	560	U	UG/KG							
ACENAPHTHYLENE	560	U	UG/KG							
ACETOPHENONE	560	U	UG/KG							
ANILINE	560	U	UG/KG							
ANTHRACENE	560	U	UG/KG							
ARAMITE	560	UJ	UG/KG							
BENZO(A)ANTHRACENE	560	U	UG/KG							
BENZO(A)PYRENE	560	U	UG/KG							
BENZO(B)FLUORANTHENE	560	U	UG/KG							
BENZO(G,H,I)PERYLENE	560	U	UG/KG							
BENZO(K)FLUORANTHENE	560	U	UG/KG							
BENZYL ALCOHOL	560	U	UG/KG							
BIS(2-CHLOROETHOXY)METHANE	560	U	UG/KG							
BIS(2-CHLOROETHYL)ETHER	560	U	UG/KG							
BIS(2-ETHYLHEXYL)PHTHALATE	560	U	UG/KG							
BUTYLBENZYL PHTHALATE	560	U	UG/KG							
CHLOROBENZILATE	2800	U	UG/KG							
CHRYSENE	560	U	UG/KG							
DI-N-BUTYL PHTHALATE	560	U	UG/KG							

SAMPLE NUMBER:	BG3SS-03								
SAMPLE DATE:	02/02/96		/ /		/ /		/ /		/ /
LABORATORY ID:	9602001-06								
QC_TYPE:	Normal								
% SOLIDS:	59.0 %		100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
SEMIVOLATILES									
DI-N-OCTYL PHTHALATE	560	U UG/KG							
DIALLATE	560	U UG/KG							
DIBENZO(A,H)ANTHRACENE	560	UJ UG/KG							
DIBENZOFURAN	560	U UG/KG							
DIETHYL PHTHALATE	560	U UG/KG							
DIMETHOATE	2800	UJ UG/KG							
DIMETHYL PHTHALATE	560	U UG/KG							
DINOSEB	560	U UG/KG							
DIPHENYLAMINE	560	U UG/KG							
DISULFOTON	560	U UG/KG							
ETHYL METHACRYLATE	560	UJ UG/KG							
ETHYL METHANESULFONATE	560	U UG/KG							
FAMPHUR	560	UJ UG/KG							
FLUORANTHENE	560	U UG/KG							
FLUORENE	560	U UG/KG							
HEXACHLOROBENZENE	560	U UG/KG							
HEXACHLOROBUTADIENE	560	U UG/KG							
HEXACHLOROCYCLOPENTADIENE	560	U UG/KG							
HEXACHLOROETHANE	560	U UG/KG							
HEXACHLOROPROPENE	560	U UG/KG							
INDENO(1,2,3-CD)PYRENE	560	U UG/KG							
ISODRIN	560	U UG/KG							
ISOPHORONE	560	U UG/KG							
ISOSAFROLE	560	U UG/KG							
KEPONE	560	UJ UG/KG							
METHAPYRILENE	2800	U UG/KG							
METHYL METHANESULFONATE	560	UJ UG/KG							
N-NITROSO-DI-N-BUTYLAMINE	560	U UG/KG							
N-NITROSO-DI-N-PROPYLAMINE	560	U UG/KG							
N-NITROSODIETHYLAMINE	560	U UG/KG							
N-NITROSODIMETHYLAMINE	560	UJ UG/KG							
N-NITROSODIPHENYLAMINE	560	U UG/KG							

SAMPLE NUMBER:	BG3SS-03			/ /		/ /		/ /		/ /
SAMPLE DATE:	02/02/96									
LABORATORY ID:	9602001-06									
QC_TYPE:	Normal									
% SOLIDS:	59.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT QUAL UNITS
SEMIVOLATILES										
N-NITROSOMETHYLETHYLAMINE	560	UJ	UG/KG							
N-NITROSOMORPHOLINE	560	U	UG/KG							
N-NITROSOPIPERIDINE	560	UJ	UG/KG							
N-NITROSOPYRROLIDINE	560	U	UG/KG							
NAPHTHALENE	560	U	UG/KG							
NITROBENZENE	560	U	UG/KG							
O,O,O-TRIETHYLPHOSPHOROTHIOATE	560	U	UG/KG							
O-TOLUIDINE	560	UJ	UG/KG							
P-DIMETHYLAMINOAZOBENZENE	560	U	UG/KG							
P-PHENYLENEDIAMINE	1100	UJ	UG/KG							
PENTACHLOROBENZENE	560	U	UG/KG							
PENTACHLOROETHANE	560	U	UG/KG							
PENTACHLORONITROBENZENE	560	U	UG/KG							
PENTACHLOROPHENOL	560	U	UG/KG							
PHENACETIN	560	U	UG/KG							
PHENANTHRENE	560	U	UG/KG							
PHENOL	560	U	UG/KG							
PRONAMIDE	560	U	UG/KG							
PYRENE	560	U	UG/KG							
PYRIDINE	560	U	UG/KG							
SAFROLE	560	U	UG/KG							
SULFOTEP	560	U	UG/KG							
THIONAZIN	560	U	UG/KG							

CTO 007 - NAS KEY WEST
SOIL D/
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	Normal			Dilution			Normal			Dilution			Normal		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.6	U	UG/KG	10.0	U	UG/KG	1.4	UJ	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
4,4'-DDE	53.3		UG/KG	10.0	U	UG/KG	1.4	UJ	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
4,4'-DDT	2.6	J	UG/KG	10.0	U	UG/KG	9.3	J	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
ALDRIN	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
ALPHA-BHC	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
AROCLOR-1016	5.2	U	UG/KG	31.4	U	UG/KG	4.5	UJ	UG/KG	125	UJ	UG/KG	5.0	U	UG/KG
AROCLOR-1221	5.2	U	UG/KG	31.4	U	UG/KG	4.5	UJ	UG/KG	125	UJ	UG/KG	5.0	U	UG/KG
AROCLOR-1232	5.2	U	UG/KG	31.4	U	UG/KG	4.5	UJ	UG/KG	125	UJ	UG/KG	5.0	U	UG/KG
AROCLOR-1242	5.2	U	UG/KG	31.4	U	UG/KG	4.5	UJ	UG/KG	125	UJ	UG/KG	5.0	U	UG/KG
AROCLOR-1248	5.2	U	UG/KG	31.4	U	UG/KG	4.5	UJ	UG/KG	125	UJ	UG/KG	5.0	U	UG/KG
AROCLOR-1254	5.2	U	UG/KG	31.4	U	UG/KG	4.5	UJ	UG/KG	125	UJ	UG/KG	5.0	U	UG/KG
AROCLOR-1260	5.2	U	UG/KG	31.4	U	UG/KG	4.5	UJ	UG/KG	125	UJ	UG/KG	5.0	U	UG/KG
BETA-BHC	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
CHLORDANE	10.3	U	UG/KG	62.7	U	UG/KG	9.0	UJ	UG/KG	250	UJ	UG/KG	9.9	U	UG/KG
DELTA-BHC	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
DIELDRIN	1.6	U	UG/KG	10.0	U	UG/KG	1.4	UJ	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
ENDOSULFAN I	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
ENDOSULFAN II	1.6	U	UG/KG	10.0	U	UG/KG	1.4	UJ	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
ENDOSULFAN SULFATE	1.6	U	UG/KG	10.0	U	UG/KG	1.4	UJ	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
ENDRIN	1.6	U	UG/KG	10.0	U	UG/KG	1.4	UJ	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
ENDRIN ALDEHYDE	1.6	U	UG/KG	10.0	U	UG/KG	1.4	UJ	UG/KG	40.0	UJ	UG/KG	1.6	U	UG/KG
GAMMA-BHC (LINDANE)	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
HEPTACHLOR	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
HEPTACHLOR EPOXIDE	0.83	U	UG/KG	5.0	U	UG/KG	0.72	UJ	UG/KG	20.0	UJ	UG/KG	0.79	U	UG/KG
METHOXYCHLOR	8.3	U	UG/KG	50.2	U	UG/KG	7.2	UJ	UG/KG	200	UJ	UG/KG	7.9	U	UG/KG
METHYL PARATHION	2.1	U	UG/KG	12.6	U	UG/KG	2.2	J	UG/KG	50.1	UJ	UG/KG	2.0	U	UG/KG
PARATHION	2.1	U	UG/KG	12.6	U	UG/KG	1.8	UJ	UG/KG	50.1	UJ	UG/KG	2.0	U	UG/KG
PHORATE	2.1	U	UG/KG	12.6	U	UG/KG	1.8	UJ	UG/KG	50.1	UJ	UG/KG	2.0	U	UG/KG
TOXAPHENE	41.0	U	UG/KG	249	U	UG/KG	35.7	UJ	UG/KG	992	UJ	UG/KG	39.3	U	UG/KG

SAMPLE NUMBER:	BG3SS-03				
SAMPLE DATE:	02/02/96	/ /	/ /	/ /	/ /
LABORATORY ID:	9602001-06				
QC_TYPE:	Dilution				
% SOLIDS:	59.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	11.1	U	UG/KG												
4,4'-DDE	16.0		UG/KG												
4,4'-DDT	11.1	U	UG/KG												
ALDRIN	5.5	U	UG/KG												
ALPHA-BHC	5.5	U	UG/KG												
AROCLOR-1016	34.6	U	UG/KG												
AROCLOR-1221	34.6	U	UG/KG												
AROCLOR-1232	34.6	U	UG/KG												
AROCLOR-1242	34.6	U	UG/KG												
AROCLOR-1248	34.6	U	UG/KG												
AROCLOR-1254	34.6	U	UG/KG												
AROCLOR-1260	34.6	U	UG/KG												
BETA-BHC	5.5	U	UG/KG												
CHLORDANE	69.1	U	UG/KG												
DELTA-BHC	5.5	U	UG/KG												
DIELDRIN	11.1	U	UG/KG												
ENDOSULFAN I	5.5	U	UG/KG												
ENDOSULFAN II	11.1	U	UG/KG												
ENDOSULFAN SULFATE	11.1	U	UG/KG												
ENDRIN	11.1	U	UG/KG												
ENDRIN ALDEHYDE	11.1	U	UG/KG												
GAMMA-BHC (LINDANE)	5.5	U	UG/KG												
HEPTACHLOR	5.5	U	UG/KG												
HEPTACHLOR EPOXIDE	5.5	U	UG/KG												
METHOXYCHLOR	55.3	U	UG/KG												
METHYL PARATHION	13.8	U	UG/KG												
PARATHION	13.8	U	UG/KG												
PHORATE	13.8	U	UG/KG												
TOXAPHENE	274	U	UG/KG												

SAMPLE NUMBER:	BG1SS-02			BG1SS-03			BG2SS-02			BG2SS-03			BG3SS-02		
SAMPLE DATE:	02/02/96			02/02/96			01/31/96			01/31/96			02/02/96		
LABORATORY ID:	9602001-03			9602001-04			9602001-01			9602001-02			9602001-05		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	80.0 %			66.0 %			92.0 %			66.0 %			83.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
HERBICIDES															
2,4,5-T	50.0	UJ	UG/KG	60.6	U	UG/KG	43.5	U	UG/KG	60.6	U	UG/KG	48.2	U	UG/KG
2,4,5-TP (SILVEX)	25.0	UJ	UG/KG	30.3	U	UG/KG	21.7	U	UG/KG	30.3	U	UG/KG	24.1	U	UG/KG
2,4-D	50.0	UJ	UG/KG	60.6	U	UG/KG	43.5	U	UG/KG	60.6	U	UG/KG	48.2	U	UG/KG

SAMPLE NUMBER:	BG3SS-03								
SAMPLE DATE:	02/02/96		/ /		/ /		/ /		/ /
LABORATORY ID:	9602001-06								
QC_TYPE:	NORMAL								
% SOLIDS:	59.0 %		100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	**QUAL**	**RESULT**	**QUAL**	**RESULT**	**QUAL**	**RESULT**	**QUAL**	**RESULT**	**QUAL**
HERBICIDES									
2,4,5-T	67.8	U UG/KG							
2,4,5-TP (SILVEX)	33.9	U UG/KG							
2,4-D	67.8	U UG/KG							

INORGANIC DATA VALIDATION
SDG 62028W

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-007

TO : KEVIN WALTER

DATE: APRIL 18, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - TAL METALS AND CYANIDE
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG 62028W

1/Aqueous/ RB01-020296

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. 62028W; one (1) aqueous sample was included for TAL metals plus cyanide analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and cyanide. The sample was collected by Brown and Root Environmental on February 2, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level C and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
• Laboratory Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method blanks at the maximum concentrations indicated below:

Analyte	Maximum Concentration	Action Level (Aqueous)
aluminum[1]	14.5 ug/L	72.5 ug/L
beryllium	0.6 ug/L	3.0 ug/L
cadmium	0.6 ug/L	3.0 ug/L
calcium[1]	13.7 ug/L	68.5 ug/L
iron	7.3 ug/L	36.5 ug/L
magnesium[1]	12.4 ug/L	62.0 ug/L
nickel[1]	2.5 ug/L	12.5 ug/L
silver	1.1 ug/L	5.5 ug/L
sodium[1]	35.4 ug/L	177 ug/L
vanadium	0.8 ug/L	4.0 ug/L

Samples affected : All

Maximum concentration found in a laboratory preparation blank.

An action level of 5X the maximum positive concentration has been established to evaluate the sample data. Sample dilution factors were considered prior to the application of the action levels. Positive results for aluminum, iron and magnesium within the action levels are qualified as nondetected, "U". No actions were required for the remaining analytes as all results were greater than the action level or nondetects.

Executive Summary

Laboratory Performance: Several contaminants were found in the laboratory method blanks.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

C-49-04-6-007

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

achments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

C-49-04-6-007

NAS Key West
SDG 62028W

TABLE 1 - RECOMMENDATION SUMMARY

Aluminum	A[1]	Magnesium	A[1]
Antimony		Manganese	
Arsenic		Mercury	
Barium		Nickel	
Beryllium		Potassium	
Cadmium		Selenium	
Calcium		Silver	
Chromium		Sodium	
Cobalt		Thallium	
Copper		Vanadium	
Iron	A[1]	Zinc	
Lead		Cyanide	

If the field is left blank, the qualifier is A - Accept all data.

A[1] - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO 0[illegible] NAS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	RB01-020296											
SAMPLE DATE:	02/02/96			/ /			/ /			/ /		
LABORATORY ID:	9602028-10											
QC_TYPE:	Normal											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**
INORGANICS												
ALUMINUM	37.6	U	UG/L									
ANTIMONY	2.6	U	UG/L									
ARSENIC	4.9	U	UG/L									
BARIUM	0.64		UG/L									
BERYLLIUM	0.30	U	UG/L									
CADMIUM	0.40	U	UG/L									
CALCIUM	100		UG/L									
CHROMIUM	1.3		UG/L									
COBALT	0.80	U	UG/L									
COPPER	1.2	U	UG/L									
CYANIDE	0.80	U	UG/L									
IRON	13.9	U	UG/L									
LEAD	1.8	U	UG/L									
MAGNESIUM	32.5	U	UG/L									
MANGANESE	0.60	U	UG/L									
MERCURY	0.10	U	UG/L									
NICKEL	1.3	U	UG/L									
POTASSIUM	17.8		UG/L									
SELENIUM	4.8	U	UG/L									
SILVER	0.70	U	UG/L									
SODIUM	712		UG/L									
THALLIUM	4.5	U	UG/L									
VANADIUM	0.70	U	UG/L									
ZINC	4.0		UG/L									

ORGANIC DATA VALIDATION
SDG 62028W

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-037

TO: KEVIN WALTER **DATE:** APRIL 18, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOA/SVOA/PEST/PCB/HERB ORGANICS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG 62028W

SAMPLES: Waters:

S3MW-1	S3MW-2	S3MW-6
S3MW-7	S3DPGW-01	S3MW-8
S3MW-9		
TB01-013196	TB01-020296	RB01-020296

The sample set for the CTO 007 NAS Key West site, SDG 62028W, consists of seven (7) aqueous environmental samples, two (2) trip blanks and one (1) rinsate blank. All samples were analyzed for Appendix IX volatile and semivolatile compounds, excluding the trip blanks which were analyzed for the volatile compounds only. The rinsate blank, RB01-020296, was also analyzed for Target Compound List (TCL) pesticide/PCB and herbicide organic compounds. The field crew designated sample S3MW-6 for Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis. One field duplicate pair was included in this SDG(S3MW-7/S3DPGW-01).

The samples were collected by Brown and Root Environmental on January 31st, February 1st and 2nd, 1996 and analyzed by General Engineering Laboratories, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Methods 8240, 8270, 8080 and 8150 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- * Laboratory and field blank analyses
- Field Duplicate Precision

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatiles

Initial and continuing calibration Relative Response Factors for acrolein, propionitrile and trans-1,4-dichloro-2-butene were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by these noncompliances. As a result of this major calibration noncompliance, nondetected results for the aforementioned compounds are considered unreliable and were rejected, (UR), in the affected samples.

The following volatile compounds were detected in the laboratory method and field quality control blanks at the maximum concentrations indicated below:

Compound	Maximum Concentration	Action Level
2-Hexanone	0.52 µg/L	2.6 µg/L
Methylene Chloride	0.76 µg/L	7.6 µg/L
Acetone*	2 µg/L	20 µg/L

* - Maximum concentration of contaminant detected in a field quality control blank.

Samples Affected: All.

Sample aliquot size and dilution factors were taken into consideration during the application of all action levels. Positive results for methylene chloride and acetone reported at concentrations below the detection limit were replaced with revised detection limits and qualified nondetected, (U). No action was taken for 2-hexanone since no positive results were reported for these compounds. It should be noted that field quality control blanks are not qualified based on field quality control blank contamination.

Poor surrogate Percent Recoveries (%Rs) were reported in samples RB01-020296 and S3MW-7. As a result the laboratory reanalyzed these samples and reported improved %Rs. Therefore, the reanalyses were chosen for validation. No further action was taken.

Poor internal standard areas for 1,4-dichlorobenzene-d4 were reported in the following samples TB01-013196, S3MW-1, S3MW-2, S3MW-7, S3MW-8, S3MW-9 and S3DPGW-01. Samples S3MW-7 and S3DPGW-01 also had poor areas reported for chlorobenzene-d5. The laboratory reanalyzed these samples and found improved areas in all of the aforementioned samples. Therefore, the data reviewer chose the reanalyses for validation. No further action was taken.

It should be noted that the laboratory used 20ml of sample for each sample analysis. This deviation was not addressed in the case narrative. No validation actions were taken.
The laboratory only analyzed two method blanks, however three bromofluorobenzene (BFB) tunes were analyzed with the associated environmental samples. It is a common laboratory practice to analyze a laboratory method blank during each 12 hour BFB tune. This practice precludes the possibility of cross-contamination which may be present form standardization. The lack of a blank associated with a BFB tune is therefore not recommended or advised. Hence, the validator was only able to apply two laboratory method blanks to all the samples.

It should be noted that sample S3MW-2 was analyzed at a 10-fold dilution. Therefore, reporting limits are elevated.

Methyl methacrylate was analyzed for both volatile and semivolatile fractions. Since lower detection limits are obtained in the volatile fraction, the sample results for this compound were reported from the volatile fraction. Methyl methacrylate was deleted from the semivolatile target compound list contained in Appendix A - Qualified Analytical Results.

Semivolatiles

An initial calibration RRF for 4-nitroquioline-1-oxide and a continuing calibration RRF for 3,3'-dimethylbenzidine were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

4-Chloroaniline and 2-naphthylamine also had initial and/or continuing calibration RRFs less than 0.050 reported. However, no action was taken since the affected samples were not used in validation.

Di-n-butylphthalate was reported in the field quality control blank RB01-020296. No qualifications were made in the environmental samples for blank contamination since no positive results were reported for di-n-butylphthalate. It should be noted that field quality control blanks are not qualified based on field quality control blank contamination.

Zero percent surrogate recoveries for the acid surrogates were reported in samples S3MW-6, S3MW-9, S3MW-7 and S3DPGW-01. Low %Rs for two of the acid surrogates were reported in sample S3MW-1. As a result, the laboratory re-extracted and reanalyzed these samples, however the re-extraction was performed grossly outside of the 7 day holding period. Therefore, the original analyses of the aforementioned samples were chosen for validation. It should be noted that the low acid surrogate recoveries would resort in biased low acidic compound data. No further action was taken since no qualifications are being made for surrogate noncompliances.

Sample S3MW-2 was analyzed at a 4-fold dilution. Hence, the reporting limits are elevated.

Pesticide/PCBs

Sample RB01-020296 was extracted grossly outside the 7 day holding time for pesticide/PCB analysis. As a result of this severe noncompliance, positive results are qualified as estimated, (J), and nondetected results are considered unreliable and were rejected, (UR).

Herbicides

It should be noted that the extraction date on the laboratory Form I for sample RB01-020296 was incorrect. The data reviewer has amended the appropriate form.

Samples MW5-1, S2DPGW-01, S1MW-4 and S1MW-6 were analyzed at various dilutions. Hence, the reporting levels are elevated.

MEMO TO: KEVIN WALTER
DATE: APRIL 18, 1996 - PAGE 4

Additional Comments

Positive results reported at concentrations less than the Contract Required Quantitation Limit (CRQL) are are qualified as estimated, (J).

It should be noted that field quality control blanks can only be applied for blank contamination to those environmental samples which were sampled on the same day as the particular blank. For example, contamination present in samples TB01-020296 and RB01-020296 cannot be used to qualify the environmental samples in this SDG since they were sampled on different days.

It should be noted that the laboratory case narrative did not report the noncompliances noted above in the volatile and pesticide/PCB parameters. No further action was taken.

Executive Summary

Laboratory Performance: Sample RB01-020296 was extracted grossly outside the 7 day holding time for pesticide/PCB analysis. Initial and/or continuing calibration RRFs for acrolein, propionitrile, trans-1,4-dichloro-2-butene and 3,3'-dichlorobenzidine were reported less than the 0.050 quality control limit. Methylene chloride and 2-hexanone were reported in the volatile laboratory method blank. Poor surrogate %Rs were reported in samples RB01-020296 and S3MW-7. Poor internal standard areas for 1,4-dichlorobenzene-d4 were reported in the following samples TB01-013196, S3MW-1, S3MW-2, S3MW-7, S3MW-8, S3MW-9 and S3DPGW-01. Zero percent surrogate recoveries for the acid surrogates were reported in samples S3MW-6, S3MW-9, S3MW-7 and S3DPGW-01. Low %Rs for two of the acid surrogates were reported in sample S3MW-1.

Other Factors Affecting Data Quality: Di-n-butylphthalate was reported in the field quality control blank RB01-020296.

MEMO TO: KEVIN WALTER
DATE: APRIL 18, 1996 - PAGE 5

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG 62028W

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA		SVOA	PEST/PCB	HERB
S3MW-1	A^2	R^1	$R^{2,4}$		
S3MW-2	$A^{1,2}$ J^1	R^1	$R^{2,4}$		
S3MW-6	J^1	R^1	$R^{2,4}$		
S3MW-7	A^2	R^1	$R^{2,4}$		
S3DPGW-01	A^2 J^1	R^1	$R^{2,4}$		
S3MW-8	A^2 J^1	R^1	$R^{2,4}$		
S3MW-9	A^2	R^1	$R^{2,4}$		
TB01-013196	A^1 J^1	R^1			
TB01-020296	A^1 J^1	R^1			
RB01-020296	A^1 J^1	R^1	$R^{2,4}$	R^3	

If the field is left blank, the qualifier is A - Accept all data.

A^1 - Accept data, but change positive results for methylene chloride to a revised detection limit and qualify as nondetected, (U), as a result of laboratory method blank contamination.

A^2 - Accept data, but change positive results for acetone to a revised detection limit and qualify as nondetected, (U), as a result of field quality control blank contamination.

J^1 - Accept data, but qualify positive results reported at concentrations less than the CRQL as estimated, (J).

R^1 - Reject, (UR), nondetected results for acrolein, propionitrile and trans-1,4-dichloro-2-butene, as a result of initial and continuing calibration RRFs less than 0.050.

R^2 - Reject, (UR), nondetected results for 3,3'-dichlorobenzidine as a result of a continuing calibration RRF less than 0.050.

R^3 - Reject, (UR), nondetected results and qualify positive results as estimated, (J), as a result of a gross exceedence of a holding time requirement for extraction.

R^4 - Reject, (UR), nondetected results for 4-nitroquioline-1-oxide as a result of an initial calibration RRF less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 0[illegible] NAS KEY WEST
WATE[illegible]ATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	RB01-020296			S3DPGW-01			S3MW-1			S3MW-2			S3MW-6		
SAMPLE DATE:	02/02/96			02/01/96			02/01/96			02/01/96			01/31/96		
LABORATORY ID:	9602028-10			9602028-08			9602028-04			9602028-03			9602028-02		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,1,1-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,1,2,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,1,2-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,1-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,1-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,2,3-TRICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,2-DIBROMOETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,2-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
1,2-DICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
2-BUTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	50	U	UG/L	5	U	UG/L
2-CHLORO-1,3-BUTADIENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
2-HEXANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	50	U	UG/L	5	U	UG/L
4-METHYL-2-PENTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	50	U	UG/L	5	U	UG/L
ACETONE	4	J	UG/L	5	U	UG/L	5	U	UG/L	50	U	UG/L	5	U	UG/L
ACETONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	100	U	UG/L	10	U	UG/L
ACROLEIN	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	200	UR	UG/L	20	UR	UG/L
ACRYLONITRILE	20	U	UG/L	20	U	UG/L	20	U	UG/L	200	U	UG/L	20	U	UG/L
ALLYL CHLORIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	100	U	UG/L	10	U	UG/L
BENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	20	U	UG/L	20	U	UG/L	20	U	UG/L	200	U	UG/L	20	U	UG/L
BROMODICHLOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
BROMOFORM	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
BROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	3		UG/L
CARBON DISULFIDE	5	U	UG/L	5	U	UG/L	12		UG/L	50	U	UG/L	5	U	UG/L
CARBON TETRACHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
CHLOROBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
CHLORODIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
CHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
CHLO[illegible]FORM	0.289	J	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
CHL[illegible]IETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	J	UG/L

SAMPLE NUMBER:	RB01-020296			S3DPGW-01			S3MW-1			S3MW-2			S3MW-6		
SAMPLE DATE:	02/02/96			02/01/96			02/01/96			02/01/96			01/31/96		
LABORATORY ID:	9602028-10			9602028-08			9602028-04			9602028-03			9602028-02		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
DIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
DICHLORODIFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
ETHYL CYANIDE	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	200	UR	UG/L	20	UR	UG/L
ETHYLBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	9	J	UG/L	2	U	UG/L
IODOMETHANE	5	U	UG/L	5	U	UG/L	5	U	UG/L	50	U	UG/L	6		UG/L
ISOBUTYL ALCOHOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	200	U	UG/L	20	U	UG/L
METHACRYLONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	100	U	UG/L	10	U	UG/L
METHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	100	U	UG/L	10	U	UG/L
METHYLENE CHLORIDE	5	U	UG/L	5	U	UG/L	5	U	UG/L	50	U	UG/L	5	U	UG/L
STYRENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
TETRACHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
TOLUENE	2	U	UG/L	1	J	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
TRANS-1,2-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
TRANS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	100	UR	UG/L	10	UR	UG/L
TRICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
TRICHLOROFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
VINYL ACETATE	5	U	UG/L	5	U	UG/L	5	U	UG/L	50	U	UG/L	5	U	UG/L
VINYL CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	20	U	UG/L	2	U	UG/L
XYLENES, TOTAL	6	U	UG/L	6	U	UG/L	2		UG/L	9	J	UG/L	1	J	UG/L

SAMPLE NUMBER:	S3MW-7	S3MW-8	S3MW-9	TB01-013196	TB01-020296
SAMPLE DATE:	02/01/96	02/01/96	02/01/96	01/31/96	02/02/96
LABORATORY ID:	9602028-07	9602028-05	9602028-06	9602028-01	9602028-09
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,1-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2,2-TETRACHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1,2-TRICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,1-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2,3-TRICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DIBROMOETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
1,2-DICHLOROPROPANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
2-BUTANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
2-CHLORO-1,3-BUTADIENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
2-HEXANONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
4-METHYL-2-PENTANONE	5	U	UG/L	3	J	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ACETONE	5	U	UG/L	5	U	UG/L	5	U	UG/L	2	J	UG/L	5	U	UG/L
ACETONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
ACROLEIN	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
ACRYLONITRILE	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
ALLYL CHLORIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
BENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
BROMODICHLOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOFORM	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
BROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CARBON DISULFIDE	5	U	UG/L	2	J	UG/L	5	U	UG/L	5	U	UG/L	4	J	UG/L
CARBON TETRACHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROBENZENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLORODIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLOROETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLO[illegible]ORM	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
CHLO[illegible]METHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L

SAMPLE NUMBER:	S3MW-7			S3MW-8			S3MW-9			TB01-013196			TB01-020296		
SAMPLE DATE:	02/01/96			02/01/96			02/01/96			01/31/96			02/02/96		
LABORATORY ID:	9602028-07			9602028-05			9602028-06			9602028-01			9602028-09		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CIS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DIBROMOMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
DICHLORODIFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
ETHYL CYANIDE	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L	20	UR	UG/L
ETHYLBENZENE	2	U	UG/L	5		UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
IODOMETHANE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
ISOBUTYL ALCOHOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L	20	U	UG/L
METHACRYLONITRILE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L	10	U	UG/L
METHYLENE CHLORIDE	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
STYRENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TETRACHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TOLUENE	0.47	J	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,2-DICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,3-DICHLOROPROPENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L
TRICHLOROETHENE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
TRICHLOROFLUOROMETHANE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
VINYL ACETATE	5	U	UG/L	3	J	UG/L	5	U	UG/L	5	U	UG/L	5	U	UG/L
VINYL CHLORIDE	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L	2	U	UG/L
XYLENES, TOTAL	6	U	UG/L	2		UG/L	6	U	UG/L	6	U	UG/L	6	U	UG/L

CTO C NAS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	RB01-020296	S3DPGW-01	S3MW-1	S3MW-2	S3MW-6
SAMPLE DATE:	02/02/96	02/01/96	02/01/96	02/01/96	01/31/96
LABORATORY ID:	9602028-10	9602028-08	9602028-04	9602028-03	9602028-02
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1,2,4-TRICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1,2-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1,3,5-TRINITROBENZENE	50	U	UG/L	50	U	UG/L	50	U	UG/L	200	U	UG/L	50	U	UG/L
1,3-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1,3-DINITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1,4-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1,4-DIOXANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1,4-NAPHTHOQUINONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
1-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,3,4,6-TETRACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,4,5-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,4,6-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,4-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,4-DIMETHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,4-DINITROPHENOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	80	U	UG/L	20	U	UG/L
2,4-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,6-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2,6-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-ACETYLAMINOFLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-CHLORONAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-CHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-METHYL-4,6-DINITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-METHYLNAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	67		UG/L	10	U	UG/L
2-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-NITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
2-PICOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
3 & 4-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
3,3'-D[illegible]LOROBENZIDINE	50	U	UG/L	50	U	UG/L	50	U	UG/L	200	U	UG/L	50	U	UG/L
3,3'-L[illegible]HYLBENZIDINE	50	UR	UG/L	50	UR	UG/L	50	UR	UG/L	200	UR	UG/L	50	R	UG/L

SAMPLE NUMBER:	RB01-020296			S3DPGW-01			S3MW-1			S3MW-2			S3MW-6		
SAMPLE DATE:	02/02/96			02/01/96			02/01/96			02/01/96			01/31/96		
LABORATORY ID:	9602028-10			9602028-08			9602028-04			9602028-03			9602028-02		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLCHOLANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
3-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
4-AMINOBIPHENYL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
4-BROMOPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
4-CHLORO-3-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
4-CHLOROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
4-CHLOROPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
4-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
4-NITROPHENOL	20	U	UG/L	20	U	UG/L	20	U	UG/L	80	U	UG/L	20	U	UG/L
4-NITROQUINOLINE-1-OXIDE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L	40	UR	UG/L	10	UR	UG/L
5-NITRO-O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
7,12-DIMETHYLBENZ(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
A,A-DIMETHYLPHENETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ACENAPHTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ACENAPHTHYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ACETOPHENONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ARAMITE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BENZO(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BENZO(A)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BENZO(B)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BENZO(G,H,I)PERYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BENZO(K)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BENZYL ALCOHOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BIS(2-CHLOROETHOXY)METHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BIS(2-CHLOROETHYL)ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
BUTYLBENZYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
CHLOROBENZILATE	50	U	UG/L	50	U	UG/L	50	U	UG/L	200	U	UG/L	50	U	UG/L
CHRYSENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DI-N-BUTYL PHTHALATE	54		UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L

SAMPLE NUMBER:	RB01-020296	S3DPGW-01	S3MW-1	S3MW-2	S3MW-6
SAMPLE DATE:	02/02/96	02/01/96	02/01/96	02/01/96	01/31/96
LABORATORY ID:	9602028-10	9602028-08	9602028-04	9602028-03	9602028-02
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DIALLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DIBENZO(A,H)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DIBENZOFURAN	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DIETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DIMETHOATE	50	U	UG/L	50	U	UG/L	50	U	UG/L	200	U	UG/L	50	U	UG/L
DIMETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DINOSEB	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
DISULFOTON	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ETHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ETHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
FAMPHUR	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
FLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
HEXACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
HEXACHLOROBUTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
HEXACHLOROCYCLOPENTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
HEXACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
HEXACHLOROPROPENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
INDENO(1,2,3-CD)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ISODRIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ISOPHORONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
ISOSAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
KEPONE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
METHAPYRILENE	50	U	UG/L	50	U	UG/L	50	U	UG/L	200	U	UG/L	50	U	UG/L
METHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NITROSO-DI-N-BUTYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NITROSO-DI-N-PROPYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NITROSODIETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NIT[illegible]ODIMETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NI[illegible]ODIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	[illegible]	UG/L

SAMPLE NUMBER:	RB01-020296			S3DPGW-01			S3MW-1			S3MW-2			S3MW-6		
SAMPLE DATE:	02/02/96			02/01/96			02/01/96			02/01/96			01/31/96		
LABORATORY ID:	9602028-10			9602028-08			9602028-04			9602028-03			9602028-02		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %			0.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
N-NITROSOMETHYLETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NITROSOMORPHOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NITROSOPIPERIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
N-NITROSOPYRROLIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
NAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	114		UG/L	10	U	UG/L
NITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
O,O,O-TRIETHYLPHOSPHOROTHIOATE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
P-DIMETHYLAMINOAZOBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
P-PHENYLENEDIAMINE	20	U	UG/L	20	U	UG/L	20	U	UG/L	80	U	UG/L	20	U	UG/L
PENTACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PENTACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PENTACHLORONITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PENTACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PHENACETIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PHENANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PRONAMIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
PYRIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
SAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
SULFOTEP	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L
THIONAZIN	10	U	UG/L	10	U	UG/L	10	U	UG/L	40	U	UG/L	10	U	UG/L

SAMPLE NUMBER:	S3MW-7			S3MW-8			S3MW-9			/ /		/ /	
SAMPLE DATE:	02/01/96			02/01/96			02/01/96						
LABORATORY ID:	9602028-07			9602028-05			9602028-06						
QC_TYPE:	Normal			Normal			Normal						
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
SEMIVOLATILES													
1,2,4,5-TETRACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1,2,4-TRICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1,2-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1,3,5-TRINITROBENZENE	50	U	UG/L	50	U	UG/L	50	U	UG/L				
1,3-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1,3-DINITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1,4-DICHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1,4-DIOXANE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1,4-NAPHTHOQUINONE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
1-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,3,4,6-TETRACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,4,5-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,4,6-TRICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,4-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,4-DIMETHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,4-DINITROPHENOL	20	U	UG/L	20	U	UG/L	20	U	UG/L				
2,4-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,6-DICHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2,6-DINITROTOLUENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-ACETYLAMINOFLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-CHLORONAPHTHALENE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-CHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-METHYL-4,6-DINITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-METHYLNAPHTHALENE	10	U	UG/L	11		UG/L	10	U	UG/L				
2-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-NAPHTHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-NITROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
2-PICOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L				
3 & 4-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L				
3,3'-DI[illegible]OROBENZIDINE	50	U	UG/L	50	U	UG/L	50	U	UG/L				
3,3'-D[illegible]YLBENZIDINE	50	UR	UG/L	50	R	UG/L	50	UR	UG/L				

SAMPLE NUMBER:	S3MW-7			S3MW-8			S3MW-9				
SAMPLE DATE:	02/01/96			02/01/96			02/01/96			/ /	/ /
LABORATORY ID:	9602028-07			9602028-05			9602028-06				
QC_TYPE:	Normal			Normal			Normal				
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %	100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS	RESULT QUAL UNITS
SEMIVOLATILES											
3-METHYLCHOLANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
3-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
4-AMINOBIPHENYL	10	U	UG/L	10	U	UG/L	10	U	UG/L		
4-BROMOPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L		
4-CHLORO-3-METHYLPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L		
4-CHLOROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
4-CHLOROPHENYL PHENYL ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L		
4-NITROANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
4-NITROPHENOL	20	U	UG/L	20	U	UG/L	20	U	UG/L		
4-NITROQUINOLINE-1-OXIDE	10	UR	UG/L	10	UR	UG/L	10	UR	UG/L		
5-NITRO-O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
7,12-DIMETHYLBENZ(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
A,A-DIMETHYLPHENETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
ACENAPHTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
ACENAPHTHYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
ACETOPHENONE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
ANILINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
ARAMITE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BENZO(A)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BENZO(A)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BENZO(B)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BENZO(G,H,I)PERYLENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BENZO(K)FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BENZYL ALCOHOL	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BIS(2-CHLOROETHOXY)METHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BIS(2-CHLOROETHYL)ETHER	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
BUTYLBENZYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
CHLOROBENZILATE	50	U	UG/L	50	U	UG/L	50	U	UG/L		
CHRYSENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
DI-N-BUTYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L		

SAMPLE NUMBER:	S3MW-7	S3MW-8	S3MW-9	/ /	/ /
SAMPLE DATE:	02/01/96	02/01/96	02/01/96		
LABORATORY ID:	9602028-07	9602028-05	9602028-06		
QC_TYPE:	Normal	Normal	Normal		
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
DI-N-OCTYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DIALLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DIBENZO(A,H)ANTHRACENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DIBENZOFURAN	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DIETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DIMETHOATE	50	U	UG/L	50	U	UG/L	50	U	UG/L						
DIMETHYL PHTHALATE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DINOSEB	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
DISULFOTON	10	U	UG/L	10	U	UG/L	10	U	UG/L						
ETHYL METHACRYLATE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
ETHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
FAMPHUR	10	U	UG/L	10	U	UG/L	10	U	UG/L						
FLUORANTHENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
FLUORENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
HEXACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
HEXACHLOROBUTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
HEXACHLOROCYCLOPENTADIENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
HEXACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
HEXACHLOROPROPENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
INDENO(1,2,3-CD)PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
ISODRIN	10	U	UG/L	10	U	UG/L	10	U	UG/L						
ISOPHORONE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
ISOSAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
KEPONE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
METHAPYRILENE	50	U	UG/L	50	U	UG/L	50	U	UG/L						
METHYL METHANESULFONATE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
N-NITROSO-DI-N-BUTYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
N-NITROSO-DI-N-PROPYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
N-NITROSODIETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
N-NITR[illegible]ODIMETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L						
N-NIT[illegible]DIPHENYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L						

SAMPLE NUMBER:	S3MW-7			S3MW-8			S3MW-9				
SAMPLE DATE:	02/01/96			02/01/96			02/01/96			/ /	/ /
LABORATORY ID:	9602028-07			9602028-05			9602028-06				
QC_TYPE:	Normal			Normal			Normal				
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %	100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS	RESULT QUAL UNITS
SEMIVOLATILES											
N-NITROSOMETHYLETHYLAMINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
N-NITROSOMORPHOLINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
N-NITROSOPIPERIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
N-NITROSOPYRROLIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
NAPHTHALENE	10	U	UG/L	19		UG/L	10	U	UG/L		
NITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
O,O,O-TRIETHYLPHOSPHOROTHIOATE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
O-TOLUIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
P-DIMETHYLAMINOAZOBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
P-PHENYLENEDIAMINE	20	U	UG/L	20	U	UG/L	20	U	UG/L		
PENTACHLOROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PENTACHLOROETHANE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PENTACHLORONITROBENZENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PENTACHLOROPHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PHENACETIN	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PHENANTHRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PHENOL	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PRONAMIDE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PYRENE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
PYRIDINE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
SAFROLE	10	U	UG/L	10	U	UG/L	10	U	UG/L		
SULFOTEP	10	U	UG/L	10	U	UG/L	10	U	UG/L		
THIONAZIN	10	U	UG/L	10	U	UG/L	10	U	UG/L		

CTO 007 - NAS KEY WEST
WATER DATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	RB01-020296			/ /			/ /			/ /		
SAMPLE DATE:	02/02/96											
LABORATORY ID:	9602028-10											
QC_TYPE:	Normal											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs												
4,4'-DDD	0.044	UR	UG/L									
4,4'-DDE	0.044	UR	UG/L									
4,4'-DDT	0.044	UR	UG/L									
ALDRIN	0.030	J	UG/L									
ALPHA-BHC	0.022	UR	UG/L									
AROCLOR-1016	0.14	UR	UG/L									
AROCLOR-1221	0.14	UR	UG/L									
AROCLOR-1232	0.14	UR	UG/L									
AROCLOR-1242	0.14	UR	UG/L									
AROCLOR-1248	0.14	UR	UG/L									
AROCLOR-1254	0.14	UR	UG/L									
AROCLOR-1260	0.14	UR	UG/L									
BETA-BHC	0.022	UR	UG/L									
CHLORDANE	0.28	UR	UG/L									
DELTA-BHC	0.022	UR	UG/L									
DIELDRIN	0.044	UR	UG/L									
ENDOSULFAN I	0.022	UR	UG/L									
ENDOSULFAN II	0.044	UR	UG/L									
ENDOSULFAN SULFATE	0.044	UR	UG/L									
ENDRIN	0.044	UR	UG/L									
ENDRIN ALDEHYDE	0.044	UR	UG/L									
GAMMA-BHC (LINDANE)	0.022	UR	UG/L									
HEPTACHLOR	0.022	UR	UG/L									
HEPTACHLOR EPOXIDE	0.022	UR	UG/L									
METHOXYCHLOR	0.22	UR	UG/L									
METHYL PARATHION	0.056	UR	UG/L									
PARATHION	0.056	UR	UG/L									
PHORATE	0.056	UR	UG/L									
TOXAPHENE	1.1	UR	UG/L									

CTO 0[illegible] NAS KEY WEST
WAT [illegible]ATA
GENERAL ENGINEERING LABS

SAMPLE NUMBER:	RB01-020296			/ /		/ /		/ /		/ /
SAMPLE DATE:	02/02/96									
LABORATORY ID:	9602028-10									
QC_TYPE:	Normal									
% SOLIDS:	0.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**	**RESULT**	**QUAL**	**UNITS**
HERBICIDES												
2,4,5-T	0.23	U	UG/L									
2,4,5-TP (SILVEX)	0.11	U	UG/L									
2,4-D	0.23	U	UG/L									

INORGANIC DATA VALIDATION
SDG BRMET71

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-286

TO : KEVIN WALTER

DATE: MAY 1, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - SELECT METALS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG BRMET7I

5/Tissue/	SISS-05	BG2SS-01	SISS-08	SISS-07
	BGISS-01			

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. BRMET7I; five (5) tissue samples were included for these analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and tin minus aluminum, calcium, iron, magnesium, manganese, potassium, sodium. The samples were collected by Brown and Root Environmental on March 5, 1996.

All analyses were performed by Environmental Science and Engineering, Inc. using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
* • Laboratory Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Executive Summary

Laboratory Performance: All analyses were acceptable as submitted.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

C-49-04-6-286

NAS Key West
SDG BRMET7I

TABLE 1 - RECOMMENDATION SUMMARY

Antimony	Mercury
Arsenic	Nickel
Barium	Selenium
Beryllium	Silver
Cadmium	Thallium
Chromium	Vanadium
Cobalt	Zinc
Copper	Tin
Lead	

If the field is left blank, the qualifier is A - Accept all data.

APPENDIX A
QUALIFIED LABORATORY RESULTS

SAMPLE NUMBER:	BG2SS-01			BGISS-01			SISS(-08)			SISS-5			SISS-7		
SAMPLE DATE:	03/05/96			03/05/96			03/05/96			03/05/96			03/05/96		
LABORATORY ID:	BRNCT1*126			BRNCT1*129			BRNCT1*127			BRNCT1*125			BRNCT1*128		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	5.0	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG	10.6		MG/KG	4.9	U	MG/KG
ARSENIC	0.79		MG/KG	0.79		MG/KG	0.97		MG/KG	2.9		MG/KG	1.9		MG/KG
BARIUM	1.7		MG/KG	7.6		MG/KG	5.0		MG/KG	54.8		MG/KG	14.2		MG/KG
BERYLLIUM	0.40	U	MG/KG	0.39	U	MG/KG	0.38	U	MG/KG	0.38	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.50	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	4.1		MG/KG	2.0		MG/KG
CHROMIUM	1.00	U	MG/KG	4.0		MG/KG	2.5		MG/KG	38.1		MG/KG	8.4		MG/KG
COBALT	1.00	U	MG/KG	0.98	U	MG/KG	0.95	U	MG/KG	2.2		MG/KG	0.99	U	MG/KG
COPPER	2.6		MG/KG	4.2		MG/KG	2.3		MG/KG	296		MG/KG	59.3		MG/KG
LEAD	0.45		MG/KG	4.2		MG/KG	3.9		MG/KG	319	D	MG/KG	92.2	D	MG/KG
MERCURY	0.02	U	MG/KG	0.02	U	MG/KG	0.02	U	MG/KG	2.7	D	MG/KG	0.18		MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	26.9		MG/KG	3.8		MG/KG
SELENIUM	0.28		MG/KG	1.2	UD	MG/KG	0.30		MG/KG	0.24	U	MG/KG	1.3		MG/KG
SILVER	0.50	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	1.7		MG/KG	0.49	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	5.0	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG	34.2		MG/KG	4.9	U	MG/KG
VANADIUM	1.00	U	MG/KG	2.6		MG/KG	1.8		MG/KG	4.5		MG/KG	2.8		MG/KG
ZINC	13.5		MG/KG	21.3		MG/KG	15.7		MG/KG	397		MG/KG	324		MG/KG

ORGANIC DATA VALIDATION
SDG G68402

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-040

TO: KEVIN WALTER **DATE:** MAY 20, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G68402

SAMPLES: Tissue:

S1F-01	S1F-02	S1F-03
S1F-04	S1F-05	S1F-06
S1F-07	S1F-08	S1F-09
S1F-10	S2F-01	S2F-02
S2F-03	S2F-04	S2F-05
S2F-06		

The sample set for the CTO 007 NAS Key West site, SDG G68402, consists of sixteen (16) fish samples analyzed for Appendix IX volatile organic compounds. The samples were collected by Brown and Root Environmental on January 18th, 19th, 20th and 21st, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8260 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatiles

It should be noted that the laboratory did not perform a five point initial calibration for isobutyl alcohol, chloroprene and 1,4-dioxane. Instead, the laboratory performed a single point calibration with a 50 µg/L standard. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Initial and continuing calibration Relative Response Factors (RRFs) for 2-butanone, isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

Acetone was detected in the laboratory method blank at 610 µg/Kg. No action was necessary since no positive results were reported for this compound in the affected samples.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG. No further action was taken.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

Executive Summary

Laboratory Performance: Initial and continuing calibration RRFs for 2-butanone, isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. The laboratory did not perform a 5-point calibration for isobutyl alcohol, chloroprene and 1,4-dioxane. Acetone was detected in the laboratory method blank. The laboratory Form Is and case narrative are not adequately documented.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G68402

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA
S1F-01	R^1
S1F-02	R^1
S1F-03	R^1
S1F-04	R^1
S1F-05	R^1
S1F-06	R^1
S1F-07	R^1
S1F-08	R^1
S1F-09	R^1
S1F-10	R^1
S2F-01	R^1
S2F-02	R^1
S2F-03	R^1
S2F-04	R^1
S2F-05	R^1
S2F-06	R^1

If the field is left blank, the qualifier is A - Accept all data.

R^1 - Reject, (UR), nondetected results for 2-butanone, isobutyl alcohol and 1,4-dioxane, as a result of initial and continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 NAS KEY WEST
FISH TI[illegible]E DATA
ESE LABORATORY

SAMPLE NUMBER:	S1F-01			S1F-02			S1F-03			S1F-04			S1F-05		
SAMPLE DATE:	01/18/96			01/18/96			01/18/96			01/18/96			01/18/96		
LABORATORY ID:	BRNCT1*1			BRNCT1*2			BRNCT1*3			BRNCT1*4			BRNCT1*5		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOR[illegible]THANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	S1F-01			S1F-02			S1F-03			S1F-04			S1F-05		
SAMPLE DATE:	01/18/96			01/18/96			01/18/96			01/18/96			01/18/96		
LABORATORY ID:	BRNCT1*1			BRNCT1*2			BRNCT1*3			BRNCT1*4			BRNCT1*5		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S1F-06			S1F-07			S1F-08			S1F-09			S1F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*6			BRNCT1*7			BRNCT1*8			BRNCT1*9			BRNCT1*10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOR THANE	1000	U	UG/KG	1000		UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000		UG/KG

SAMPLE NUMBER:	S1F-06			S1F-07			S1F-08			S1F-09			S1F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*6			BRNCT1*7			BRNCT1*8			BRNCT1*9			BRNCT1*10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S2F-01	S2F-02	S2F-03	S2F-04	S2F-05
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/19/96
LABORATORY ID:	BRNCT1*13	BRNCT1*14	BRNCT1*15	BRNCT1*16	BRNCT1*17
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	S2F-01			S2F-02			S2F-03			S2F-04			S2F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*13			BRNCT1*14			BRNCT1*15			BRNCT1*16			BRNCT1*17		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S2F-06			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/19/96									
LABORATORY ID:	BRNCT1*18									
QC_TYPE:	Normal									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES												
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG									
1,1,1-TRICHLOROETHANE	500	U	UG/KG									
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG									
1,1,2-TRICHLOROETHANE	500	U	UG/KG									
1,1-DICHLOROETHANE	500	U	UG/KG									
1,1-DICHLOROETHENE	500	U	UG/KG									
1,2,3-TRICHLOROPROPANE	500	U	UG/KG									
1,2-DIBROMOETHANE	500	U	UG/KG									
1,2-DICHLOROBENZENE	500	U	UG/KG									
1,2-DICHLOROETHANE	500	U	UG/KG									
1,2-DICHLOROPROPANE	500	U	UG/KG									
1,3-DICHLOROBENZENE	500	U	UG/KG									
1,4-DICHLOROBENZENE	500	U	UG/KG									
1,4-DIOXANE	10000	UR	UG/KG									
2-BUTANONE	2000	UR	UG/KG									
2-HEXANONE	2000	U	UG/KG									
3-CHLOROPROPENE	5000	U	UG/KG									
4-METHYL-2-PENTANONE	2000	U	UG/KG									
ACETONE	1000	U	UG/KG									
ACETONITRILE	5000	U	UG/KG									
ACROLEIN	1000	U	UG/KG									
ACRYLONITRILE	1000	U	UG/KG									
BENZENE	500	U	UG/KG									
BROMODICHLOROMETHANE	500	U	UG/KG									
BROMOFORM	500	U	UG/KG									
BROMOMETHANE	1000	U	UG/KG									
CARBON DISULFIDE	500	U	UG/KG									
CARBON TETRACHLORIDE	500	U	UG/KG									
CHLOROBENZENE	500	U	UG/KG									
CHLOROETHANE	2000	U	UG/KG									
CHLOROFORM	500	U	UG/KG									
CHLOROMETHANE	1000	U	UG/KG									

SAMPLE NUMBER:	S2F-06			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/19/96									
LABORATORY ID:	BRNCT1*18									
QC_TYPE:	Normal									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG												
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG												
DIBROMOCHLOROMETHANE	500	U	UG/KG												
DIBROMOCHLOROPROPANE	1000	U	UG/KG												
DIBROMOMETHANE	500	U	UG/KG												
DICHLORODIFLUOROMETHANE	500	U	UG/KG												
ETHYL METHACRYLATE	500	U	UG/KG												
ETHYLBENZENE	500	U	UG/KG												
IODOMETHANE	500	U	UG/KG												
ISOBUTYL ALCOHOL	10000	UR	UG/KG												
METHACRYLONITRILE	500	U	UG/KG												
METHYL METHACRYLATE	500	U	UG/KG												
METHYLENE CHLORIDE	500	U	UG/KG												
PENTACHLOROETHANE	500	U	UG/KG												
PROPIONITRILE	500	U	UG/KG												
STYRENE	500	U	UG/KG												
TETRACHLOROETHENE	500	U	UG/KG												
TOLUENE	500	U	UG/KG												
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG												
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG												
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG												
TRICHLOROETHENE	500	U	UG/KG												
TRICHLOROFLUOROMETHANE	500	U	UG/KG												
VINYL ACETATE	1000	U	UG/KG												
VINYL CHLORIDE	1000	U	UG/KG												
XYLENES, TOTAL	500	U	UG/KG												

INORGANIC DATA VALIDATION
SDG G68543

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-196

TO : KEVIN WALTER

DATE: MAY 17, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - SELECT METALS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG G68543

18/Tissue/	S1F-01	S1F-02	S1F-03	S1F-04
	S1F-05	S1F-06	S1F-07	S1F-08
	S1F-09	S1F-10	S2F-01	S2F-02
	S2F-03	S2F-04	S2F-05	S2F-06
	S2F-07	S2F-08		

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. G68543; eighteen (18) tissue samples were included for these analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and tin minus aluminum, calcium, iron, magnesium, manganese, potassium, sodium. The samples were collected by Brown and Root Environmental on January 18,19, 20, and 21, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
* • Laboratory Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Notes:

- The data package was missing one Form I for ICP metals.
- The dates of collection for several samples was missing on the Chain of Custody forms.

Executive Summary

Laboratory Performance: All analyses were acceptable as submitted.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

C-49-04-6-196

NAS Key West
SDG G68543

TABLE 1 - RECOMMENDATION SUMMARY

Antimony	Mercury
Arsenic	Nickel
Barium	Selenium
Beryllium	Silver
Cadmium	Thallium
Chromium	Vanadium
Cobalt	Zinc
Copper	Tin
Lead	

If the field is left blank, the qualifier is A - Accept all data.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO [illegible] NAS KEY WEST
FISH [illegible] SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S1F-01			S1F-02			S1F-03			S1F-04			S1F-05		
SAMPLE DATE:	01/18/96			01/18/96			01/18/96			01/18/96			01/18/96		
LABORATORY ID:	BRNCT1*1			BRNCT1*2			BRNCT1*3			BRNCT1*4			BRNCT1*5		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.37		MG/KG	0.79		MG/KG	0.75		MG/KG	0.69		MG/KG	0.42		MG/KG
BARIUM	4.6		MG/KG	9.1		MG/KG	9.4		MG/KG	9.1		MG/KG	4.9		MG/KG
BERYLLIUM	0.38	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
CHROMIUM	0.95	U	MG/KG	0.98	U	MG/KG	1.0	U	MG/KG	0.96	U	MG/KG	0.98	U	MG/KG
COBALT	0.95	U	MG/KG	0.98	U	MG/KG	1.0	U	MG/KG	0.96	U	MG/KG	0.98	U	MG/KG
COPPER	7.0		MG/KG	4.3		MG/KG	3.7		MG/KG	3.9		MG/KG	5.3		MG/KG
LEAD	8.6		MG/KG	3.0		MG/KG	2.1		MG/KG	1.8		MG/KG	5.4		MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.24	U	MG/KG	0.29		MG/KG	0.25	U	MG/KG	0.29		MG/KG	0.25	U	MG/KG
SILVER	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
VANADIUM	0.95	U	MG/KG	0.98	U	MG/KG	1.0	U	MG/KG	0.96	U	MG/KG	0.98	U	MG/KG
ZINC	66.3		MG/KG	35.9		MG/KG	30.7		MG/KG	30.4		MG/KG	47.8		MG/KG

CTO - NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

	S1F-06			S1F-07			S1F-08			S1F-09			S1F-10		
SAMPLE NUMBER:	S1F-06			S1F-07			S1F-08			S1F-09			S1F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*6			BRNCT1*7			BRNCT1*8			BRNCT1*9			BRNCT1*10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	5.0	U	MG/KG	4.8	U	MG/KG	4.7	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.72		MG/KG	0.58		MG/KG	2.0		MG/KG	0.58		MG/KG	0.79		MG/KG
BARIUM	8.0		MG/KG	6.1		MG/KG	1.1		MG/KG	0.74		MG/KG	1.2		MG/KG
BERYLLIUM	0.40	U	MG/KG	0.38	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG	0.39	U	MG/KG
CADMIUM	0.50	U	MG/KG	0.48	U	MG/KG	0.47	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
CHROMIUM	1.0	U	MG/KG	0.96	U	MG/KG	0.94	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG
COBALT	1.0	U	MG/KG	0.96	U	MG/KG	0.94	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG
COPPER	3.6		MG/KG	5.0		MG/KG	2.9		MG/KG	0.85		MG/KG	3.1		MG/KG
LEAD	3.4		MG/KG	4.9		MG/KG	2.3		MG/KG	0.29		MG/KG	1.4		MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.5	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.25	U	MG/KG	0.24	U	MG/KG	0.24	U	MG/KG	0.34		MG/KG	0.24	U	MG/KG
SILVER	0.50	U	MG/KG	0.48	U	MG/KG	0.47	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	5.0	U	MG/KG	4.8	U	MG/KG	4.7	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
VANADIUM	1.0	U	MG/KG	0.96	U	MG/KG	0.94	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG
ZINC	37.9		MG/KG	58.9		MG/KG	75.6		MG/KG	34.5		MG/KG	63.9		MG/KG

SAMPLE NUMBER:	S2F-01			S2F-02			S2F-03			S2F-04			S2F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*13			BRNCT1*14			BRNCT1*15			BRNCT1*16			BRNCT1*17		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG
ARSENIC	0.29		MG/KG	0.35		MG/KG	0.59		MG/KG	2.3		MG/KG	3.1		MG/KG
BARIUM	0.48	U	MG/KG	1.4		MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.49		MG/KG
BERYLLIUM	0.39	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.39	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG
CHROMIUM	0.96	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.97	U	MG/KG	0.95	U	MG/KG
COBALT	0.96	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.97	U	MG/KG	0.95	U	MG/KG
COPPER	7.1		MG/KG	4.7		MG/KG	6.0		MG/KG	0.49	U	MG/KG	0.80		MG/KG
LEAD	0.14	U	MG/KG	0.59		MG/KG	0.15	U	MG/KG	0.15	U	MG/KG	0.14	U	MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.08		MG/KG	0.05		MG/KG
NICKEL	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG
SELENIUM	0.24	U	MG/KG	0.25	U	MG/KG	0.57		MG/KG	0.24	U	MG/KG	0.24	U	MG/KG
SILVER	0.48	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG
TIN	4.8	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG
VANADIUM	0.96	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.97	U	MG/KG	0.95	U	MG/KG
ZINC	23.3		MG/KG	16.6		MG/KG	39.7		MG/KG	12.1		MG/KG	15.7		MG/KG

CTO (NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S2F-06			S2F-07			S2F-08							
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			/ /			/ /	
LABORATORY ID:	BRNCT1*18			BRNCT1*19			BRNCT1*20							
QC_TYPE:	Normal			Normal			Normal							
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS
INORGANICS														
ANTIMONY	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG					
ARSENIC	2.0		MG/KG	2.1		MG/KG	2.0		MG/KG					
BARIUM	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG					
BERYLLIUM	0.40	U	MG/KG	0.40	U	MG/KG	0.39	U	MG/KG					
CADMIUM	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG					
CHROMIUM	0.99	U	MG/KG	1.0	U	MG/KG	0.97	U	MG/KG					
COBALT	0.99	U	MG/KG	1.0	U	MG/KG	0.97	U	MG/KG					
COPPER	0.50	U	MG/KG	0.50	U	MG/KG	0.49		MG/KG					
LEAD	0.15	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG					
MERCURY	0.06		MG/KG	0.04	U	MG/KG	0.04	U	MG/KG					
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG					
SELENIUM	0.31		MG/KG	0.25	U	MG/KG	0.24	U	MG/KG					
SILVER	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG					
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG					
TIN	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG					
VANADIUM	0.99	U	MG/KG	1.0	U	MG/KG	0.97	U	MG/KG					
ZINC	12.4		MG/KG	21.7		MG/KG	23.3		MG/KG					

INORGANIC DATA VALIDATION
SDG G68610

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-178

TO : KEVIN WALTER

DATE: APRIL 18, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - SELECT METALS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG G68610

20/Tissue/	S2F-09	S2F-10	S2F-11	S2F-12
	S2F-13	S2F-14	S2F-15	S2F-16
	S2F-17	S2F-18	S2F-19	S2F-20
	S2F-21	S2F-22	S2F-23	S2F-24
	S2F-25	S3F-01	S3F-02	S3F-03

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. G68610; twenty (20) tissue samples were included for these analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and tin minus aluminum, calcium, iron, magnesium, manganese, potassium, sodium. The samples were collected by Brown and Root Environmental on January 19, 20, 21, 22, 24, and 25, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	Calibration Verifications
*	•	Laboratory Blank Analyses
*	•	Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Notes:

- The data package was missing several Form I's for selenium.
- The dates of collection for several samples was missing on the Chain of Custody forms.

Executive Summary

Laboratory Performance: All analyses were acceptable as submitted.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as pecified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG G68610

TABLE 1 - RECOMMENDATION SUMMARY

Antimony	Mercury
Arsenic	Nickel
Barium	Selenium
Beryllium	Silver
Cadmium	Thallium
Chromium	Vanadium
Cobalt	Zinc
Copper	Tin
Lead	

If the field is left blank, the qualifier is A - Accept all data.

APPENDIX A
QUALIFIED LABORATORY RESULTS

SAMPLE NUMBER:	S2F-09	S2F-10	S2F-11	S2F-12	S2F-13
SAMPLE DATE:	01/19/96	01/20/96	01/20/96	01/20/96	01/20/96
LABORATORY ID:	BRNCT1*21	BRNCT1*22	BRNCT1*23	BRNCT1*24	BRNCT1*25
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG
ARSENIC	2.6		MG/KG	6.9		MG/KG	1.7		MG/KG	1.9		MG/KG	3.6		MG/KG
BARIUM	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG
BERYLLIUM	0.40	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG
CHROMIUM	1.0	U	MG/KG	0.99	U	MG/KG	0.95	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG
COBALT	1.0	U	MG/KG	0.99	U	MG/KG	0.95	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG
COPPER	0.50	U	MG/KG	0.98		MG/KG	0.48	U	MG/KG	0.49	U	MG/KG	0.85		MG/KG
LEAD	0.15	U	MG/KG	0.15	U	MG/KG	0.14	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.11		MG/KG	0.05		MG/KG	0.05		MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.25	U	MG/KG	0.25	U	MG/KG	0.28		MG/KG	0.24	U	MG/KG	0.25	U	MG/KG
SILVER	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG
VANADIUM	1.0	U	MG/KG	0.99	U	MG/KG	0.95	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG
ZINC	18.2		MG/KG	8.7		MG/KG	18.0		MG/KG	7.9		MG/KG	7.8		MG/KG

	S2F-14			S2F-15			S2F-16			S2F-17			S2F-18		
SAMPLE NUMBER:	S2F-14			S2F-15			S2F-16			S2F-17			S2F-18		
SAMPLE DATE:	01/20/96			01/20/96			01/20/96			01/20/96			01/20/96		
LABORATORY ID:	BRNCT1*26			BRNCT1*27			BRNCT1*28			BRNCT1*29			BRNCT1*30		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	5.0	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.7	U	MG/KG
ARSENIC	0.46		MG/KG	0.77		MG/KG	0.40		MG/KG	0.72		MG/KG	0.19	U	MG/KG
BARIUM	0.50	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.47	U	MG/KG
BERYLLIUM	0.40	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.50	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.47	U	MG/KG
CHROMIUM	1.0	U	MG/KG	0.98	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.94	U	MG/KG
COBALT	1.0	U	MG/KG	0.98	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.94	U	MG/KG
COPPER	1.7		MG/KG	0.54		MG/KG	1.7		MG/KG	1.4		MG/KG	4.7		MG/KG
LEAD	0.15	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG	0.14	U	MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG
SELENIUM	0.25	U	MG/KG	0.24	U	MG/KG	0.25	U	MG/KG	0.25	U	MG/KG	0.23	U	MG/KG
SILVER	0.50	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.47	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
TIN	5.0	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.7	U	MG/KG
VANADIUM	1.0	U	MG/KG	0.98	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.94	U	MG/KG
ZINC	10.0		MG/KG	15.7		MG/KG	10.9		MG/KG	10.4		MG/KG	25.1		MG/KG

SAMPLE NUMBER:	S2F-19			S2F-20			S2F-21			S2F-22			S2F-23		
SAMPLE DATE:	01/21/96			01/22/96			01/24/96			01/25/96			01/20/96		
LABORATORY ID:	BRNCT1*31			BRNCT1*32			BRNCT1*33			BRNCT1*34			BRNCT1*35		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.6	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG
ARSENIC	3.9		MG/KG	4.1		MG/KG	3.0		MG/KG	0.20	U	MG/KG	0.25		MG/KG
BARIUM	0.70		MG/KG	0.46	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG	4.9		MG/KG
BERYLLIUM	0.38	U	MG/KG	0.37	U	MG/KG	0.39	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.46	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG
CHROMIUM	0.95	U	MG/KG	0.92	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG	0.99	U	MG/KG
COBALT	0.95	U	MG/KG	0.92	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG	0.99	U	MG/KG
COPPER	0.75		MG/KG	1.3		MG/KG	1.4		MG/KG	1.2		MG/KG	2.8		MG/KG
LEAD	0.14	U	MG/KG	0.14	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG	0.38		MG/KG
MERCURY	0.04	U	MG/KG	0.05		MG/KG	0.04		MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.4	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.24	U	MG/KG	0.23	U	MG/KG	0.24	U	MG/KG	0.25	U	MG/KG	0.25	U	MG/KG
SILVER	0.48	U	MG/KG	0.46	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG
TIN	4.8	U	MG/KG	4.6	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG
VANADIUM	0.95	U	MG/KG	0.92	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG	0.99	U	MG/KG
ZINC	16.5		MG/KG	7.6		MG/KG	6.5		MG/KG	13.4		MG/KG	23.7		MG/KG

SAMPLE NUMBER:	S2F-24	S2F-25	S3F-01	S3F-02	S3F-03
SAMPLE DATE:	01/22/96	01/22/96	01/19/96	01/19/96	01/19/96
LABORATORY ID:	BRNCT1*36	BRNCT1*37	BRNCT1*38	BRNCT1*39	BRNCT1*40
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG
ARSENIC	0.25		MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
BARIUM	3.3		MG/KG	2.4		MG/KG	3.1		MG/KG	3.0		MG/KG	2.8		MG/KG
BERYLLIUM	0.39	U	MG/KG	0.37	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG
CHROMIUM	0.97	U	MG/KG	0.94	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.96	U	MG/KG
COBALT	0.97	U	MG/KG	0.94	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.96	U	MG/KG
COPPER	3.3		MG/KG	5.1		MG/KG	13.5		MG/KG	7.1		MG/KG	3.8		MG/KG
LEAD	0.39		MG/KG	0.74		MG/KG	1.2		MG/KG	0.52		MG/KG	0.29		MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG
SELENIUM	0.24	U	MG/KG	0.23	U	MG/KG	0.27		MG/KG	0.25	U	MG/KG	0.24	U	MG/KG
SILVER	0.48	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
TIN	4.8	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG
VANADIUM	0.97	U	MG/KG	0.94	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.96	U	MG/KG
ZINC	31.2		MG/KG	31.6		MG/KG	39.7		MG/KG	26.0		MG/KG	24.0		MG/KG

INORGANIC DATA VALIDATION
SDG G68624

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-229

TO : KEVIN WALTER

DATE: MAY 17, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: **INORGANIC DATA VALIDATION - SELECT METALS**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG G68624

20/Tissue/	S3F-04	S3F-05	S3F-06	S3F-07
	S3F-08	S3F-09	S3F-10	S3F-11
	S3F-12	S3F-13	S3F-14	S3F-15
	S3F-16	S3F-17	S3F-18	S3F-19
	S3F-20	S3F-21	S3F-22	S9BV-01

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. G68624; twenty (20) tissue samples were included for these analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and tin minus aluminum, calcium, iron, magnesium, manganese, potassium, sodium. The samples were collected by Brown and Root Environmental on January 18,19, 20, 21, 22, and 23 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
* • Laboratory Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Executive Summary

Laboratory Performance: All analyses were acceptable as submitted.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

C-49-04-6-229

NAS Key West
SDG G68624

TABLE 1 - RECOMMENDATION SUMMARY

Antimony	Mercury
Arsenic	Nickel
Barium	Selenium
Beryllium	Silver
Cadmium	Thallium
Chromium	Vanadium
Cobalt	Zinc
Copper	Tin
Lead	

If the field is left blank, the qualifier is A - Accept all data.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO 00[illegible] NAS KEY WEST
FISH [illegible] UE DATA
ESE LABORATORY

SAMPLE NUMBER:	S3F-04			S3F-05			S3F-06			S3F-07			S3F-08		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/20/96			01/21/96		
LABORATORY ID:	BRNCT1*41			BRNCT1*42			BRNCT1*43			BRNCT1*44			BRNCT1*45		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.20	U	MG/KG	0.27		MG/KG	0.19	U	MG/KG	2.7		MG/KG	2.5		MG/KG
BARIUM	2.9		MG/KG	1.8		MG/KG	2.4		MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
BERYLLIUM	0.40	U	MG/KG	0.40	U	MG/KG	0.39	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
CHROMIUM	1.0	U	MG/KG	0.99	U	MG/KG	0.97	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG
COBALT	1.0	U	MG/KG	0.99	U	MG/KG	0.97	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG
COPPER	3.2		MG/KG	3.8		MG/KG	9.8		MG/KG	0.48	U	MG/KG	1.7		MG/KG
LEAD	0.17		MG/KG	0.16		MG/KG	0.34		MG/KG	0.15	U	MG/KG	0.15	U	MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.05		MG/KG	0.04	U	MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.31		MG/KG	0.31		MG/KG	0.33		MG/KG	0.25		MG/KG	0.49		MG/KG
SILVER	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	4.6		MG/KG
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
VANADIUM	1.0	U	MG/KG	0.99	U	MG/KG	0.97	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG
ZINC	19.1		MG/KG	24.6		MG/KG	25.1		MG/KG	5.6		MG/KG	510		MG/KG

SAMPLE NUMBER:	S3F-09			S3F-10			S3F-11			S3F-12			S3F-13		
SAMPLE DATE:	01/21/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*46			BRNCT1*47			BRNCT1*48			BRNCT1*49			BRNCT1*50		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	9.9	U	MG/KG	4.9	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG	4.7	U	MG/KG
ARSENIC	0.39	U	MG/KG	4.3		MG/KG	2.8		MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
BARIUM	2.4		MG/KG	0.49	U	MG/KG	1.5		MG/KG	2.3		MG/KG	2.1		MG/KG
BERYLLIUM	0.79	U	MG/KG	0.39	U	MG/KG	0.38	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.99	U	MG/KG	0.49	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG	0.47	U	MG/KG
CHROMIUM	2.0	U	MG/KG	0.98	U	MG/KG	0.95	U	MG/KG	1.0	U	MG/KG	0.95	U	MG/KG
COBALT	2.0	U	MG/KG	0.98	U	MG/KG	0.95	U	MG/KG	1.0	U	MG/KG	0.95	U	MG/KG
COPPER	4.9		MG/KG	2.0		MG/KG	10.0		MG/KG	7.0		MG/KG	9.8		MG/KG
LEAD	0.37		MG/KG	0.15		MG/KG	0.33		MG/KG	0.44		MG/KG	0.62		MG/KG
MERCURY	0.06	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	3.0	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG
SELENIUM	0.49	U	MG/KG	1.0		MG/KG	0.52		MG/KG	0.25	U	MG/KG	0.27		MG/KG
SILVER	0.99	U	MG/KG	4.0		MG/KG	0.47	U	MG/KG	0.50	U	MG/KG	0.47	U	MG/KG
THALLIUM	0.39	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
TIN	9.9	U	MG/KG	4.9	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG	4.7	U	MG/KG
VANADIUM	2.0	U	MG/KG	0.98	U	MG/KG	0.95	U	MG/KG	1.0	U	MG/KG	0.95	U	MG/KG
ZINC	31.7		MG/KG	535		MG/KG	31.1		MG/KG	34.9		MG/KG	26.4		MG/KG

SAMPLE NUMBER:	S3F-14			S3F-15			S3F-16			S3F-17			S3F-18		
SAMPLE DATE:	01/22/96			01/22/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	BRNCT1*51			BRNCT1*52			BRNCT1*53			BRNCT1*54			BRNCT1*55		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.9	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.19	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
BARIUM	2.6		MG/KG	0.49	U	MG/KG	2.5		MG/KG	4.7		MG/KG	0.49	U	MG/KG
BERYLLIUM	0.38	U	MG/KG	0.39	U	MG/KG	0.37	U	MG/KG	0.40	U	MG/KG	0.39	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.49	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG
CHROMIUM	0.96	U	MG/KG	0.98	U	MG/KG	0.93	U	MG/KG	1.0	U	MG/KG	0.97	U	MG/KG
COBALT	0.96	U	MG/KG	0.98	U	MG/KG	0.93	U	MG/KG	1.0	U	MG/KG	0.97	U	MG/KG
COPPER	51.6		MG/KG	1.5		MG/KG	5.4		MG/KG	17.1		MG/KG	1.1		MG/KG
LEAD	0.81		MG/KG	0.15	U	MG/KG	0.33		MG/KG	1.5		MG/KG	0.15	U	MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.4	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.32		MG/KG	0.25	U	MG/KG	0.23	U	MG/KG	0.25	U	MG/KG	0.24	U	MG/KG
SILVER	0.55		MG/KG	0.49	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
TIN	4.8	U	MG/KG	4.9	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG
VANADIUM	0.96	U	MG/KG	0.98	U	MG/KG	0.93	U	MG/KG	1.0	U	MG/KG	0.97	U	MG/KG
ZINC	37.7		MG/KG	37.4		MG/KG	29.1		MG/KG	48.9		MG/KG	51.1		MG/KG

SAMPLE NUMBER:	S3F-19			S3F-20			S3F-21			S3F-22			S9BV-01		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/22/96		
LABORATORY ID:	BRNCT1*56			BRNCT1*57			BRNCT1*58			BRNCT1*59			BRNCT1*61		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.6	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG
ARSENIC	0.18	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	1.0		MG/KG
BARIUM	0.59		MG/KG	2.6		MG/KG	2.1		MG/KG	2.1		MG/KG	0.50	U	MG/KG
BERYLLIUM	0.37	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.46	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG
CHROMIUM	0.92	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.98	U	MG/KG	1.0	U	MG/KG
COBALT	0.92	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.98	U	MG/KG	1.0	U	MG/KG
COPPER	2.2		MG/KG	5.1		MG/KG	7.2		MG/KG	9.3		MG/KG	1.7		MG/KG
LEAD	0.14	U	MG/KG	0.37		MG/KG	0.39		MG/KG	0.31		MG/KG	0.15	U	MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.23	U	MG/KG	0.25	U	MG/KG	0.27		MG/KG	0.35		MG/KG	0.66		MG/KG
SILVER	0.46	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG
THALLIUM	0.18	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG
TIN	4.6	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG
VANADIUM	0.92	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.98	U	MG/KG	1.0	U	MG/KG
ZINC	53.1		MG/KG	23.2		MG/KG	24.8		MG/KG	24.0		MG/KG	617		MG/KG

ORGANIC DATA VALIDATION
SDG G68747

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-004

TO:	**MR. KEVIN WALTER**	**DATE:**	**MAY 1, 1996**
FROM:	**MICHELLE L. ALLEN**	**CC:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - APPENDIX IX TCL SVOCs**
CTO 7, NAS KEY WEST, FLORIDA
SDG G68747

SAMPLES: Fish Tissue:

S2F-11	S2F-12	S2F-13	S2F-14	S2F-15	S2F-16
S2F-17	S2F-18	S2F-19	S2F-20	S2F-21	S2F-22
S2F-23	S2F-24	S2F-25	S3F-01	S3F-02	S3F-03
S3F-04	S3F-05				

Environmental Science & Engineering (ESE), Inc. analyzed twenty environmental fish tissue samples for Appendix IX Target Compound List (TCL) semivolatile. No field duplicate pairs or field quality control blanks were included in this SDG.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8270 analytical and reporting protocols and were evaluated according to the following parameters:

- Holding times
- GC/MS tuning and mass calibration
- Initial and continuing calibrations
- Laboratory and field blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Semivolatile Fraction

It should be noted that the following Appendix IX compounds were not analyzed: thionazin, dinoseb, famphur, methyl parathion, parathion, phorate, sulfotepp, and o,o,o,-triethylphosphorothiate. These compounds were not reported by the laboratory, therefore, reporting limits are not presented within this report. Additionally, dimethoate, which is an Appendix IX compound was not reported by the laboratory. SW-846 requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted here for completeness. No actions were taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

The semivolatile compound 3-methylphenol was not on the sample Form Is, however, this compound was standardized for and included in the Appendix A - Qualified Laboratory Results. No further actions were taken.

The samples were diluted due to the nature of the sample matrix. In addition, the samples were reported on a wet-weight basis.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample weight/volume, concentrated extract volume, and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this SDG.

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory failed to analyze for several Appendix IX compounds. The sample Form Is were not correct.

Other Factors Affecting Data Quality: None.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown & Root Environmental
Michelle L. Allen
Chemist/Data Validator

Brown & Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST
SDG NO. G68747

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	Semivolatile
S2F-11	
S2F-12	
S2F-13	
S2F-14	
S2F-15	
S2F-16	
S2F-17	
S2F-18	
S2F-19	
S2F-20	
S2F-21	
S2F-22	
S2F-23	
S2F-24	
S2F-25	
S3F-01	
S3F-02	
S3F-03	
S3F-04	
S3F-05	

If the field is left blank, the qualifier is A - accept all data.

Data Qualifier Key:

U - Value is a nondetect as reported by the laboratory.

APPENDIX A

Qualified Analytical Results

SAMPLE NUMBER:	S2F-11	S2F-12	S2F-13	S2F-14	S2F-15
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/20/96	01/20/96
LABORATORY ID:	BRNCT1*23	BRNCT1*24	BRNCT1*25	BRNCT1*26	BRNCT1*27
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,2,4-TRICHLOROBENZENE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
1,2-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,3,5-TRINITROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
1,3-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,3-DINITROBENZENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
1,4-BENZENEDIAMINE	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG
1,4-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,4-NAPHTHOQUINONE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1-NAPHTHYLAMINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,4,5-TRICHLOROPHENOL	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
2,4,6-TRICHLOROPHENOL	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
2,4-DICHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,4-DIMETHYLPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,4-DINITROPHENOL	3900	U	UG/KG	3900	U	UG/KG	3900	U	UG/KG	3900	U	UG/KG	3900	U	UG/KG
2,4-DINITROTOLUENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,6-DICHLOROPHENOL	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
2,6-DINITROTOLUENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-ACETYLAMINOFLUORENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-CHLORONAPHTHALENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
2-CHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
2-METHYLNAPHTHALENE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
2-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-NAPHTHYLAMINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-NITROANILINE	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
2-NITROPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-PICOLINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
3,3'-DICHLOROBENZIDINE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
3-METHYLCHOLANTHRENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	S2F-11	S2F-12	S2F-13	S2F-14	S2F-15
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/20/96	01/20/96
LABORATORY ID:	BRNCT1*23	BRNCT1*24	BRNCT1*25	BRNCT1*26	BRNCT1*27
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
3-NITROANILINE	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-AMINOBIPHENYL	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-CHLORO-3-METHYL PHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-CHLOROANILINE	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
4-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-NITROANILINE	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-NITROPHENOL	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
5-NITRO-O-TOLUIDINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
ACENAPHTHENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ACENAPHTHYLENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ACETOPHENONE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ANILINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ANTHRACENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ARAMITE'	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BENZO(A)ANTHRACENE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZO(A)PYRENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BENZO(B)FLUORANTHENE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZO(G,H,I)PERYLENE	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG
BENZO(K)FLUORANTHENE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZYL ALCOHOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	300	U	UG/KG	300	U	UG/KG	340	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BUTYLBENZYL PHTHALATE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
CHLO[illegible]NZILATE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	S2F-11	S2F-12	S2F-13	S2F-14	S2F-15
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/20/96	01/20/96
LABORATORY ID:	BRNCT1*23	BRNCT1*24	BRNCT1*25	BRNCT1*26	BRNCT1*27
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
DI-N-BUTYL PHTHALATE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DI-N-OCTYL PHTHALATE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIALLATE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIBENZO(A,H)ANTHRACENE	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG
DIBENZOFURAN	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIETHYL PHTHALATE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIMETHYL PHTHALATE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
DIPHENYLAMINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ETHYL METHANESULFONATE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
FLUORANTHENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
FLUORENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
HEXACHLOROBENZENE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
HEXACHLOROBUTADIENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
HEXACHLOROETHANE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
HEXACHLOROPHENE	48000	U	UG/KG	48000	U	UG/KG	48000	U	UG/KG	48000	U	UG/KG	48000	U	UG/KG
HEXACHLOROPROPENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
INDENO(1,2,3-CD)PYRENE	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG
ISOPHORONE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ISOSAFROLE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
METHAPYRILENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
METHYL METHANESULFONATE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
N-NITROSODIETHYLAMINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSODIMETHYLAMINE	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
N-NITROSODIPHENYLAMINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOMORPHOLINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOPIPERIDINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOPYRROLIDINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG

SAMPLE NUMBER:	S2F-11	S2F-12	S2F-13	S2F-14	S2F-15
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/20/96	01/20/96
LABORATORY ID:	BRNCT1*23	BRNCT1*24	BRNCT1*25	BRNCT1*26	BRNCT1*27
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
NITROBENZENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
O-TOLUIDINE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PENTACHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PENTACHLORONITROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PENTACHLOROPHENOL	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
PHENACETIN	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PHENANTHRENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PRONAMIDE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PYRENE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PYRIDINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
SAFROLE	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG

SAMPLE NUMBER:	S2F-16			S2F-17			S2F-18		S2F-19			S2F-20		
SAMPLE DATE:	01/20/96			01/20/96			01/20/96		01/21/96			01/22/96		
LABORATORY ID:	BRNCT1*28			BRNCT1*29			BRNCT1*30		BRNCT1*31			BRNCT1*32		
QC_TYPE:	Normal			Normal			Normal		Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %		100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES														
1,2,4,5-TETRACHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U UG/KG	210	U	UG/KG	210	U	UG/KG
1,2,4-TRICHLOROBENZENE	300	U	UG/KG	300	U	UG/KG	1500	U UG/KG	300	U	UG/KG	300	U	UG/KG
1,2-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U UG/KG	210	U	UG/KG	210	U	UG/KG
1,3,5-TRINITROBENZENE	2100	U	UG/KG	2100	U	UG/KG	11000	U UG/KG	2100	U	UG/KG	2100	U	UG/KG
1,3-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U UG/KG	210	U	UG/KG	210	U	UG/KG
1,3-DINITROBENZENE	600	U	UG/KG	600	U	UG/KG	3000	U UG/KG	600	U	UG/KG	600	U	UG/KG
1,4-BENZENEDIAMINE	6000	U	UG/KG	6000	U	UG/KG	30000	U UG/KG	6000	U	UG/KG	6000	U	UG/KG
1,4-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U UG/KG	210	U	UG/KG	210	U	UG/KG
1,4-NAPHTHOQUINONE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
1-NAPHTHYLAMINE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2,4,5-TRICHLOROPHENOL	900	U	UG/KG	900	U	UG/KG	4500	U UG/KG	900	U	UG/KG	900	U	UG/KG
2,4,6-TRICHLOROPHENOL	900	U	UG/KG	900	U	UG/KG	4500	U UG/KG	900	U	UG/KG	900	U	UG/KG
2,4-DICHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2,4-DIMETHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2,4-DINITROPHENOL	3900	U	UG/KG	3900	U	UG/KG	20000	U UG/KG	3900	U	UG/KG	3900	U	UG/KG
2,4-DINITROTOLUENE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2,6-DICHLOROPHENOL	210	U	UG/KG	210	U	UG/KG	1100	U UG/KG	210	U	UG/KG	210	U	UG/KG
2,6-DINITROTOLUENE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2-ACETYLAMINOFLUORENE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2-CHLORONAPHTHALENE	210	U	UG/KG	210	U	UG/KG	1100	U UG/KG	210	U	UG/KG	210	U	UG/KG
2-CHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	3000	U	UG/KG	3000	U	UG/KG	15000	U UG/KG	3000	U	UG/KG	3000	U	UG/KG
2-METHYLNAPHTHALENE	300	U	UG/KG	300	U	UG/KG	1500	U UG/KG	300	U	UG/KG	300	U	UG/KG
2-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2-NAPHTHYLAMINE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2-NITROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U UG/KG	900	U	UG/KG	900	U	UG/KG
2-NITROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
2-PICOLINE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
3,3'-DICHLOROBENZIDINE	1500	U	UG/KG	1500	U	UG/KG	7500	U UG/KG	1500	U	UG/KG	1500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG
3-METHYLCHOLANTHRENE	420	U	UG/KG	420	U	UG/KG	2100	U UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	S2F-16	S2F-17	S2F-18	S2F-19	S2F-20
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/21/96	01/22/96
LABORATORY ID:	BRNCT1*28	BRNCT1*29	BRNCT1*30	BRNCT1*31	BRNCT1*32
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
3-NITROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-AMINOBIPHENYL	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-CHLORO-3-METHYL PHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-CHLOROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
4-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-NITROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-NITROPHENOL	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG
5-NITRO-O-TOLUIDINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
ACENAPHTHENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ACENAPHTHYLENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ACETOPHENONE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ANILINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ANTHRACENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ARAMITE	1100	U	UG/KG	1100	U	UG/KG	5400	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BENZO(A)ANTHRACENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZO(A)PYRENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BENZO(B)FLUORANTHENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZO(G,H,I)PERYLENE	480	U	UG/KG	480	U	UG/KG	2400	U	UG/KG	480	U	UG/KG	480	U	UG/KG
BENZO(K)FLUORANTHENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZYL ALCOHOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BUTYLBENZYL PHTHALATE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
CHLORENZILATE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	S2F-16	S2F-17	S2F-18	S2F-19	S2F-20
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/21/96	01/22/96
LABORATORY ID:	BRNCT1*28	BRNCT1*29	BRNCT1*30	BRNCT1*31	BRNCT1*32
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
DI-N-BUTYL PHTHALATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DI-N-OCTYL PHTHALATE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIALLATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIBENZO(A,H)ANTHRACENE	480	U	UG/KG	480	U	UG/KG	2400	U	UG/KG	480	U	UG/KG	480	U	UG/KG
DIBENZOFURAN	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIETHYL PHTHALATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIMETHYL PHTHALATE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
DIPHENYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ETHYL METHANESULFONATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
FLUORANTHENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
FLUORENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
HEXACHLOROBENZENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
HEXACHLOROBUTADIENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	3000	U	UG/KG	3000	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
HEXACHLOROETHANE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
HEXACHLOROPHENE	48000	U	UG/KG	48000	U	UG/KG	240000	U	UG/KG	48000	U	UG/KG	48000	U	UG/KG
HEXACHLOROPROPENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
INDENO(1,2,3-CD)PYRENE	480	U	UG/KG	480	U	UG/KG	2400	U	UG/KG	480	U	UG/KG	480	U	UG/KG
ISOPHORONE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ISOSAFROLE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
METHAPYRILENE	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
METHYL METHANESULFONATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
N-NITROSODIETHYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSODIMETHYLAMINE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG
N-NITROSODIPHENYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOMORPHOLINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOPIPERIDINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOPYRROLIDINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG

SAMPLE NUMBER:	S2F-16	S2F-17	S2F-18	S2F-19	S2F-20
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/21/96	01/22/96
LABORATORY ID:	BRNCT1*28	BRNCT1*29	BRNCT1*30	BRNCT1*31	BRNCT1*32
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
NITROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
O-TOLUIDINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PENTACHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PENTACHLORONITROBENZENE	1100	U	UG/KG	1100	U	UG/KG	5300	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PENTACHLOROPHENOL	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
PHENACETIN	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PHENANTHRENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PRONAMIDE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PYRENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PYRIDINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
SAFROLE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG

SAMPLE NUMBER:	S2F-21	S2F-22	S2F-23	S2F-24	S2F-25
SAMPLE DATE:	01/24/96	01/25/96	01/20/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*33	BRNCT1*34	BRNCT1*35	BRNCT1*36	BRNCT1*37
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2500	U	UG/KG	14000	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	600	U	UG/KG	710	U	UG/KG	730	U	UG/KG	4000	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	6000	U	UG/KG	7100	U	UG/KG	7300	U	UG/KG	40000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
1,4-NAPHTHOQUINONE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	900	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	6000	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	900	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	6000	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	3900	U	UG/KG	4600	U	UG/KG	4700	U	UG/KG	26000	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	3000	U	UG/KG	3500	U	UG/KG	3600	U	UG/KG	20000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	6000	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
2-PICOLINE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	10000	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG

SAMPLE NUMBER:	S2F-21	S2F-22	S2F-23	S2F-24	S2F-25
SAMPLE DATE:	01/24/96	01/25/96	01/20/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*33	BRNCT1*34	BRNCT1*35	BRNCT1*36	BRNCT1*37
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	6000	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	900	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	6000	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	6000	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	10000	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	900	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	6000	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	10000	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
ANILINE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
ANTHRACENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
ARAMITE'	5400	U	UG/KG	1100	U	UG/KG	1300	U	UG/KG	1300	U	UG/KG	7200	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	480	U	UG/KG	560	U	UG/KG	580	U	UG/KG	3200	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	300	U	UG/KG	410	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
BUTYLBENZYL PHTHALATE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
CHL[illegible]ENZILATE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG

SAMPLE NUMBER:	S2F-21			S2F-22			S2F-23			S2F-24			S2F-25		
SAMPLE DATE:	01/24/96			01/25/96			01/20/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*33			BRNCT1*34			BRNCT1*35			BRNCT1*36			BRNCT1*37		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
DIALLATE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	480	U	UG/KG	560	U	UG/KG	580	U	UG/KG	3200	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
FLUORENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	3000	U	UG/KG	3500	U	UG/KG	3600	U	UG/KG	20000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	48000	U	UG/KG	56000	U	UG/KG	58000	U	UG/KG	320000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	480	U	UG/KG	560	U	UG/KG	580	U	UG/KG	3200	U	UG/KG
ISOPHORONE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	10000	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	300	U	UG/KG	350	U	UG/KG	360	U	UG/KG	2000	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG

SAMPLE NUMBER:	S2F-21	S2F-22	S2F-23	S2F-24	S2F-25
SAMPLE DATE:	01/24/96	01/25/96	01/20/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*33	BRNCT1*34	BRNCT1*35	BRNCT1*36	BRNCT1*37
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
NITROBENZENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1300	U	UG/KG	7000	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	10000	U	UG/KG
PHENACETIN	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
PHENOL	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
PRONAMIDE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
PYRENE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG
PYRIDINE	2100	U	UG/KG	420	U	UG/KG	490	U	UG/KG	510	U	UG/KG	2800	U	UG/KG
SAFROLE	1100	U	UG/KG	210	U	UG/KG	250	U	UG/KG	250	U	UG/KG	1400	U	UG/KG

SAMPLE NUMBER:	S3F-01	S3F-02	S3F-03	S3F-04	S3F-05
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/19/96
LABORATORY ID:	BRNCT1*38	BRNCT1*39	BRNCT1*40	BRNCT1*41	BRNCT1*42
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
1,4-NAPHTHOQUINONE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	3900	U	UG/KG	3900	U	UG/KG	3900	U	UG/KG	3900	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-PICOLINE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	S3F-01			S3F-02			S3F-03			S3F-04			S3F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*38			BRNCT1*39			BRNCT1*40			BRNCT1*41			BRNCT1*42		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG	900	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ANILINE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ANTHRACENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ARAMITE	5400	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	300	U	UG/KG	970	U	UG/KG	300	U	UG/KG	300	U	UG/KG
BUTYLBENZYL PHTHALATE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
CHLO[illegible]ENZILATE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG

	S3F-01			S3F-02			S3F-03			S3F-04			S3F-05		
SAMPLE NUMBER:	S3F-01			S3F-02			S3F-03			S3F-04			S3F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*38			BRNCT1*39			BRNCT1*40			BRNCT1*41			BRNCT1*42		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIALLATE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
FLUORENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	48000	U	UG/KG	48000	U	UG/KG	48000	U	UG/KG	48000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG	480	U	UG/KG
ISOPHORONE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG	300	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG

SAMPLE NUMBER:	S3F-01	S3F-02	S3F-03	S3F-04	S3F-05
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/19/96
LABORATORY ID:	BRNCT1*38	BRNCT1*39	BRNCT1*40	BRNCT1*41	BRNCT1*42
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
NITROBENZENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
PHENACETIN	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PHENOL	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PRONAMIDE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PYRENE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG
PYRIDINE	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG
SAFROLE	1100	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG	210	U	UG/KG

ORGANIC DATA VALIDATION
SDG G68781

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-101

TO: KEVIN WALTER

DATE: MAY 10, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - PESTICIDE/PCB ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G68781

SAMPLES: Tissue:

S2F-11	S2F-12	S2F-13
S2F-14	S2F-15	S2F-16
S2F-17	S2F-18	S2F-19
S2F-20	S2F-21	S2F-22
S2F-23	S2F-24	S2F-25
S3F-01	S3F-02	S3F-03
S3F-04	S3F-05	

The sample set for the CTO 007 NAS Key West site, SDG G68781, consists of twenty (20) tissue samples analyzed for Appendix IX pesticide/PCB organic compounds. The samples were collected by Brown and Root Environmental on January 19, 20, 21, 22, 24 and 25, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8080 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 10, 1996 - PAGE 2

Pesticides/PCBs

The laboratory failed to provide a Form X: Pesticide Identification Summary with Percent Differences calculated for each positive result. Therefore, the data reviewer was unable to evaluate for this parameter.

The laboratory only provided calibration summaries for analyses performed on column one (DB-608). Furthermore, all results have been reported and quantitated using column one (DB-608).

The laboratory did not perform GC/MS confirmation analyses for single component pesticides whose concentration exceeded 330 ug/kg.

The laboratory only analyzed a single point calibration for Kepone. Therefore, as a result of the low response and the lack of associated performance data for Kepone, the nondetected results for this compound have been qualified as estimated, "UJ".

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory did not provide a Form X. The laboratory only used one column for quantitation for several analytes.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 10, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G68781

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	PEST/PCB
S2F-11	J[1]
S2F-12	J[1]
S2F-13	J[1]
S2F-14	J[1]
S2F-15	J[1]
S2F-16	J[1]
S2F-17	J[1]
S2F-18	J[1]
S2F-19	J[1]
S2F-20	J[1]
S2F-21	J[1]
S2F-22	J[1]
S2F-23	J[1]
S2F-24	J[1]
S2F-25	J[1]
S3F-01	J[1]
S3F-02	J[1]
S3F-03	J[1]
S3F-04	J[1]
S3F-05	J[1]

If the field is left blank, the qualifier is A - Accept all data.

J[1] - Accept data but qualify nondetects for Kepone as estimated, "UJ", as a result of calibration noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

SAMPLE NUMBER:	S2F-11	S2F-12	S2F-13	S2F-14	S2F-15
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/20/96	01/20/96
LABORATORY ID:	BRNCT1*23	BRNCT1*24	BRNCT1*25	BRNCT1*26	BRNCT1*27
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	19.7		UG/KG	1880		UG/KG	167		UG/KG	592		UG/KG	439		UG/KG
4,4'-DDE	56.6		UG/KG	2520		UG/KG	585		UG/KG	2830		UG/KG	2040		UG/KG
4,4'-DDT	1.0	U	UG/KG	63.8		UG/KG	30.6		UG/KG	96.8		UG/KG	92.2		UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	2.8		UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	20	U	UG/KG	397		UG/KG	151		UG/KG	896		UG/KG	481		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	10.3		UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	S2F-16	S2F-17	S2F-18	S2F-19	S2F-20
SAMPLE DATE:	01/20/96	01/20/96	01/20/96	01/21/96	01/22/96
LABORATORY ID:	BRNCT1*28	BRNCT1*29	BRNCT1*30	BRNCT1*31	BRNCT1*32
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1860		UG/KG	186		UG/KG	440		UG/KG	521		UG/KG	518		UG/KG
4,4'-DDE	3000		UG/KG	1050		UG/KG	2110		UG/KG	590		UG/KG	678		UG/KG
4,4'-DDT	229		UG/KG	1.0	U	UG/KG	84.6		UG/KG	27.9		UG/KG	25.6		UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	3.6		UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	489		UG/KG	238		UG/KG	636		UG/KG	127		UG/KG	127		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	11.3		UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	S2F-21	S2F-22	S2F-23	S2F-24	S2F-25
SAMPLE DATE:	01/24/96	01/25/96	01/20/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*33	BRNCT1*34	BRNCT1*35	BRNCT1*36	BRNCT1*37
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	96.2		UG/KG	4.6		UG/KG	4200		UG/KG	2510		UG/KG	384		UG/KG
4,4'-DDE	333		UG/KG	368		UG/KG	1730		UG/KG	1630		UG/KG	452		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	76.7		UG/KG	74.0		UG/KG	19.8		UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	3.4		UG/KG	4.7		UG/KG	1.3	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	24	U	UG/KG	27	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	24	U	UG/KG	27	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	24	U	UG/KG	27	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	24	U	UG/KG	27	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	24	U	UG/KG	27	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	24	U	UG/KG	27	U	UG/KG
AROCLOR-1260	371		UG/KG	195		UG/KG	181		UG/KG	207		UG/KG	116		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	4.8		UG/KG	1.2	U	UG/KG	6.0		UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.9	U	UG/KG	6.1	U	UG/KG	6.7	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	235	UJ	UG/KG	242	UJ	UG/KG	267	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.2	U	UG/KG	1.3	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	118	U	UG/KG	121	U	UG/KG	133	U	UG/KG

SAMPLE NUMBER:	S3F-01			S3F-02			S3F-03			S3F-04			S3F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*38			BRNCT1*39			BRNCT1*40			BRNCT1*41			BRNCT1*42		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
4,4'-DDE	11.2		UG/KG	17.0		UG/KG	17.6		UG/KG	17.5		UG/KG	21.3		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	78		UG/KG	357		UG/KG	270		UG/KG	305		UG/KG	340		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

INORGANIC DATA VALIDATION
SDG G68838

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-268

TO : KEVIN WALTER

DATE: MAY 17, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - SELECT METALS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG G68838

20/Tissue/	BG1F-01	BG1F-02	BG1F-03	BG1F-04
	BG1F-05	BG1F-06	BG1F-07	BG1F-08
	BG1F-09	BG1F-10	BG1F-11	BG1F-13
	BG1F-14	BG1F-15	BG1F-16	BG1F-17
	BG1F-18	BG1F-19	S3F-23	S9BV-02

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. G68838; twenty (20) tissue samples were included for these analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and tin minus aluminum, calcium, iron, magnesium, manganese, potassium, sodium. The samples were collected by Brown and Root Environmental on January 22, 23, 25, and 26, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
* • Laboratory Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Executive Summary

Laboratory Performance: All analyses were acceptable as submitted.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
/illiam J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG G68838

TABLE 1 - RECOMMENDATION SUMMARY

Antimony	Mercury
Arsenic	Nickel
Barium	Selenium
Beryllium	Silver
Cadmium	Thallium
Chromium	Vanadium
Cobalt	Zinc
Copper	Tin
Lead	

If the field is left blank, the qualifier is A - Accept all data.

APPENDIX A
QUALIFIED LABORATORY RESULTS

SAMPLE NUMBER:	BG1F-01	BG1F-02	BG1F-03	BG1F-04	BG1F-05
SAMPLE DATE:	01/22/96	01/22/96	01/22/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*63	BRNCT1*64	BRNCT1*65	BRNCT1*66	BRNCT1*67
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.9	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.20	U	MG/KG	0.20	U	MG/KG	0.37		MG/KG	0.19	U	MG/KG	0.35		MG/KG
BARIUM	0.49	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
BERYLLIUM	0.39	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG	0.39	U	MG/KG
CADMIUM	0.49	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
CHROMIUM	0.97	U	MG/KG	0.99	U	MG/KG	0.96	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG
COBALT	0.97	U	MG/KG	0.99	U	MG/KG	0.96	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG
COPPER	0.49	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
LEAD	0.15	U	MG/KG	0.15	U	MG/KG	0.14	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.06		MG/KG	0.04	U	MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.90		MG/KG	0.40		MG/KG	0.24	U	MG/KG	0.24	U	MG/KG	0.25	U	MG/KG
SILVER	0.49	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	4.9	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
VANADIUM	0.97	U	MG/KG	0.99	U	MG/KG	0.96	U	MG/KG	0.97	U	MG/KG	0.98	U	MG/KG
ZINC	168		MG/KG	17.6		MG/KG	8.3		MG/KG	6.2		MG/KG	11.2		MG/KG

SAMPLE NUMBER:	BG1F-06			BG1F-07			BG1F-08			BG1F-09			BG1F-10		
SAMPLE DATE:	01/22/96			01/22/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*68			BRNCT1*69			BRNCT1*70			BRNCT1*71			BRNCT1*72		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.29		MG/KG	0.53		MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG
BARIUM	0.48	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG
BERYLLIUM	0.39	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG
CHROMIUM	0.97	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG
COBALT	0.97	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG
COPPER	0.48	U	MG/KG	0.50	U	MG/KG	1.6		MG/KG	3.5		MG/KG	0.49	U	MG/KG
LEAD	0.15	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG
MERCURY	0.04	U	MG/KG	0.05		MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.24	U	MG/KG	0.25	U	MG/KG	0.28		MG/KG	0.38		MG/KG	1.2		MG/KG
SILVER	0.48	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG
TIN	4.8	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG
VANADIUM	0.97	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG
ZINC	5.0		MG/KG	8.9		MG/KG	8.5		MG/KG	9.0		MG/KG	248		MG/KG

SAMPLE NUMBER:	BG1F-11	BG1F-13	BG1F-14	BG1F-15	BG1F-16
SAMPLE DATE:	01/25/96	01/25/96	01/25/96	01/25/96	01/25/96
LABORATORY ID:	BRNCT1*73	BRNCT1*75	BRNCT1*76	BRNCT1*77	BRNCT1*78
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG
ARSENIC	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
BARIUM	2.7		MG/KG	3.3		MG/KG	3.9		MG/KG	3.0		MG/KG	0.89		MG/KG
BERYLLIUM	0.38	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG
CHROMIUM	0.96	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.95	U	MG/KG
COBALT	0.96	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.95	U	MG/KG
COPPER	2.5		MG/KG	3.3		MG/KG	3.7		MG/KG	5.0		MG/KG	0.48	U	MG/KG
LEAD	0.18		MG/KG	0.25		MG/KG	0.24		MG/KG	0.20		MG/KG	0.16		MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.4	U	MG/KG	12.4		MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG
SELENIUM	0.29		MG/KG	0.36		MG/KG	0.42		MG/KG	0.31		MG/KG	0.29		MG/KG
SILVER	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
TIN	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG
VANADIUM	0.96	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	1.0	U	MG/KG	0.95	U	MG/KG
ZINC	32.2		MG/KG	41.0		MG/KG	35.7		MG/KG	30.7		MG/KG	45.0		MG/KG

SAMPLE NUMBER:	BG1F-17	BG1F-18	BG1F-19	S3F-23	S9BV-02
SAMPLE DATE:	01/25/96	01/23/96	01/23/96	01/23/96	01/25/96
LABORATORY ID:	BRNCT1*79	BRNCT1*80	BRNCT1*81	BRNCT1*60	BRNCT1*62
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.6	U	MG/KG	4.7	U	MG/KG	4.7	U	MG/KG	4.9	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.98	UD	MG/KG	1.4		MG/KG
BARIUM	2.0		MG/KG	0.70		MG/KG	2.3		MG/KG	3.6		MG/KG	0.76		MG/KG
BERYLLIUM	0.37	U	MG/KG	0.37	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG	0.39	U	MG/KG
CADMIUM	0.46	U	MG/KG	0.47	U	MG/KG	0.47	U	MG/KG	0.49	U	MG/KG	0.49	U	MG/KG
CHROMIUM	0.93	U	MG/KG	0.93	U	MG/KG	0.94	U	MG/KG	0.98	U	MG/KG	0.98	U	MG/KG
COBALT	0.93	U	MG/KG	0.93	U	MG/KG	0.94	U	MG/KG	0.98	U	MG/KG	0.98	U	MG/KG
COPPER	10.3		MG/KG	0.47	U	MG/KG	2.1		MG/KG	6.4		MG/KG	1.7		MG/KG
LEAD	0.33		MG/KG	0.14	U	MG/KG	0.14		MG/KG	0.78		MG/KG	0.25		MG/KG
MERCURY	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG	0.04	U	MG/KG
NICKEL	1.4	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.40		MG/KG	0.26		MG/KG	0.24		MG/KG	0.34		MG/KG	0.85		MG/KG
SILVER	0.46	U	MG/KG	0.47	U	MG/KG	0.47	U	MG/KG	0.49	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG
TIN	4.6	U	MG/KG	4.7	U	MG/KG	4.7	U	MG/KG	4.9	U	MG/KG	4.9	U	MG/KG
VANADIUM	0.93	U	MG/KG	0.93	U	MG/KG	0.94	U	MG/KG	0.98	U	MG/KG	0.98	U	MG/KG
ZINC	41.3		MG/KG	29.4		MG/KG	29.8		MG/KG	30.9		MG/KG	881		MG/KG

INORGANIC DATA VALIDATION
SDG G68884

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-239

TO : KEVIN WALTER

DATE: MAY 17, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - SELECT METALS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG G68884

20/Tissue/	BG1F-21	BG1F-22	BG2F-01	BG2F-02
	BG2F-03	BG2F-04	BG2F-05	BG2F-06
	BG2F-07	BG2F-08	BG2F-09	BG2F-10
	BG3F-01	BG3F-02	BG3F-03	BG3F-04
	BG3F-06	BG3F-07	BG3F-08	BG3F-09

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. G68884; twenty (20) tissue samples were included for these analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and tin minus aluminum, calcium, iron, magnesium, manganese, potassium, sodium. The samples were collected by Brown and Root Environmental on January 21, 23, 24, and 25, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
• Laboratory Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Blanks

The following contaminant was detected in the laboratory method blanks at the following maximum concentration :

Analyte	Maximum Concentration	Action Level
zinc	1.24 mg/kg	6.2 mg/kg

Samples Affected: All

An action level of 5x the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into consideration when evaluating for blank contamination. Positive results < the action level for zinc have been qualified, "U", as a result of blank contamination.

Executive Summary

Laboratory Performance: Zinc was found in the laboratory preparation blank.

Other Factors Affecting Data Quality: None

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

:achments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS Key West
SDG G68884

TABLE 1 - RECOMMENDATION SUMMARY

Antimony	Mercury	
Arsenic	Nickel	
Barium	Selenium	
Beryllium	Silver	
Cadmium	Thallium	
Chromium	Vanadium	
Cobalt	Zinc	A^1
Copper	Tin	
Lead		

If the field is left blank, the qualifier is A - Accept all data.

A^1 - Accept data but qualify as nondetected, "U", as a result of laboratory blank contamination.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO 007 - NAS KEY WEST
FIELD ISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG1F-21	BG1F-22	BG2F-01	BG2F-02	BG2F-03
SAMPLE DATE:	01/23/96	01/23/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*83	BRNCT1*84	BRNCT1*85	BRNCT1*86	BRNCT1*87
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.7	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG	4.8	U	MG/KG	5.0	U	MG/KG
ARSENIC	0.19	U	MG/KG	0.20	U	MG/KG	3.2		MG/KG	2.5		MG/KG	2.3		MG/KG
BARIUM	1.9		MG/KG	3.4		MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.50	U	MG/KG
BERYLLIUM	0.37	U	MG/KG	0.39	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.47	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.50	U	MG/KG
CHROMIUM	0.93	U	MG/KG	0.99	U	MG/KG	0.95	U	MG/KG	0.96	U	MG/KG	1.0	U	MG/KG
COBALT	0.93	U	MG/KG	0.99	U	MG/KG	0.95	U	MG/KG	0.96	U	MG/KG	1.0	U	MG/KG
COPPER	3.5		MG/KG	10.2		MG/KG	2.5		MG/KG	0.58		MG/KG	0.69		MG/KG
LEAD	0.14	U	MG/KG	0.23		MG/KG	0.14	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG
MERCURY	0.06		MG/KG	0.02	U	MG/KG	0.12		MG/KG	0.04		MG/KG	0.04		MG/KG
NICKEL	1.4	U	MG/KG	1.5	U	MG/KG	2.8		MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.24		MG/KG	0.42		MG/KG	0.27		MG/KG	0.32		MG/KG	0.25	U	MG/KG
SILVER	0.47	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG	0.48	U	MG/KG	0.50	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	4.7	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG	4.8	U	MG/KG	5.0	U	MG/KG
VANADIUM	0.93	U	MG/KG	0.99	U	MG/KG	0.95	U	MG/KG	0.96	U	MG/KG	1.0	U	MG/KG
ZINC	24.5		MG/KG	39.9		MG/KG	10.7		MG/KG	5.6	U	MG/KG	5.6	U	MG/KG

SAMPLE NUMBER:	BG2F-04			BG2F-05			BG2F-06			BG2F-07			BG2F-08		
SAMPLE DATE:	01/21/96			01/21/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*88			BRNCT1*89			BRNCT1*90			BRNCT1*91			BRNCT1*92		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.7	U	MG/KG	4.8	U	MG/KG	4.7	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
ARSENIC	0.57		MG/KG	2.0		MG/KG	2.3		MG/KG	0.95		MG/KG	2.0		MG/KG
BARIUM	0.47	U	MG/KG	0.48	U	MG/KG	0.47	U	MG/KG	0.55		MG/KG	0.61		MG/KG
BERYLLIUM	0.37	U	MG/KG	0.39	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG	0.39	U	MG/KG
CADMIUM	0.47	U	MG/KG	0.48	U	MG/KG	0.47	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
CHROMIUM	0.93	U	MG/KG	0.96	U	MG/KG	0.94	U	MG/KG	0.97	U	MG/KG	0.97	U	MG/KG
COBALT	0.93	U	MG/KG	0.96	U	MG/KG	0.94	U	MG/KG	0.97	U	MG/KG	0.97	U	MG/KG
COPPER	0.47	U	MG/KG	0.48	U	MG/KG	0.93		MG/KG	0.50		MG/KG	0.49	U	MG/KG
LEAD	0.14	U	MG/KG	0.14	U	MG/KG	0.14	U	MG/KG	0.15	U	MG/KG	0.15	U	MG/KG
MERCURY	0.04		MG/KG	0.03		MG/KG	0.02		MG/KG	0.02		MG/KG	0.04		MG/KG
NICKEL	1.4	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.23	U	MG/KG	0.24	U	MG/KG	0.24	U	MG/KG	0.24	U	MG/KG	0.25		MG/KG
SILVER	0.47	U	MG/KG	0.48	U	MG/KG	0.47	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG
TIN	4.7	U	MG/KG	4.8	U	MG/KG	4.7	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
VANADIUM	0.93	U	MG/KG	0.96	U	MG/KG	0.94	U	MG/KG	0.97	U	MG/KG	0.97	U	MG/KG
ZINC	13.6		MG/KG	9.9		MG/KG	9.8		MG/KG	15.0		MG/KG	15.2		MG/KG

SAMPLE NUMBER:	BG2F-09			BG2F-10			BG3F-01			BG3F-02			BG3F-03		
SAMPLE DATE:	01/21/96			01/23/96			01/24/96			01/24/96			01/25/96		
LABORATORY ID:	BRNCT1*93			BRNCT1*94			BRNCT1*95			BRNCT1*96			BRNCT1*97		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	5.0	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
ARSENIC	2.0		MG/KG	0.89		MG/KG	3.3		MG/KG	2.3		MG/KG	7.2		MG/KG
BARIUM	1.2		MG/KG	3.8		MG/KG	0.84		MG/KG	0.56		MG/KG	0.49	U	MG/KG
BERYLLIUM	0.40	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG	0.39	U	MG/KG
CADMIUM	0.50	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
CHROMIUM	1.0	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	1.1		MG/KG	0.98	U	MG/KG
COBALT	1.0	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.96	U	MG/KG	0.98	U	MG/KG
COPPER	0.50	U	MG/KG	5.9		MG/KG	1.0		MG/KG	6.7		MG/KG	1.7		MG/KG
LEAD	0.15	U	MG/KG	0.24		MG/KG	0.15	U	MG/KG	0.14	U	MG/KG	0.54		MG/KG
MERCURY	0.03		MG/KG	0.02		MG/KG	0.07		MG/KG	0.07		MG/KG	0.03		MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.25	U	MG/KG	0.25	U	MG/KG	0.26		MG/KG	0.37		MG/KG	0.64		MG/KG
SILVER	0.50	U	MG/KG	0.50	U	MG/KG	0.50	U	MG/KG	0.48	U	MG/KG	0.49	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	5.0	U	MG/KG	5.0	U	MG/KG	5.0	U	MG/KG	4.8	U	MG/KG	4.9	U	MG/KG
VANADIUM	1.0	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.96	U	MG/KG	0.98	U	MG/KG
ZINC	13.7		MG/KG	13.6		MG/KG	27.0		MG/KG	19.6		MG/KG	39.2		MG/KG

SAMPLE NUMBER:	BG3F-04			BG3F-06			BG3F-07			BG3F-08			BG3F-09		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*98			BRNCT1*100			BRNCT1*101			BRNCT1*102			BRNCT1*103		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.9	U	MG/KG	4.6	U	MG/KG	4.7	U	MG/KG	4.7	U	MG/KG
ARSENIC	4.3		MG/KG	0.57		MG/KG	0.56		MG/KG	7.0		MG/KG	0.72		MG/KG
BARIUM	0.48	U	MG/KG	1.1		MG/KG	0.91		MG/KG	0.47	U	MG/KG	0.94		MG/KG
BERYLLIUM	0.39	U	MG/KG	0.39	U	MG/KG	0.37	U	MG/KG	0.38	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.49	U	MG/KG	0.46	U	MG/KG	0.47	U	MG/KG	0.47	U	MG/KG
CHROMIUM	0.97	U	MG/KG	0.98	U	MG/KG	0.92	U	MG/KG	0.94	U	MG/KG	0.94	U	MG/KG
COBALT	0.97	U	MG/KG	0.98	U	MG/KG	0.92	U	MG/KG	0.94	U	MG/KG	0.94	U	MG/KG
COPPER	1.6		MG/KG	8.0		MG/KG	4.2		MG/KG	1.5		MG/KG	2.8		MG/KG
LEAD	0.80		MG/KG	8.8		MG/KG	7.4		MG/KG	0.62		MG/KG	11.9		MG/KG
MERCURY	0.02		MG/KG	0.02	U	MG/KG	0.02	U	MG/KG	0.02		MG/KG	0.02	U	MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG
SELENIUM	0.59		MG/KG	0.61		MG/KG	0.45		MG/KG	0.26		MG/KG	0.42		MG/KG
SILVER	0.48	U	MG/KG	0.49	U	MG/KG	0.46	U	MG/KG	0.47	U	MG/KG	0.47	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.18	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG
TIN	4.8	U	MG/KG	4.9	U	MG/KG	4.6	U	MG/KG	4.7	U	MG/KG	4.7	U	MG/KG
VANADIUM	0.97	U	MG/KG	0.98	U	MG/KG	0.92	U	MG/KG	0.94	U	MG/KG	0.94	U	MG/KG
ZINC	29.8		MG/KG	41.5		MG/KG	32.9		MG/KG	30.3		MG/KG	23.3		MG/KG

ORGANIC DATA VALIDATION
SDG G68931

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-098

TO: KEVIN WALTER

DATE: MAY 10, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - PESTICIDE/PCB ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G68931

SAMPLES: Tissue:

S3F-06	S3F-07	S3F-08
S3F-09	S3F-10	S3F-11
S3F-12	S3F-13	S3F-14
S3F-15	S3F-16	S3F-17
S3F-18	S3F-19	S3F-20
S3F-21	S3F-22	S3F-23
S9BV-01	S9BV-02	

The sample set for the CTO 007 NAS Key West site, SDG G68931, consists of twenty (20) tissue samples analyzed for Appendix IX pesticide/PCB organic compounds. The samples were collected by Brown and Root Environmental on January 19, 20, 21, 22, 23 and 25, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8080 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

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Pesticides/PCBs

The laboratory failed to provide a Form X: Pesticide Identification Summary with Percent Differences calculated for each positive result. Therefore, the data reviewer was unable to evaluate for this parameter.

The laboratory only provided calibration summaries for analyses performed on column one (DB-608). Furthermore, all results have been reported and quantitated using column one (DB-608).

The laboratory did not perform GC/MS confirmation analyses for single component pesticides.

The laboratory only analyzed a single point calibration for Kepone. Therefore, as a result of the low response and the lack of associated performance data for Kepone, the nondetected results for this compound have been qualified as estimated, "UJ".

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory did not provide a Form X. The laboratory only used one column for quantitation for several analytes.

Other Factors Affecting Data Quality: None.

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The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G68931

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	PEST/PCB
S3F-06	J[1]
S3F-07	J[1]
S3F-08	J[1]
S3F-09	J[1]
S3F-10	J[1]
S3F-11	J[1]
S3F-12	J[1]
S3F-13	J[1]
S3F-14	J[1]
S3F-15	J[1]
S3F-16	J[1]
S3F-17	J[1]
S3F-18	J[1]
S3F-19	J[1]
S3F-20	J[1]
S3F-21	J[1]
S3F-22	J[1]
S3F-23	J[1]
S9BV-01	J[1]
S9BV-02	J[1]

If the field is left blank, the qualifier is A - Accept all data.

J[1] - Accept data but qualify nondetects for Kepone as estimated, "UJ", as a result of calibration noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

FISH [illegible]SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S3F-06			S3F-07			S3F-08			S3F-09			S3F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/22/96		
LABORATORY ID:	BRNCT1*43			BRNCT1*44			BRNCT1*45			BRNCT1*46			BRNCT1*47		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
4,4'-DDE	20.9		UG/KG	20.5		UG/KG	17.4		UG/KG	16.4		UG/KG	19.0		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	162		UG/KG	81		UG/KG	159		UG/KG	125		UG/KG	209		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	S3F-11	S3F-12	S3F-13	S3F-14	S3F-15
SAMPLE DATE:	01/22/96	01/22/96	01/22/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*48	BRNCT1*49	BRNCT1*50	BRNCT1*51	BRNCT1*52
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
4,4'-DDE	18.6		UG/KG	12.2		UG/KG	9.8		UG/KG	11.3		UG/KG	25.1		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	36	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	36	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	36	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	36	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	36	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	36	U	UG/KG
AROCLOR-1260	250		UG/KG	60		UG/KG	70		UG/KG	39		UG/KG	113		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.9	U	UG/KG	9.1	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	235	UJ	UG/KG	364	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.8	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	118	U	UG/KG	182	U	UG/KG

SAMPLE NUMBER:	S3F-16			S3F-17			S3F-18			S3F-19			S3F-20		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	BRNCT1*53			BRNCT1*54			BRNCT1*55			BRNCT1*56			BRNCT1*57		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
4,4'-DDE	15.6		UG/KG	8.0		UG/KG	17.7		UG/KG	17.9		UG/KG	18.2		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	28	U	UG/KG	31	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	28	U	UG/KG	31	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	28	U	UG/KG	31	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	28	U	UG/KG	31	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	28	U	UG/KG	31	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	28	U	UG/KG	31	U	UG/KG	20	U	UG/KG
AROCLOR-1260	119		UG/KG	20	U	UG/KG	36		UG/KG	75		UG/KG	191		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	6.9	U	UG/KG	7.7	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	276	UJ	UG/KG	308	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.4	U	UG/KG	1.5	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	138	U	UG/KG	154	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	S3F-21	S3F-22	S3F-23	S9BV-01	S9BV-02
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/22/96	01/25/96
LABORATORY ID:	BRNCT1*58	BRNCT1*59	BRNCT1*60	BRNCT1*61	BRNCT1*62
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
4,4'-DDE	21.1		UG/KG	18.7		UG/KG	19.1		UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	245		UG/KG	235		UG/KG	155		UG/KG	20	U	UG/KG	20	U	UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

INORGANIC DATA VALIDATION
SDG G68956

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-234

TO : **KEVIN WALTER** **DATE:** **MAY 17, 1996**

FROM: **WILLIAM J. BROTZ** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION - SELECT METALS**
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
BROWN AND ROOT PROJECT NO. 7046, SDG G68956

20/Tissue/	BG1F-23	BG1F-24	BG1F-26	BG1F-27
	BG1F-28	BG3BV-01	BG3BV-02	BG3BV-03
	BG3F-10	BG3F-11	BG3F-12	BG3F-13
	BG3F-14	BG3F-15	BG3F-16	BG3F-17
	BG3F-18	BG3F-19	BG3F-20	BG3F-21

Introduction

A validation was performed on the inorganic analytical data from CTO 007, NAS Key West, SDG No. G68956; twenty (20) tissue samples were included for these analyses. No field duplicate pairs were included with this SDG. These samples were analyzed for Target Analyte List (TAL) metals and tin minus aluminum, calcium, iron, magnesium, manganese, potassium, sodium. The samples were collected by Brown and Root Environmental on January 25 and 26, 1996.

All analyses were performed by General Engineering Laboratories using Contract Laboratory Program (CLP) Statement of Work (SOW) ILM03.0 analytical and reporting protocols. These data are reported as NEESA Level D and were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
* • Laboratory Blank Analyses
* • Laboratory Control Sample Results
• Matrix Spike Results
• Laboratory Duplicate Results
* • ICP Interference Check Sample Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Serial Dilution analyses were not provided within this data package. Therefore, an evaluation of this parameter was not conducted.

The attached Table 1 summarizes the validation recommendations which were based on the following formation:

Matrix Spike Results

The Matrix Spike (MS) Percent Recovery (%R) for arsenic and silver were above the upper quality control limit. Positive results reported for arsenic were qualified as estimated, "J".

The MS %R for mercury was below the lower quality control limit. Positive results and nondetects reported for mercury were qualified as estimated, "J" and "UJ", respectively.

The MS %R for zinc was extremely high > 125%. Positive results reported for zinc were qualified as estimated,"J".

Laboratory Duplicate Results

Laboratory duplicate imprecision was noted for arsenic. Positive and nondetected results reported for arsenic were qualified as estimated, "J" and "UJ", respectively.

Additional Comments

It should be noted that the laboratory incorrectly calculated Relative Percent Differences for laboratory duplicate. Furthermore, the laboratory also incorrectly calculated %Rs for matrix spike recoveries. The data reviewer recalculated and amended forms where significant items were evident.

Executive Summary

Laboratory Performance: The matrix spike %Rs for several analytes were outside quality control limits. Laboratory duplicate imprecision was noted for arsenic. The laboratory incorrectly calculated RPDs and %Rs on several quality control summary forms.

Other Factors Affecting Data Quality: None.

No other problems were encountered in this case.

The data for these analysis were reviewed with reference to the "National Functional Guidelines for inorganic Data Validation", and the NEESA document entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; 6/88).

The text of this report has been formulated to address only those problem areas affecting data quality.

I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
CLEAN Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
2. Appendix C - Support Documentation

NAS Key West
SDG G68956

TABLE 1 - RECOMMENDATION SUMMARY

Antimony		Mercury	J[1]
Arsenic	J[1,2]	Nickel	
Barium		Selenium	
Beryllium		Silver	J[1]
Cadmium		Thallium	
Chromium		Vanadium	
Cobalt		Zinc	J[1]
Copper		Tin	
Lead			

If the field is left blank, the qualifier is A - Accept all data.

J[1] - Accept data but qualify positive results and nondetects as estimated, "J", and "UJ", respectively as a result of MS %R outside the quality control limits.

J[2] - Accept data but qualify positive results and nondetects as estimated, "J", and "UJ", respectively, as a result of laboratory duplicate imprecision.

APPENDIX A
QUALIFIED LABORATORY RESULTS

CTO 0[illegible] - NAS KEY WEST
FISH [illegible] SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG1F-23			BG1F-24			BG1F-26			BG1F-27			BG1F-28		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*107			BRNCT1*108			BRNCT1*110			BRNCT1*111			BRNCT1*112		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.6	U	MG/KG	5.0	U	MG/KG
ARSENIC	0.20	UJ	MG/KG	0.20	UJ	MG/KG	0.20	UJ	MG/KG	0.18	UJ	MG/KG	0.20	UJ	MG/KG
BARIUM	2.7		MG/KG	2.8		MG/KG	2.8		MG/KG	0.70		MG/KG	0.67		MG/KG
BERYLLIUM	0.40	U	MG/KG	0.40	U	MG/KG	0.40	U	MG/KG	0.37	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.46	U	MG/KG	0.50	U	MG/KG
CHROMIUM	0.99	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	3.1		MG/KG	0.99	U	MG/KG
COBALT	0.99	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.91	U	MG/KG	0.99	U	MG/KG
COPPER	3.0		MG/KG	4.9		MG/KG	4.4		MG/KG	16.3		MG/KG	0.70		MG/KG
LEAD	0.15	U	MG/KG	0.15	U	MG/KG	0.24		MG/KG	0.14	U	MG/KG	0.15	U	MG/KG
MERCURY	0.02	UJ	MG/KG	0.02	UJ	MG/KG	0.02	UJ	MG/KG	0.03	J	MG/KG	0.04	J	MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.28		MG/KG	0.41		MG/KG	0.42		MG/KG	0.34		MG/KG	0.37		MG/KG
SILVER	0.50	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.46	U	MG/KG	0.50	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.18	U	MG/KG	0.20	U	MG/KG
TIN	5.0	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.6	U	MG/KG	5.0	U	MG/KG
VANADIUM	0.99	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.91	U	MG/KG	0.99	U	MG/KG
ZINC	24.5	J	MG/KG	29.2	J	MG/KG	45.4	J	MG/KG	37.5	J	MG/KG	41.5	J	MG/KG

SAMPLE NUMBER:	BG3BV-01			BG3BV-02			BG3BV-03			BG3F-10			BG3F-11		
SAMPLE DATE:	01/26/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*122			BRNCT1*123			BRNCT1*124			BRNCT1*104			BRNCT1*105		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.9	U	MG/KG	4.7	U	MG/KG	4.7	U	MG/KG	4.6	U	MG/KG	4.7	U	MG/KG
ARSENIC	2.4	J	MG/KG	3.4	J	MG/KG	3.7	J	MG/KG	6.1	J	MG/KG	8.3	J	MG/KG
BARIUM	0.49	U	MG/KG	0.47	U	MG/KG	0.47	U	MG/KG	0.46	U	MG/KG	0.47	U	MG/KG
BERYLLIUM	0.39	U	MG/KG	0.38	U	MG/KG	0.38	U	MG/KG	0.37	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.49	U	MG/KG	0.47	U	MG/KG	0.47	U	MG/KG	0.46	U	MG/KG	0.47	U	MG/KG
CHROMIUM	0.98	U	MG/KG	0.95	U	MG/KG	0.94	U	MG/KG	1.0		MG/KG	0.94	U	MG/KG
COBALT	0.98	U	MG/KG	0.95	U	MG/KG	0.94	U	MG/KG	0.93	U	MG/KG	0.94	U	MG/KG
COPPER	3.8		MG/KG	1.7		MG/KG	1.7		MG/KG	22.8		MG/KG	2.8		MG/KG
LEAD	0.15	U	MG/KG	0.14	U	MG/KG	0.14	U	MG/KG	0.48		MG/KG	0.27		MG/KG
MERCURY	0.08	J	MG/KG	0.06	J	MG/KG	0.05	J	MG/KG	0.04	J	MG/KG	0.03	J	MG/KG
NICKEL	1.5	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG	1.4	U	MG/KG
SELENIUM	1.4		MG/KG	1.3		MG/KG	1.2		MG/KG	0.45		MG/KG	0.36		MG/KG
SILVER	5.5	J	MG/KG	3.8	J	MG/KG	4.3	J	MG/KG	0.46	U	MG/KG	0.47	U	MG/KG
THALLIUM	0.20	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG	0.19	U	MG/KG
TIN	4.9	U	MG/KG	4.7	U	MG/KG	4.7	U	MG/KG	4.6	U	MG/KG	4.7	U	MG/KG
VANADIUM	0.98	U	MG/KG	0.95	U	MG/KG	0.94	U	MG/KG	0.93	U	MG/KG	0.94	U	MG/KG
ZINC	1570	J	MG/KG	582	J	MG/KG	647	J	MG/KG	29.0	J	MG/KG	25.8	J	MG/KG

SAMPLE NUMBER:	BG3F-12	BG3F-13	BG3F-14	BG3F-15	BG3F-16
SAMPLE DATE:	01/25/96	01/25/96	01/25/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*106	BRNCT1*113	BRNCT1*114	BRNCT1*115	BRNCT1*116
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.8	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG
ARSENIC	6.1	J	MG/KG	4.9	J	MG/KG	3.8	J	MG/KG	0.98	UJ	MG/KG	1.1	J	MG/KG
BARIUM	0.48	U	MG/KG	0.48	U	MG/KG	0.50	U	MG/KG	1.1		MG/KG	1.9		MG/KG
BERYLLIUM	0.38	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG	0.39	U	MG/KG	0.38	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.48	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG
CHROMIUM	0.95	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG	0.98	U	MG/KG	0.95	U	MG/KG
COBALT	0.95	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG	0.98	U	MG/KG	0.95	U	MG/KG
COPPER	1.8		MG/KG	9.8		MG/KG	2.7		MG/KG	4.0		MG/KG	1.4		MG/KG
LEAD	0.54		MG/KG	0.78		MG/KG	0.51		MG/KG	8.1		MG/KG	5.3		MG/KG
MERCURY	0.03	J	MG/KG	0.05	J	MG/KG	0.04	J	MG/KG	0.02	UJ	MG/KG	0.02	UJ	MG/KG
NICKEL	1.4	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG
SELENIUM	0.41		MG/KG	0.42		MG/KG	0.37		MG/KG	0.40		MG/KG	0.33		MG/KG
SILVER	0.48	U	MG/KG	0.48	U	MG/KG	0.50	U	MG/KG	0.49	U	MG/KG	0.48	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG
TIN	4.8	U	MG/KG	4.8	U	MG/KG	5.0	U	MG/KG	4.9	U	MG/KG	4.8	U	MG/KG
VANADIUM	0.95	U	MG/KG	0.97	U	MG/KG	0.99	U	MG/KG	0.98	U	MG/KG	0.95	U	MG/KG
ZINC	27.8	J	MG/KG	30.9	J	MG/KG	60.7	J	MG/KG	37.6	J	MG/KG	26.2	J	MG/KG

SAMPLE NUMBER:	BG3F-17			BG3F-18			BG3F-19			BG3F-20			BG3F-21		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*117			BRNCT1*118			BRNCT1*119			BRNCT1*120			BRNCT1*121		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
INORGANICS															
ANTIMONY	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG
ARSENIC	3.8	J	MG/KG	0.99	UJ	MG/KG	1.7	J	MG/KG	5.3	J	MG/KG	2.4	J	MG/KG
BARIUM	0.48	U	MG/KG	0.97		MG/KG	0.50	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG
BERYLLIUM	0.39	U	MG/KG	0.39	U	MG/KG	0.40	U	MG/KG	0.38	U	MG/KG	0.40	U	MG/KG
CADMIUM	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG
CHROMIUM	0.97	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.94	U	MG/KG	1.0	U	MG/KG
COBALT	0.97	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.94	U	MG/KG	1.0	U	MG/KG
COPPER	0.95		MG/KG	3.3		MG/KG	2.0		MG/KG	2.2		MG/KG	3.1		MG/KG
LEAD	0.50		MG/KG	11.3		MG/KG	0.49		MG/KG	0.14	U	MG/KG	0.35		MG/KG
MERCURY	0.03	J	MG/KG	0.02	UJ	MG/KG	0.03	J	MG/KG	0.04	J	MG/KG	0.02	J	MG/KG
NICKEL	1.5	U	MG/KG	1.5	U	MG/KG	1.5	U	MG/KG	1.4	U	MG/KG	1.5	U	MG/KG
SELENIUM	0.44		MG/KG	0.45		MG/KG	0.36		MG/KG	0.43		MG/KG	0.44		MG/KG
SILVER	0.48	U	MG/KG	0.49	U	MG/KG	0.50	U	MG/KG	0.47	U	MG/KG	0.50	U	MG/KG
THALLIUM	0.19	U	MG/KG	0.20	U	MG/KG	0.20	U	MG/KG	0.19	U	MG/KG	0.20	U	MG/KG
TIN	4.8	U	MG/KG	4.9	U	MG/KG	5.0	U	MG/KG	4.7	U	MG/KG	5.0	U	MG/KG
VANADIUM	0.97	U	MG/KG	0.99	U	MG/KG	0.99	U	MG/KG	0.94	U	MG/KG	1.0	U	MG/KG
ZINC	26.4	J	MG/KG	45.5	J	MG/KG	29.8	J	MG/KG	23.4	J	MG/KG	29.1	J	MG/KG

ORGANIC DATA VALIDATION
SDG G68991

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-125

TO: KEVIN WALTER **DATE:** MAY 16, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - PESTICIDE/PCB ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G68991

SAMPLES: Tissue:

BG3F-12	BG3F-13	BG3F-14
BG3F-15	BG3F-16	BG3F-17
BG3F-18	BG3F-19	BG3F-20
BG3F-21	BG1F-23	BG1F-24
BG1F-26	BG1F-27	BG1F-28
BG3BV-01	BG3BV-02	BG3BV-03

The sample set for the CTO 007 NAS Key West site, SDG G68991, consists of fifteen (15) fish samples, designated BG3F- and BG1F-, and three (3) oyster samples, designated BG3BV-. The samples were analyzed for Appendix IX pesticide/PCB organic compounds. The samples were collected by Brown and Root Environmental on January 23rd, 25th and 26th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8080 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Data completeness
- Holding times
- * Initial and continuing calibrations
- Laboratory blank analyses
- * Surrogate spike recoveries
- Matrix Spike/Matrix Spike Duplicate analysis
- Blank Spike/Blank Spike Duplicate results
- Instrument Performance
- Compound Identification
- Compound Quantitation
- Detection limits

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Pesticides/PCBs

It should be noted that the laboratory used one column(DB-608) only for the quantitation of all analytes detected in the samples contained in this SDG. Furthermore, a calibration curve for each individual analyte was reported from column DB-608 only.

The laboratory only analyzed a single point calibration for Kepone. Therefore, as a result of the low response and the lack of associated performance data for Kepone, the nondetected results for this compound have been qualified as estimated, (UJ).

An initial calibration Percent Relative Standard Deviation (%RSD) for 4,4'-DDT was greater than the 20% quality control limit. However, the correlation coefficient was well within acceptable limits. Since quantitation is based on a quadratic curve no action was taken.

A marginally low surrogate Percent Recovery (%R) for tetrachloro-m-xylene was reported in sample BG3F-18. No action was taken since only one surrogate was noncompliant and the %R was marginally below quality control limits.

The laboratory failed to provide a Form X: Pesticide Identification Summary with Percent Differences calculated for each positive result. The laboratory also failed to provide Endrin and 4,4'-DDT breakdown values. Therefore, the data reviewer was unable to evaluate for these parameters.

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory used one column(DB-608) only for the quantitation of all analytes. The laboratory only analyzed a single point calibration for Kepone. A low surrogate %R was reported in sample BG3F-18. The laboratory did not provide a Form X.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 16, 1996 - PAGE 2

Pesticides/PCBs

It should be noted that the laboratory used one column(DB-608) only for the quantitation of all analytes detected in the samples contained in this SDG. Furthermore, a calibration curve for each individual analyte was reported from column DB-608 only.

The laboratory only analyzed a single point calibration for Kepone. Therefore, as a result of the low response and the lack of associated performance data for Kepone, the nondetected results for this compound have been qualified as estimated, (UJ).

An initial calibration Percent Relative Standard Deviation (%RSD) for 4,4'-DDT was greater than the 20% quality control limit. However, the correlation coefficient was well within acceptable limits. Since quantitation is based on a quadratic curve no action was taken.

A marginally low surrogate Percent Recovery (%R) for tetrachloro-m-xylene was reported in sample BG3F-18. No action was taken since only one surrogate was noncompliant and the %R was marginally below quality control limits.

The laboratory failed to provide a Form X: Pesticide Identification Summary with Percent Differences calculated for each positive result. The laboratory also failed to provide Endrin and 4,4'-DDT breakdown values. Therefore, the data reviewer was unable to evaluate for these parameters.

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory used one column(DB-608) only for the quantitation of all analytes. The laboratory only analyzed a single point calibration for Kepone. A low surrogate %R was reported in sample BG3F-18. The laboratory did not provide a Form X.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 16, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G68991

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	PEST/PCB
BG3F-12	J^1
BG3F-13	J^1
BG3F-14	J^1
BG3F-15	J^1
BG3F-16	J^1
BG3F-17	J^1
BG3F-18	J^1
BG3F-19	J^1
BG3F-20	J^1
BG3F-21	J^1
BG1F-23	J^1
BG1F-24	J^1
BG1F-26	J^1
BG1F-27	J^1
BG1F-28	J^1
BG3BV-01	J^1
BG3BV-02	J^1
BG3BV-03	J^1

If the field is left blank, the qualifier is A - Accept all data.

J^1 - Accept data, but qualify nondetected results for Kepone as estimated, (UJ), as a result of poor calibration performance.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO (NAS KEY WEST
FISH SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG1F-23			BG1F-24			BG1F-26			BG1F-27			BG1F-28		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*107			BRNCT1*108			BRNCT1*110			BRNCT1*111			BRNCT1*112		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	2.3		UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
4,4'-DDE	15.2		UG/KG	17.9		UG/KG	20.4		UG/KG	5.8		UG/KG	7.0		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	33	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	33	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	33	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	33	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	33	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	33	U	UG/KG	20	U	UG/KG
AROCLOR-1260	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	33	U	UG/KG	20	U	UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	8.3	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.6		UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	333	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.7	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	167	U	UG/KG	100	U	UG/KG

CTO (NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG3BV-01			BG3BV-02			BG3BV-03			BG3F-12			BG3F-13		
SAMPLE DATE:	01/26/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*122			BRNCT1*123			BRNCT1*124			BRNCT1*106			BRNCT1*113		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	12.2		UG/KG	6.3		UG/KG
4,4'-DDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	89.1		UG/KG	59.3		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	165		UG/KG	20	U	UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

CTO / NAS KEY WEST
FISH SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG3F-14			BG3F-15			BG3F-16			BG3F-17			BG3F-18		
SAMPLE DATE:	01/25/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*114			BRNCT1*115			BRNCT1*116			BRNCT1*117			BRNCT1*118		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	4.7		UG/KG	12.2		UG/KG	16.6		UG/KG	8.5		UG/KG	3.4		UG/KG
4,4'-DDE	66.8		UG/KG	23.6		UG/KG	68.3		UG/KG	70.0		UG/KG	21.2		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	22	U	UG/KG	29	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	22	U	UG/KG	29	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	22	U	UG/KG	29	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	22	U	UG/KG	29	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	22	U	UG/KG	29	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	22	U	UG/KG	29	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	20	U	UG/KG	22	U	UG/KG	60		UG/KG	127		UG/KG	20	U	UG/KG
BETA-BHC	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.6	U	UG/KG	7.1	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	222	UJ	UG/KG	286	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.1	U	UG/KG	1.4	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	111	U	UG/KG	143	U	UG/KG	100	U	UG/KG	100	U	UG/KG

CTO 0 NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG3F-19			BG3F-20			BG3F-21			/ /		/ /
SAMPLE DATE:	01/26/96			01/26/96			01/26/96					
LABORATORY ID:	BRNCT1*119			BRNCT1*120			BRNCT1*121					
QC_TYPE:	Normal			Normal			Normal					
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT QUAL UNITS
PESTICIDES/PCBs												
4,4'-DDD	7.2		UG/KG	13.7		UG/KG	4.2		UG/KG			
4,4'-DDE	53.9		UG/KG	69.9		UG/KG	56.7		UG/KG			
4,4'-DDT	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ALDRIN	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ALPHA-BHC	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ALPHA-CHLORDANE	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
AROCLOR-1016	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG			
AROCLOR-1221	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG			
AROCLOR-1232	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG			
AROCLOR-1242	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG			
AROCLOR-1248	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG			
AROCLOR-1254	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG			
AROCLOR-1260	24	U	UG/KG	50		UG/KG	20	U	UG/KG			
BETA-BHC	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
CHLORDANE	5.9	U	UG/KG	5.3	U	UG/KG	5.0	U	UG/KG			
DELTA-BHC	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
DIELDRIN	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ENDOSULFAN I	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ENDOSULFAN II	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ENDOSULFAN SULFATE	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ENDRIN	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ENDRIN ALDEHYDE	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
GAMMA-BHC (LINDANE)	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
GAMMA-CHLORDANE	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
HEPTACHLOR	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
HEPTACHLOR EPOXIDE	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
ISODRIN	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
KEPONE	235	UJ	UG/KG	213	UJ	UG/KG	200	UJ	UG/KG			
METHOXYCHLOR	1.2	U	UG/KG	1.1	U	UG/KG	1.0	U	UG/KG			
TOXAPHENE	118	U	UG/KG	106	U	UG/KG	100	U	UG/KG			

ORGANIC DATA VALIDATION
SDG G69005

Brown & Root Environmental INTERNAL CORRESPONDENCE

C-49-05-6-056

TO:	**MR. KEVIN WALTER**	**DATE:**	**MAY 7, 1996**
FROM:	**MICHELLE L. ALLEN**	**CC:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- APPENDIX IX TCL VOCs**
CTO 7, NAS KEY WEST, FLORIDA
SDG G69005

SAMPLES: Fish Tissue:

S3F-07	S3F-12	S3F-13	S3F-14	S3F-15	S3F-16
S3F-17	S3F-18	S3F-19	S3F-20	S3F-21	S3F-22
S3F-23	S9BV-01	S9BV-02			

Environmental Science & Engineering (ESE), Inc. analyzed fifteen environmental fish tissue samples for Appendix IX Target Compound List (TCL) volatile organic compounds. No field duplicate pairs or field quality control blanks were included in this SDG.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8270 analytical and reporting protocols and were evaluated according to the following parameters:

- Holding times
- GC/MS tuning and mass calibration
- * Initial and continuing calibrations
- * Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatile Fraction

The initial and subsequent continuing calibrations contained Relative Response Factors (RRFs) for isobutanol, 2-butanone, and 1,4-dioxane which were less than 0.050. Failure to meet this quality control criteria indicates that the laboratory's instruments could not achieve satisfactory sensitivity for these compounds, and therefore, the associated positive and nondetected results for these compounds are severely compromised. Only nondetected results were reported for these compounds in the affected samples and these nondetects are considered to be unreliable and are rejected, "UR". These results are biased very low.

The laboratory performed one-point standard calibrations for the Appendix IX compounds chloroprene, isobutanol, and 1,4-dioxane instead of a five-point calibration. No validation action was taken for this analytical method discrepancy.

The laboratory method blank analysis yielded the following contaminants at the maximum concentrations indicated:

Compound	Maximum Concentration	Action Level
Acetone	150 µg/Kg	1500 µg/Kg

Sample aliquot size and dilution factors were considered prior to the application of the action level. No qualifications were necessary since no positive results were reported for this compound in the associated samples.

The samples were analyzed as medium level soils due to the nature of the sample matrix. In addition, the samples were reported on a wet-weight basis.

No other problems were noted.

Executive Summary

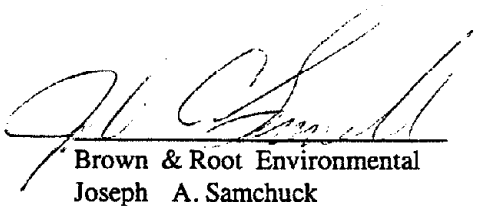
Laboratory Performance: Major calibration noncompliances (RRFs < 0.050) were noted for some volatile compounds. Some Appendix IX compounds were only standardized with a one-point calibration. Acetone was detected in the laboratory method blank.

Other Factors Affecting Data Quality: None.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown & Root Environmental
Michelle L. Allen
Chemist/Data Validator



Brown & Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST
SDG NO. G69005

TABLE 1 - RECOMMENDATIONSUMMARY

Sample No.	Volatile
S3F-07	R[1]
S3F-12	R[1]
S3F-13	R[1]
S3F-14	R[1]
S3F-15	R[1]
S3F-16	R[1]
S3F-17	R[1]
S3F-18	R[1]
S3F-19	R[1]
S3F-20	R[1]
S3F-21	R[1]
S3F-22	R[1]
S3F-23	R[1]
S9BV-01	R[1]
S9BV-02	R[1]

R[1] - Reject, "UR",nondetected results for isobutanol, 1,4-dioxane, and 2-butanone as a result of initial and continuing calibration RRFs < 0.050.

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory.
UR	-	Nondetected result is rejected as a result of initial and continuing calibration RRFs < 0.050.

APPENDIX A

Qualified Analytical Results

	S3F-07			S3F-12			S3F-13			S3F-14			S3F-15		
SAMPLE NUMBER:	S3F-07			S3F-12			S3F-13			S3F-14			S3F-15		
SAMPLE DATE:	01/20/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*44			BRNCT1*49			BRNCT1*50			BRNCT1*51			BRNCT1*52		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	S3F-07			S3F-12			S3F-13			S3F-14			S3F-15		
SAMPLE DATE:	01/20/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*44			BRNCT1*49			BRNCT1*50			BRNCT1*51			BRNCT1*52		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S3F-16	S3F-17	S3F-18	S3F-19	S3F-20
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	01/23/96
LABORATORY ID:	BRNCT1*53	BRNCT1*54	BRNCT1*55	BRNCT1*56	BRNCT1*57
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

	S3F-16			S3F-17			S3F-18			S3F-19			S3F-20		
SAMPLE NUMBER:	S3F-16			S3F-17			S3F-18			S3F-19			S3F-20		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	BRNCT1*53			BRNCT1*54			BRNCT1*55			BRNCT1*56			BRNCT1*57		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S3F-21			S3F-22			S3F-23			S9BV-01			S9BV-02		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/22/96			01/25/96		
LABORATORY ID:	BRNCT1*58			BRNCT1*59			BRNCT1*60			BRNCT1*61			BRNCT1*62		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

	S3F-21			S3F-22			S3F-23			S9BV-01			S9BV-02		
SAMPLE NUMBER:	S3F-21			S3F-22			S3F-23			S9BV-01			S9BV-02		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/22/96			01/25/96		
LABORATORY ID:	BRNCT1*58			BRNCT1*59			BRNCT1*60			BRNCT1*61			BRNCT1*62		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

ORGANIC DATA VALIDATION
SDG G69006

Brown & Root Environmental INTERNAL CORRESPONDENCE

C-49-05-6-057

TO:	**MR. KEVIN WALTER**	**DATE:**	**MAY 7, 1996**
FROM:	**MICHELLE L. ALLEN**	**CC:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - APPENDIX IX TCL VOCs**
CTO 7, NAS KEY WEST, FLORIDA
SDG G69006

SAMPLES: Fish Tissue:

BG1F-01	BG1F-02	BG1F-03	BG1F-04	BG1F-05
BG1F-06	BG1F-07	BG1F-08	BG1F-09	BG1F-10
BG1F-11	BG1F-13	BG1F-14	BG1F-15	BG1F-16
BG1F-17	BG1F-18			

Environmental Science & Engineering (ESE), Inc. analyzed seventeen environmental fish tissue samples for Appendix IX Target Compound List (TCL) volatile organic compounds. No field duplicate pairs or field quality control blanks were included in this SDG.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8270 analytical and reporting protocols and were evaluated according to the following parameters:

- Holding times
- GC/MS tuning and mass calibration
- * Initial and continuing calibrations
- * Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatile Fraction

The initial and subsequent continuing calibrations contained Relative Response Factors (RRFs) for isobutanol, 2-butanone, and 1,4-dioxane which were less than 0.050. Failure to meet this quality control criteria indicates that the laboratory's instruments could not achieve satisfactory sensitivity for these compounds, and therefore, the associated positive and nondetected results for these compounds are severely compromised. Only nondetected results were reported for these compounds in the affected samples and these nondetects are considered to be unreliable and are rejected, "UR". These results are biased very low.

The laboratory performed one-point standard calibrations for the Appendix IX compounds chloroprene, isobutanol, and 1,4-dioxane instead of a five-point calibration. No validation action was taken for this

analytical method discrepancy.

The laboratory method blank analysis yielded the following contaminants at the maximum concentrations indicated:

Compound	Maximum Concentration	Action Level
Acetone	460 µg/Kg	4600 µg/Kg

Sample aliquot size and dilution factors were considered prior to the application of the action level. No qualifications were necessary since no positive results were reported for this compound in the associated samples.

The samples were analyzed as medium level soils due to the nature of the sample matrix. In addition, the samples were reported on a wet-weight basis.

No other problems were noted.

Executive Summary

Laboratory Performance: Major calibration noncompliances (RRFs < 0.050) were noted for some volatile compounds. Some Appendix IX compounds were only standardized with a one-point calibration. Acetone was detected in the laboratory method blank.

Other Factors Affecting Data Quality: None.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown & Root Environmental
Michelle L. Allen
Chemist/Data Validator

Brown & Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST
SDG NO. G69006

TABLE 1 - RECOMMENDATIONSUMMARY

Sample No.	Volatile
BG1F-01	R^1
BG1F-02	R^1
BG1F-03	R^1
BG1F-04	R^1
BG1F-05	R^1
BG1F-06	R^1
BG1F-07	R^1
BG1F-08	R^1
BG1F-09	R^1
BG1F-10	R^1
BG1F-11	R^1
BG1F-13	R^1
BG1F-14	R^1
BG1F-15	R^1
BG1F-16	R^1
BG1F-17	R^1
BG1F-18	R^1

R^1 - Reject, "UR",nondetected results for isobutanol, 1,4-dioxane, and 2-butanone as a result of initial and continuing calibration RRFs < 0.050.

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory.
UR	-	Nondetected result is rejected as a result of initial and continuing calibration RRFs < 0.050.

APPENDIX A

Qualified Analytical Results

FISH TI' 'E DATA
ESE L/ RATORY

SAMPLE NUMBER:	BG1F-01	BG1F-02	BG1F-03	BG1F-04	BG1F-05
SAMPLE DATE:	01/22/96	01/22/96	01/22/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*63	BRNCT1*64	BRNCT1*65	BRNCT1*66	BRNCT1*67
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	BG1F-01	BG1F-02	BG1F-03	BG1F-04	BG1F-05
SAMPLE DATE:	01/22/96	01/22/96	01/22/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*63	BRNCT1*64	BRNCT1*65	BRNCT1*66	BRNCT1*67
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG1F-06			BG1F-07			BG1F-08			BG1F-09			BG1F-10		
SAMPLE DATE:	01/22/96			01/22/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*68			BRNCT1*69			BRNCT1*70			BRNCT1*71			BRNCT1*72		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	BG1F-06	BG1F-07	BG1F-08	BG1F-09	BG1F-10
SAMPLE DATE:	01/22/96	01/22/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*68	BRNCT1*69	BRNCT1*70	BRNCT1*71	BRNCT1*72
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG1F-11			BG1F-13			BG1F-14			BG1F-15			BG1F-16		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*73			BRNCT1*75			BRNCT1*76			BRNCT1*77			BRNCT1*78		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	BG1F-11			BG1F-13			BG1F-14			BG1F-15			BG1F-16		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*73			BRNCT1*75			BRNCT1*76			BRNCT1*77			BRNCT1*78		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG1F-17			BG1F-18						
SAMPLE DATE:	01/25/96			01/23/96			/ /		/ /	
LABORATORY ID:	BRNCT1*79			BRNCT1*80						
QC_TYPE:	Normal			Normal						
% SOLIDS:	100.0 %			100.0 %			100.0 %		100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
VOLATILES										
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG				
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG				
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG				
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG				
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG				
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG				
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG				
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG				
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG				
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG				
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG				
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG				
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG				
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG				
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG				
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG				
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG				
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG				
ACETONE	1000	U	UG/KG	1000	U	UG/KG				
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG				
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG				
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG				
BENZENE	500	U	UG/KG	500	U	UG/KG				
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG				
BROMOFORM	500	U	UG/KG	500	U	UG/KG				
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG				
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG				
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG				
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG				
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG				
CHLOROFORM	500	U	UG/KG	500	U	UG/KG				
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG				

SAMPLE NUMBER:	BG1F-17			BG1F-18								
SAMPLE DATE:	01/25/96			01/23/96			/ /			/ /		/ /
LABORATORY ID:	BRNCT1*79			BRNCT1*80								
QC_TYPE:	Normal			Normal								
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG									
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG									
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG									
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG									
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG									
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG									
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG									
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG									
IODOMETHANE	500	U	UG/KG	500	U	UG/KG									
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG									
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG									
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG									
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG									
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG									
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG									
STYRENE	500	U	UG/KG	500	U	UG/KG									
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG									
TOLUENE	500	U	UG/KG	500	U	UG/KG									
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG									
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG									
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG									
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG									
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG									
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG									
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG									
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG									

ORGANIC DATA VALIDATION
SDG G69007

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-066

TO: KEVIN WALTER **DATE:** MAY 8, 1996

FROM: DONALD J. WESTERHOFF **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69007

SAMPLES: Tissue:

BG3F-13	BG3F-14	BG3F-15
BG3F-16	BG3F-17	BG3F-18
BG3F-19	BG3F-20	BG3F-21
BG3BV-01	BG3BV-03	

The sample set for the CTO 007 NAS Key West site, SDG G69007, consists of eleven (11) fish samples analyzed for Appendix IX volatile organic compounds. The samples were collected by Brown and Root Environmental on January 23rd, 25th, and 26th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8260 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 8, 1996 - PAGE 2

Volatiles

It should be noted that the laboratory did not perform a five point initial calibration for chloroprene, isobutyl alcohol, and 1,4-dioxane. Instead, the laboratory performed a single point calibration with a 50 µg/L standard. SW-846 methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted here for completeness. No action was taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Initial and continuing calibration Relative Response Factors (RRFs) for 2-butanone, isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

Acetone and 2-butanone were detected in the laboratory method blank at 690 µg/Kg and 290 µg/Kg, respectively. No action was necessary since no positive results were reported for these compounds in the affected samples.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

Executive Summary

Laboratory Performance: Initial and continuing calibration RRFs for 2-butanone, isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. The laboratory did not perform a 5-point calibration for chloroprene, isobutyl alcohol, and 1,4-dioxane. Acetone and 2-butanone were detected in the laboratory method blank.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 8, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Donald J. Westerhoff
Industrial Hygienist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69007

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA
BG3F-13	R[1]
BG3F-14	R[1]
BG3F-15	R[1]
BG3F-16	R[1]
BG3F-17	R[1]
BG3F-18	R[1]
BG3F-19	R[1]
BG3F-20	R[1]
BG3F-21	R[1]
BG3BV-01	R[1]
BG3BV-03	R[1]

If the field is left blank, the qualifier is A - Accept all data.

R[1] - Reject, (UR), nondetected results for 2-butanone, isobutyl alcohol and 1,4-dioxane, as a result of initial and continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO C NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG3BV-01	BG3BV-03	BG3F-13	BG3F-14	BG3F-15
SAMPLE DATE:	01/26/96	01/25/96	01/25/96	01/25/96	01/26/96
LABORATORY ID:	BRNCT1*122	BRNCT1*124	BRNCT1*113	BRNCT1*114	BRNCT1*115
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLC ORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

CTO [illegible] NAS KEY WEST
FISH [illegible]SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG3BV-01	BG3BV-03	BG3F-13	BG3F-14	BG3F-15
SAMPLE DATE:	01/26/96	01/25/96	01/25/96	01/25/96	01/26/96
LABORATORY ID:	BRNCT1*122	BRNCT1*124	BRNCT1*113	BRNCT1*114	BRNCT1*115
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

	BG3F-16			BG3F-17			BG3F-18			BG3F-19			BG3F-20		
SAMPLE NUMBER:	BG3F-16			BG3F-17			BG3F-18			BG3F-19			BG3F-20		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*116			BRNCT1*117			BRNCT1*118			BRNCT1*119			BRNCT1*120		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHL ORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	BG3F-16			BG3F-17			BG3F-18			BG3F-19			BG3F-20		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*116			BRNCT1*117			BRNCT1*118			BRNCT1*119			BRNCT1*120		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

CTO 0 NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG3F-21			/ /		/ /		/ /		/ /		
SAMPLE DATE:	01/26/96											
LABORATORY ID:	BRNCT1*121											
QC_TYPE:	Normal											
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES												
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG									
1,1,1-TRICHLOROETHANE	500	U	UG/KG									
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG									
1,1,2-TRICHLOROETHANE	500	U	UG/KG									
1,1-DICHLOROETHANE	500	U	UG/KG									
1,1-DICHLOROETHENE	500	U	UG/KG									
1,2,3-TRICHLOROPROPANE	500	U	UG/KG									
1,2-DIBROMOETHANE	500	U	UG/KG									
1,2-DICHLOROBENZENE	500	U	UG/KG									
1,2-DICHLOROETHANE	500	U	UG/KG									
1,2-DICHLOROPROPANE	500	U	UG/KG									
1,3-DICHLOROBENZENE	500	U	UG/KG									
1,4-DICHLOROBENZENE	500	U	UG/KG									
1,4-DIOXANE	10000	UR	UG/KG									
2-BUTANONE	2000	UR	UG/KG									
2-HEXANONE	2000	U	UG/KG									
3-CHLOROPROPENE	5000	U	UG/KG									
4-METHYL-2-PENTANONE	2000	U	UG/KG									
ACETONE	1000	U	UG/KG									
ACETONITRILE	5000	U	UG/KG									
ACROLEIN	1000	U	UG/KG									
ACRYLONITRILE	1000	U	UG/KG									
BENZENE	500	U	UG/KG									
BROMODICHLOROMETHANE	500	U	UG/KG									
BROMOFORM	500	U	UG/KG									
BROMOMETHANE	1000	U	UG/KG									
CARBON DISULFIDE	500	U	UG/KG									
CARBON TETRACHLORIDE	500	U	UG/KG									
CHLOROBENZENE	500	U	UG/KG									
CHLOROETHANE	2000	U	UG/KG									
CHLOROFORM	500	U	UG/KG									
CHLOROMETHANE	1000	U	UG/KG									

SAMPLE NUMBER:	BG3F-21			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/26/96									
LABORATORY ID:	BRNCT1*121									
QC_TYPE:	Normal									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
VOLATILES										
CHLOROPRENE	1000	U	UG/KG							
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG							
DIBROMOCHLOROMETHANE	500	U	UG/KG							
DIBROMOCHLOROPROPANE	1000	U	UG/KG							
DIBROMOMETHANE	500	U	UG/KG							
DICHLORODIFLUOROMETHANE	500	U	UG/KG							
ETHYL METHACRYLATE	500	U	UG/KG							
ETHYLBENZENE	500	U	UG/KG							
IODOMETHANE	500	U	UG/KG							
ISOBUTYL ALCOHOL	10000	UR	UG/KG							
METHACRYLONITRILE	500	U	UG/KG							
METHYL METHACRYLATE	500	U	UG/KG							
METHYLENE CHLORIDE	500	U	UG/KG							
PENTACHLOROETHANE	500	U	UG/KG							
PROPIONITRILE	500	U	UG/KG							
STYRENE	500	U	UG/KG							
TETRACHLOROETHENE	500	U	UG/KG							
TOLUENE	500	U	UG/KG							
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG							
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG							
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG							
TRICHLOROETHENE	500	U	UG/KG							
TRICHLOROFLUOROMETHANE	500	U	UG/KG							
VINYL ACETATE	1000	U	UG/KG							
VINYL CHLORIDE	1000	U	UG/KG							
XYLENES, TOTAL	500	U	UG/KG							

ORGANIC DATA VALIDATION
SDG G69009

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-047

TO: KEVIN WALTER **DATE:** MAY 20, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69009

SAMPLES: Tissue:

S2F-07	S2F-08	S2F-09
S2F-10	S2F-11	S2F-13
S2F-14	S2F-15	S2F-16
S2F-17	S2F-18	

The sample set for the CTO 007 NAS Key West site, SDG G69009, consists of eleven (11) fish samples analyzed for Appendix IX volatile organic compounds. The samples were collected by Brown and Root Environmental on January 19th and 20th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8260 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 20 1996 - PAGE 2

Volatiles

It should be noted that the laboratory did not perform a five point initial calibration for chloroprene, isobutyl alcohol and 1,4-dioxane. Instead, the laboratory performed a single point calibration with a 50 µg/L standard. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Initial calibration Relative Response Factors (RRFs) for isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG. No further action was taken.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

Executive Summary

Laboratory Performance: Initial calibration RRFs for isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. The laboratory did not perform a 5-point calibration for chloroprene. The laboratory Form Is and case narrative are not adequately documented. isobutyl alcohol and 1,4-dioxane.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 20 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69009

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA
S2F-07	R[1]
S2F-08	R[1]
S2F-09	R[1]
S2F-10	R[1]
S2F-11	R[1]
S2F-13	R[1]
S2F-14	R[1]
S2F-15	R[1]
S2F-16	R[1]
S2F-17	R[1]
S2F-18	R[1]

If the field is left blank, the qualifier is A - Accept all data.

R[1] - Reject, (UR), nondetected results for isobutyl alcohol and 1,4-dioxane, as a result of initial and continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 'AS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

	S2F-07			S2F-08			S2F-09			S2F-10			S2F-11		
SAMPLE NUMBER:	S2F-07			S2F-08			S2F-09			S2F-10			S2F-11		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/20/96			01/20/96		
LABORATORY ID:	BRNCT1*19			BRNCT1*20			BRNCT1*21			BRNCT1*22			BRNCT1*23		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOR RM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOR THANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	S2F-07			S2F-08			S2F-09			S2F-10			S2F-11		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/20/96			01/20/96		
LABORATORY ID:	BRNCT1*19			BRNCT1*20			BRNCT1*21			BRNCT1*22			BRNCT1*23		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S2F-13			S2F-14			S2F-15			S2F-16			S2F-17		
SAMPLE DATE:	01/20/96			01/20/96			01/20/96			01/20/96			01/20/96		
LABORATORY ID:	BRNCT1*25			BRNCT1*26			BRNCT1*27			BRNCT1*28			BRNCT1*29		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOR[illegible]RM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOR[illegible]THANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000		UG/KG

SAMPLE NUMBER:	S2F-13			S2F-14			S2F-15			S2F-16			S2F-17		
SAMPLE DATE:	01/20/96			01/20/96			01/20/96			01/20/96			01/20/96		
LABORATORY ID:	BRNCT1*25			BRNCT1*26			BRNCT1*27			BRNCT1*28			BRNCT1*29		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S2F-18				
SAMPLE DATE:	01/20/96	/ /	/ /	/ /	/ /
LABORATORY ID:	BRNCT1*30				
QC_TYPE:	Normal				
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG												
1,1,1-TRICHLOROETHANE	500	U	UG/KG												
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG												
1,1,2-TRICHLOROETHANE	500	U	UG/KG												
1,1-DICHLOROETHANE	500	U	UG/KG												
1,1-DICHLOROETHENE	500	U	UG/KG												
1,2,3-TRICHLOROPROPANE	500	U	UG/KG												
1,2-DIBROMOETHANE	500	U	UG/KG												
1,2-DICHLOROBENZENE	500	U	UG/KG												
1,2-DICHLOROETHANE	500	U	UG/KG												
1,2-DICHLOROPROPANE	500	U	UG/KG												
1,3-DICHLOROBENZENE	500	U	UG/KG												
1,4-DICHLOROBENZENE	500	U	UG/KG												
1,4-DIOXANE	10000	UR	UG/KG												
2-BUTANONE	2000	U	UG/KG												
2-HEXANONE	2000	U	UG/KG												
3-CHLOROPROPENE	5000	U	UG/KG												
4-METHYL-2-PENTANONE	2000	U	UG/KG												
ACETONE	1000	U	UG/KG												
ACETONITRILE	5000	U	UG/KG												
ACROLEIN	1000	U	UG/KG												
ACRYLONITRILE	1000	U	UG/KG												
BENZENE	500	U	UG/KG												
BROMODICHLOROMETHANE	500	U	UG/KG												
BROMOFORM	500	U	UG/KG												
BROMOMETHANE	1000	U	UG/KG												
CARBON DISULFIDE	500	U	UG/KG												
CARBON TETRACHLORIDE	500	U	UG/KG												
CHLOROBENZENE	500	U	UG/KG												
CHLOROETHANE	2000	U	UG/KG												
CHLOF RM	500	U	UG/KG												
CHLOR ETHANE	1000	U	UG/KG												

SAMPLE NUMBER:	S2F-18			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/20/96									
LABORATORY ID:	BRNCT1*30									
QC_TYPE:	Normal									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG												
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG												
DIBROMOCHLOROMETHANE	500	U	UG/KG												
DIBROMOCHLOROPROPANE	1000	U	UG/KG												
DIBROMOMETHANE	500	U	UG/KG												
DICHLORODIFLUOROMETHANE	500	U	UG/KG												
ETHYL METHACRYLATE	500	U	UG/KG												
ETHYLBENZENE	500	U	UG/KG												
IODOMETHANE	500	U	UG/KG												
ISOBUTYL ALCOHOL	10000	UR	UG/KG												
METHACRYLONITRILE	500	U	UG/KG												
METHYL METHACRYLATE	500	U	UG/KG												
METHYLENE CHLORIDE	500	U	UG/KG												
PENTACHLOROETHANE	500	U	UG/KG												
PROPIONITRILE	500	U	UG/KG												
STYRENE	500	U	UG/KG												
TETRACHLOROETHENE	500	U	UG/KG												
TOLUENE	500	U	UG/KG												
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG												
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG												
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG												
TRICHLOROETHENE	500	U	UG/KG												
TRICHLOROFLUOROMETHANE	500	U	UG/KG												
VINYL ACETATE	1000	U	UG/KG												
VINYL CHLORIDE	1000	U	UG/KG												
XYLENES, TOTAL	500	U	UG/KG												

ORGANIC DATA VALIDATION
SDG G69010

Brown & Root Environmental INTERNAL CORRESPONDENCE

C-49-05-6-051

TO:	**MR. KEVIN WALTER**	**DATE:**	**MAY 6, 1996**
FROM:	**MICHELLE L. ALLEN**	**CC:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION- APPENDIX IX TCL VOCs CTO 7, NAS KEY WEST, FLORIDA SDG G69010**		

SAMPLES: Fish Tissue:

S2F-12	S2F-19	S2F-20	S2F-21	S2F-22	S2F-23
S2F-24	S2F-25	S3F-01	S3F-02	S3F-03	S3F-04
S3F-05	S3F-06	S3F-08	S3F-09	S3F-10	S3F-11

Environmental Science & Engineering (ESE), Inc. analyzed eighteen environmental fish tissue samples for Appendix IX Target Compound List (TCL) volatile organic compounds. No field duplicate pairs or field quality control blanks were included in this SDG.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8270 analytical and reporting protocols and were evaluated according to the following parameters:

- Holding times
- GC/MS tuning and mass calibration
- * Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Volatile Fraction

The initial and subsequent continuing calibrations contained Relative Response Factors (RRFs) for isobutanol and 1,4-dioxane which were less than 0.050. In addition, the continuing calibration RRF for 2-butanone was below 0.050. Failure to meet this quality control criteria indicates that the laboratory's instruments could not achieve satisfactory sensitivity for these compounds, and therefore, the associated positive and nondetected results for these compounds are severely compromised. Only nondetected results were reported for these compounds in the affected samples and these nondetects are considered to be unreliable and are rejected, "UR". These results are biased very low.

The laboratory performed one-point standard calibrations for the Appendix IX compounds chloroprene, isobutanol, and 1,4-dioxane instead of a five-point calibration. No validation action was taken for this analytical method discrepancy.

The laboratory performed one-point standard calibrations for the Appendix IX compounds chloroprene, isobutanol, and 1,4-dioxane instead of a five-point calibration. No validation action was taken for this analytical method discrepancy.
The laboratory method blank analysis yielded the following contaminants at the maximum concentrations indicated:

Compound	Maximum Concentration	Action Level
Acetone	620 µg/Kg	6200 µg/Kg
Methylene Chloride	350 µg/Kg	3500 µg/Kg

Sample aliquot size and dilution factors were considered prior to the application of the action level. No qualifications were necessary since no positive results were reported for these compounds in the associated samples.

The samples were analyzed as medium level soils due to the nature of the sample matrix. In addition, the samples were reported on a wet-weight basis.

No other problems were noted.

Executive Summary

Laboratory Performance: Major calibration noncompliances (RRFs < 0.050) were noted for some volatile compounds. Some Appendix IX compounds were only standardized with a one-point calibration. Acetone was detected in the laboratory method blank.

Other Factors Affecting Data Quality: None.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown & Root Environmental
Michelle L. Allen
Chemist/Data Validator

Brown & Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST
SDG NO. G69010

TABLE 1 - RECOMMENDATIONSUMMARY

Sample No.	Volatile
S2F-12	R[1]
S2F-19	R[1]
S2F-20	R[1]
S2F-21	R[1]
S2F-22	R[1]
S2F-23	R[1]
S2F-24	R[1]
S2F-25	R[1]
S3F-01	R[1]
S3F-02	R[1]
S3F-03	R[1]
S3F-04	R[1]
S3F-05	R[1]
S3F-06	R[1]
S3F-08	R[1]
S3F-09	R[1]
S3F-10	R[1]
S3F-11	R[1]

R[1] - Reject, "UR",nondetected results for isobutanol, 1,4-dioxane, and 2-butanone as a result of initial and/or continuing calibration RRFs < 0.050.

APPENDIX A

Qualified Analytical Results

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory.
UR	-	Nondetected result is rejected as a result of continuing calibration RRFs < 0.050.

CTO / · NAS KEY WEST
FIS: SSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S2F-12			S2F-19			S2F-20			S2F-21			S2F-22		
SAMPLE DATE:	01/20/96			01/21/96			01/22/96			01/24/96			01/25/96		
LABORATORY ID:	BRNCT1*24			BRNCT1*31			BRNCT1*32			BRNCT1*33			BRNCT1*34		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

CTO \ - NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S2F-12			S2F-19			S2F-20			S2F-21			S2F-22		
SAMPLE DATE:	01/20/96			01/21/96			01/22/96			01/24/96			01/25/96		
LABORATORY ID:	BRNCT1*24			BRNCT1*31			BRNCT1*32			BRNCT1*33			BRNCT1*34		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S2F-23	S2F-24	S2F-25	S3F-01	S3F-02
SAMPLE DATE:	01/20/96	01/22/96	01/22/96	01/19/96	01/19/96
LABORATORY ID:	BRNCT1*35	BRNCT1*36	BRNCT1*37	BRNCT1*38	BRNCT1*39
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

CTO \ - NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S2F-23			S2F-24			S2F-25			S3F-01			S3F-02		
SAMPLE DATE:	01/20/96			01/22/96			01/22/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*35			BRNCT1*36			BRNCT1*37			BRNCT1*38			BRNCT1*39		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S3F-03	S3F-04	S3F-05	S3F-06	S3F-08
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/21/96
LABORATORY ID:	BRNCT1*40	BRNCT1*41	BRNCT1*42	BRNCT1*43	BRNCT1*45
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

CTO (NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S3F-03			S3F-04			S3F-05			S3F-06			S3F-08		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/21/96		
LABORATORY ID:	BRNCT1*40			BRNCT1*41			BRNCT1*42			BRNCT1*43			BRNCT1*45		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	S3F-09			S3F-10			S3F-11					
SAMPLE DATE:	01/21/96			01/22/96			01/22/96			/ /		/ /
LABORATORY ID:	BRNCT1*46			BRNCT1*47			BRNCT1*48					
QC_TYPE:	Normal			Normal			Normal					
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS		RESULT QUAL UNITS
VOLATILES												
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG			
2-BUTANONE	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG			
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG			
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG			
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG			
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG			
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG			
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
CHLOROMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			

CTO (· NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

SAMPLE NUMBER:	S3F-09			S3F-10			S3F-11					
SAMPLE DATE:	01/21/96			01/22/96			01/22/96			/ /		/ /
LABORATORY ID:	BRNCT1*46			BRNCT1*47			BRNCT1*48					
QC_TYPE:	Normal			Normal			Normal					
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT QUAL UNITS
VOLATILES												
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG			
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG			

ORGANIC DATA VALIDATION
SDG G69012

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-053

TO: KEVIN WALTER **DATE:** MAY 20, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69012

SAMPLES: Tissue:

BG1F-19	BG1F-21	BG1F-22
BG2F-01	BG2F-02	BG2F-03
BG2F-04	BG2F-05	BG2F-06
BG2F-07	BG2F-08	BG2F-10
BG3F-01	BG3F-02	BG3F-03
BG3F-04		

The sample set for the CTO 007 NAS Key West site, SDG G69012, consists of sixteen (16) fish samples analyzed for Appendix IX volatile organic compounds. The samples were collected by Brown and Root Environmental on January 21st, 23rd, 24th and 25th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8260 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 2

Volatiles

It should be noted that the laboratory did not perform a five point initial calibration for chloroprene, isobutyl alcohol and 1,4-dioxane. Instead, the laboratory performed a single point calibration with a 50 µg/L standard, plus an additional continuing calibration. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Initial and continuing calibration Relative Response Factors (RRFs) for isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

Acetone was detected in the laboratory method blank at 260 µg/Kg. No action was necessary since no positive results were reported for this compound in the affected samples.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG. No further action was taken.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

Executive Summary

Laboratory Performance: Initial and continuing calibration RRFs for isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. The laboratory did not perform a 5-point calibration for chloroprene, isobutyl alcohol and 1,4-dioxane. Acetone was detected in the laboratory method blank. The laboratory Form Is and case narrative are not adequately documented.

Other Factors Affecting Data Quality: None.

MEMO TO: **KEVIN WALTER**
DATE: **MAY 20, 1996 - PAGE 3**

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69012

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA
BG1F-19	R^1
BG1F-21	R^1
BG1F-22	R^1
BG2F-01	R^1
BG2F-02	R^1
BG2F-03	R^1
BG2F-04	R^1
BG2F-05	R^1
BG2F-06	R^1
BG2F-07	R^1
BG2F-08	R^1
BG2F-10	R^1
BG3F-01	R^1
BG3F-02	R^1
BG3F-03	R^1
BG3F-04	R^1

If the field is left blank, the qualifier is A - Accept all data.

R^1 - Reject, (UR), nondetected results for isobutyl alcohol and 1,4-dioxane, as a result of initial and continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 - NAS KEY WEST
FISH SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG1F-19			BG1F-21			BG1F-22			BG2F-01			BG2F-02		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*81			BRNCT1*83			BRNCT1*84			BRNCT1*85			BRNCT1*86		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHI[illegible]OFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CH[illegible]OMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	BG1F-19			BG1F-21			BG1F-22			BG2F-01			BG2F-02		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*81			BRNCT1*83			BRNCT1*84			BRNCT1*85			BRNCT1*86		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	5500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG2F-03	BG2F-04	BG2F-05	BG2F-06	BG2F-07
SAMPLE DATE:	01/21/96	01/21/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*87	BRNCT1*88	BRNCT1*89	BRNCT1*90	BRNCT1*91
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHL[illegible]OFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHL[illegible]METHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	BG2F-03	BG2F-04	BG2F-05	BG2F-06	BG2F-07
SAMPLE DATE:	01/21/96	01/21/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*87	BRNCT1*88	BRNCT1*89	BRNCT1*90	BRNCT1*91
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG2F-08			BG2F-10			BG3F-01			BG3F-02			BG3F-03		
SAMPLE DATE:	01/21/96			01/23/96			01/24/96			01/24/96			01/25/96		
LABORATORY ID:	BRNCT1*92			BRNCT1*94			BRNCT1*95			BRNCT1*96			BRNCT1*97		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHL[illegible]FORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHL[illegible]METHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

SAMPLE NUMBER:	BG2F-08			BG2F-10			BG3F-01			BG3F-02			BG3F-03		
SAMPLE DATE:	01/21/96			01/23/96			01/24/96			01/24/96			01/25/96		
LABORATORY ID:	BRNCT1*92			BRNCT1*94			BRNCT1*95			BRNCT1*96			BRNCT1*97		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG3F-04			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/25/96									
LABORATORY ID:	BRNCT1*98									
QC_TYPE:	Dilution									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG												
1,1,1-TRICHLOROETHANE	500	U	UG/KG												
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG												
1,1,2-TRICHLOROETHANE	500	U	UG/KG												
1,1-DICHLOROETHANE	500	U	UG/KG												
1,1-DICHLOROETHENE	500	U	UG/KG												
1,2,3-TRICHLOROPROPANE	500	U	UG/KG												
1,2-DIBROMOETHANE	500	U	UG/KG												
1,2-DICHLOROBENZENE	500	U	UG/KG												
1,2-DICHLOROETHANE	500	U	UG/KG												
1,2-DICHLOROPROPANE	500	U	UG/KG												
1,3-DICHLOROBENZENE	500	U	UG/KG												
1,4-DICHLOROBENZENE	500	U	UG/KG												
1,4-DIOXANE	10000	UR	UG/KG												
2-BUTANONE	2000	U	UG/KG												
2-HEXANONE	2000	U	UG/KG												
3-CHLOROPROPENE	5000	U	UG/KG												
4-METHYL-2-PENTANONE	2000	U	UG/KG												
ACETONE	1000	U	UG/KG												
ACETONITRILE	5000	U	UG/KG												
ACROLEIN	1000	U	UG/KG												
ACRYLONITRILE	1000	U	UG/KG												
BENZENE	500	U	UG/KG												
BROMODICHLOROMETHANE	500	U	UG/KG												
BROMOFORM	500	U	UG/KG												
BROMOMETHANE	1000	U	UG/KG												
CARBON DISULFIDE	500	U	UG/KG												
CARBON TETRACHLORIDE	500	U	UG/KG												
CHLOROBENZENE	500	U	UG/KG												
CHLOROETHANE	2000	U	UG/KG												
CHLOROFORM	500	U	UG/KG												
CH)METHANE	1000	U	UG/KG												

SAMPLE NUMBER:	BG3F-04				
SAMPLE DATE:	01/25/96	/ /	/ /	/ /	/ /
LABORATORY ID:	BRNCT1*98				
QC_TYPE:	Dilution				
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG												
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG												
DIBROMOCHLOROMETHANE	500	U	UG/KG												
DIBROMOCHLOROPROPANE	1000	U	UG/KG												
DIBROMOMETHANE	500	U	UG/KG												
DICHLORODIFLUOROMETHANE	500	U	UG/KG												
ETHYL METHACRYLATE	500	U	UG/KG												
ETHYLBENZENE	500	U	UG/KG												
IODOMETHANE	500	U	UG/KG												
ISOBUTYL ALCOHOL	10000	UR	UG/KG												
METHACRYLONITRILE	500	U	UG/KG												
METHYL METHACRYLATE	500	U	UG/KG												
METHYLENE CHLORIDE	500	U	UG/KG												
PENTACHLOROETHANE	500	U	UG/KG												
PROPIONITRILE	500	U	UG/KG												
STYRENE	500	U	UG/KG												
TETRACHLOROETHENE	500	U	UG/KG												
TOLUENE	500	U	UG/KG												
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG												
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG												
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG												
TRICHLOROETHENE	500	U	UG/KG												
TRICHLOROFLUOROMETHANE	500	U	UG/KG												
VINYL ACETATE	1000	U	UG/KG												
VINYL CHLORIDE	1000	U	UG/KG												
XYLENES, TOTAL	500	U	UG/KG												

ORGANIC DATA VALIDATION
SDG G69013

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-062

TO: KEVIN WALTER

DATE: MAY 20, 1996

FROM: DONALD J. WESTERHOFF

COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69013

SAMPLES: Tissue:

BG1F-23	BG1F-24	BG1F-26
BG1F-27	BG1F-28	BG2F-09
BG3F-06	BG3F-07	BG3F-08
BG3F-09	BG3F-10	BG3F-11
BG3F-12		

The sample set for the CTO 007 NAS Key West site, SDG G69013, consists of thirteen (13) fish samples analyzed for Appendix IX volatile organic compounds. The samples were collected by Brown and Root Environmental on January 24th, 25th, and 26th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8260 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Data completeness
- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- * Laboratory and field blank analyses
- * Surrogate spike recoveries
- Matrix Spike/Matrix Spike Duplicate analysis
- Blank Spike/Blank Spike Duplicate results
- Internal Standards
- Instrument Performance
- Compound Identification
- Compound Quantitation
- Detection limits

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 2

Volatiles

It should be noted that the laboratory did not perform a five point initial calibration for chloroprene, isobutyl alcohol and 1,4-dioxane. Instead, the laboratory performed a single point calibration with a 50 µg/L standard. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Initial and continuing calibration Relative Response Factors (RRFs) for isobutyl alcohol and 1,4- dioxane were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

Acetone was detected in the laboratory method blank at 280 µg/Kg. No action was necessary since no positive results were reported for this compound in the affected samples.

Low surrogate Percent Recoveries (%Rs) were reported for bromoflourobenzene in samples BG3F-08, BG1F-26 and BG2F-09. The surrogate toluened-8 also had a low %R reported in sample BG2F-09. As a result of these low %Rs, nondetected results were qualified as estimated, (UJ), in the aforementioned samples.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

Executive Summary

Laboratory Performance: Initial and continuing calibration RRFs for isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. A 5 point initial calibration was not performed for chloroprene, isobutyl alcohol and 1,4-dioxane. Acetone was detected in the laboratory method blank. Low surrogate %Rs were reported in a few samples. Form Is and case narrative are not adequately documented.

Other Factors Affecting Data Quality: None.

MEMO TO: **KEVIN WALTER**
DATE: **MAY 20, 1996 - PAGE 3**

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Donald J. Westerhoff
Industrial Hygienist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69013

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA	
BG1F-23		R[1]
BG1F-24		R[1]
BG1F-26	J[1]	R[1]
BG1F-27		R[1]
BG1F-28		R[1]
BG2F-09	J[1]	R[1]
BG3F-06		R[1]
BG3F-07		R[1]
BG3F-08	J[1]	R[1]
BG3F-09		R[1]
BG3F-10		R[1]
BG3F-11		R[1]
BG3F-12		R[1]

If the field is left blank, the qualifier is A - Accept all data.

J[1] - Accept data, but qualify nondetected results as estimated, (UJ), as a result of low surrogate recoveries.

R[1] - Reject, (UR), nondetected results for isobutyl alcohol and 1,4-dioxane, as a result of initial and continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 - NAS KEY WEST
FISH 1 UE DATA
ESE LABORATORY

	BG1F-23	BG1F-24	BG1F-26	BG1F-27	BG1F-28
SAMPLE NUMBER:	BG1F-23	BG1F-24	BG1F-26	BG1F-27	BG1F-28
SAMPLE DATE:	01/26/96	01/26/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*107	BRNCT1*108	BRNCT1*110	BRNCT1*111	BRNCT1*112
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	UJ	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	UJ	UG/KG	2000	U	UG/KG	2000	U	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLOROFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG

	BG1F-23	BG1F-24	BG1F-26	BG1F-27	BG1F-28
SAMPLE NUMBER:	BG1F-23	BG1F-24	BG1F-26	BG1F-27	BG1F-28
SAMPLE DATE:	01/26/96	01/26/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*107	BRNCT1*108	BRNCT1*110	BRNCT1*111	BRNCT1*112
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	U	UG/KG	1000	U	UG/KG	1000	UJ	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000		UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	U	UG/KG	500	U	UG/KG	500	UJ	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000		UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000		UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500		UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG2F-09			BG3F-06			BG3F-07			BG3F-08			BG3F-09			
SAMPLE DATE:	01/21/96			01/25/96			01/25/96			01/25/96			01/25/96			
LABORATORY ID:	BRNCT1*93			BRNCT1*100			BRNCT1*101			BRNCT1*102			BRNCT1*103			
QC_TYPE:	Normal			Normal			Normal			Normal			Normal			
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %			
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES																
1,1,1,2-TETRACHLOROETHANE	500	UJ	UG/KG	500	U	UG/KG	500	U	UG/KG	500	UJ	UG/KG	500	U	UG/KG
1,1,1-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1,2-TRICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,1-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2,3-TRICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DIBROMOETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,2-DICHLOROPROPANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,3-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DICHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
1,4-DIOXANE	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
2-BUTANONE	2000	UJ	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	UJ	UG/KG	2000	U	UG/KG
2-HEXANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3-CHLOROPROPENE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
4-METHYL-2-PENTANONE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
ACETONE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACETONITRILE	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG	5000	U	UG/KG
ACROLEIN	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
ACRYLONITRILE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
BENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMODICHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOFORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
BROMOMETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
CARBON DISULFIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CARBON TETRACHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLOROETHANE	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
CHLO[illegible]ORM	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
CHLO[illegible]ETHANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000		UG/KG

SAMPLE NUMBER:	BG2F-09			BG3F-06			BG3F-07			BG3F-08			BG3F-09		
SAMPLE DATE:	01/21/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*93			BRNCT1*100			BRNCT1*101			BRNCT1*102			BRNCT1*103		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	1000	UR	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	UJ	UG/KG	1000	U	UG/KG
CIS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DIBROMOCHLOROPROPANE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
DIBROMOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
DICHLORODIFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ETHYLBENZENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
IODOMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
ISOBUTYL ALCOHOL	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG	10000	UR	UG/KG
METHACRYLONITRILE	500	UR	UG/KG	500	U	UG/KG	500	U	UG/KG	500	UJ	UG/KG	500	U	UG/KG
METHYL METHACRYLATE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
METHYLENE CHLORIDE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PENTACHLOROETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
PROPIONITRILE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
STYRENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TETRACHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TOLUENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,2-DICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,3-DICHLOROPROPENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRANS-1,4-DICHLORO-2-BUTENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROETHENE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
TRICHLOROFLUOROMETHANE	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG
VINYL ACETATE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
VINYL CHLORIDE	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
XYLENES, TOTAL	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG	500	U	UG/KG

SAMPLE NUMBER:	BG3F-10				BG3F-11				BG3F-12				/ /		/ /	
SAMPLE DATE:	01/25/96				01/25/96				01/25/96							
LABORATORY ID:	BRNCT1*104				BRNCT1*105				BRNCT1*106							
QC_TYPE:	Normal				Normal				Normal							
% SOLIDS:	100.0 %				100.0 %				100.0 %				100.0 %		100.0 %	
	RESULT	QUAL	UNITS		RESULT	QUAL	UNITS		RESULT	QUAL	UNITS		RESULT	QUAL	UNITS	
VOLATILES																
1,1,1,2-TETRACHLOROETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,1,1-TRICHLOROETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,1,2,2-TETRACHLOROETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,1,2-TRICHLOROETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,1-DICHLOROETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,1-DICHLOROETHENE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,2,3-TRICHLOROPROPANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,2-DIBROMOETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,2-DICHLOROBENZENE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,2-DICHLOROETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,2-DICHLOROPROPANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,3-DICHLOROBENZENE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,4-DICHLOROBENZENE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
1,4-DIOXANE	10000	UR	UG/KG		10000	UR	UG/KG		10000	UR	UG/KG					
2-BUTANONE	2000	U	UG/KG		2000	U	UG/KG		2000	U	UG/KG					
2-HEXANONE	2000	U	UG/KG		2000	U	UG/KG		2000	U	UG/KG					
3-CHLOROPROPENE	5000	U	UG/KG		5000	U	UG/KG		5000	U	UG/KG					
4-METHYL-2-PENTANONE	2000	U	UG/KG		2000	U	UG/KG		2000	U	UG/KG					
ACETONE	1000	U	UG/KG		1000	U	UG/KG		1000	U	UG/KG					
ACETONITRILE	5000	U	UG/KG		5000	U	UG/KG		5000	U	UG/KG					
ACROLEIN	1000	U	UG/KG		1000	U	UG/KG		1000	U	UG/KG					
ACRYLONITRILE	1000	U	UG/KG		1000	U	UG/KG		1000	U	UG/KG					
BENZENE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
BROMODICHLOROMETHANE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
BROMOFORM	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
BROMOMETHANE	1000	U	UG/KG		1000	U	UG/KG		1000	U	UG/KG					
CARBON DISULFIDE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
CARBON TETRACHLORIDE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
CHLOROBENZENE	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
CHLOROETHANE	2000	U	UG/KG		2000	U	UG/KG		2000	U	UG/KG					
CHLOR[illegible]ORM	500	U	UG/KG		500	U	UG/KG		500	U	UG/KG					
CHLOI [illegible]THANE	1000	U	UG/KG		1000	U	UG/KG		1000	U	UG/KG					

SAMPLE NUMBER:	BG3F-10		BG3F-11		BG3F-12					
SAMPLE DATE:	01/25/96		01/25/96		01/25/96		/ /		/ /	
LABORATORY ID:	BRNCT1*104		BRNCT1*105		BRNCT1*106					
QC_TYPE:	Normal		Normal		Normal					
% SOLIDS:	100.0 %		100.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
VOLATILES										
CHLOROPRENE	1000	U UG/KG	1000	U UG/KG	1000	U UG/KG				
CIS-1,3-DICHLOROPROPENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
DIBROMOCHLOROMETHANE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
DIBROMOCHLOROPROPANE	1000	U UG/KG	1000	U UG/KG	1000	U UG/KG				
DIBROMOMETHANE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
DICHLORODIFLUOROMETHANE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
ETHYL METHACRYLATE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
ETHYLBENZENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
IODOMETHANE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
ISOBUTYL ALCOHOL	10000	UR UG/KG	10000	UR UG/KG	10000	UR UG/KG				
METHACRYLONITRILE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
METHYL METHACRYLATE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
METHYLENE CHLORIDE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
PENTACHLOROETHANE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
PROPIONITRILE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
STYRENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
TETRACHLOROETHENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
TOLUENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
TRANS-1,2-DICHLOROETHENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
TRANS-1,3-DICHLOROPROPENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
TRANS-1,4-DICHLORO-2-BUTENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
TRICHLOROETHENE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
TRICHLOROFLUOROMETHANE	500	U UG/KG	500	U UG/KG	500	U UG/KG				
VINYL ACETATE	1000	U UG/KG	1000	U UG/KG	1000	U UG/KG				
VINYL CHLORIDE	1000	U UG/KG	1000	U UG/KG	1000	U UG/KG				
XYLENES, TOTAL	500	U UG/KG	500	U UG/KG	500	U UG/KG				

ORGANIC DATA VALIDATION
SDG G69015

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-070

TO: KEVIN WALTER **DATE:** MAY 8, 1996

FROM: DONALD J. WESTERHOFF **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - VOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69015

SAMPLES: Tissue:

BG3BV-02

The sample set for the CTO 007 NAS Key West site, SDG G69015, consists of one (1) fish sample analyzed for Appendix IX volatile organic compounds. The sample was collected by Brown and Root Environmental on January 23rd, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8260 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 8, 1996 - PAGE 2

Volatiles

It should be noted that the laboratory did not perform a five point initial calibration for chloroprene, isobutyl alcohol, and 1,4-dioxane. Instead, the laboratory performed a single point calibration with a 50 µg/L standard. SW-846 methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted here for completeness. No action was taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Initial and continuing calibration Relative Response Factors (RRFs) for isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected, (UR), in the affected samples.

Acetone was detected in the laboratory method blank at 1100 µg/Kg. No action was necessary since no positive results were reported for this compound in the affected samples.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

The laboratory diluted the sample contained within this SDG by a factor of four. Therefore, elevated detection limits are reported in the affected sample (BG3BV-02). Furthermore, the laboratory did not provide an explanation regarding the reasoning for the dilution. No target analytes were detected in this sample.

Executive Summary

Laboratory Performance: Initial and continuing calibration RRFs for isobutyl alcohol and 1,4-dioxane were reported less than the 0.050 quality control limit. The laboratory did not perform a 5-point calibration for chloroprene, isobutyl alcohol, and 1,4-dioxane. Acetone was detected in the laboratory method blank.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 8, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Donald J. Westerhoff
Industrial Hygienist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69015

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	VOA
BG3BV-02	R[1]

If the field is left blank, the qualifier is A - Accept all data.

R[1] - Reject, (UR), nondetected results for isobutyl alcohol and 1,4-dioxane, as a result of initial and continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 - NAS KEY WEST
FISH SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG3BV-02			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/25/96									
LABORATORY ID:	BRNCT1*123									
QC_TYPE:	Normal									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES												
1,1,1,2-TETRACHLOROETHANE	2000	U	UG/KG									
1,1,1-TRICHLOROETHANE	2000	U	UG/KG									
1,1,2,2-TETRACHLOROETHANE	2000	U	UG/KG									
1,1,2-TRICHLOROETHANE	2000	U	UG/KG									
1,1-DICHLOROETHANE	2000	U	UG/KG									
1,1-DICHLOROETHENE	2000	U	UG/KG									
1,2,3-TRICHLOROPROPANE	2000	U	UG/KG									
1,2-DIBROMOETHANE	2000	U	UG/KG									
1,2-DICHLOROBENZENE	2000		UG/KG									
1,2-DICHLOROETHANE	2000	U	UG/KG									
1,2-DICHLOROPROPANE	2000	U	UG/KG									
1,3-DICHLOROBENZENE	2000		UG/KG									
1,4-DICHLOROBENZENE	2000		UG/KG									
1,4-DIOXANE	40000	UR	UG/KG									
2-BUTANONE	8000	U	UG/KG									
2-HEXANONE	8000	U	UG/KG									
3-CHLOROPROPENE	20000	U	UG/KG									
4-METHYL-2-PENTANONE	8000	U	UG/KG									
ACETONE	4000	U	UG/KG									
ACETONITRILE	20000	U	UG/KG									
ACROLEIN	4000	U	UG/KG									
ACRYLONITRILE	4000	U	UG/KG									
BENZENE	2000	U	UG/KG									
BROMODICHLOROMETHANE	2000	U	UG/KG									
BROMOFORM	2000	U	UG/KG									
BROMOMETHANE	4000	U	UG/KG									
CARBON DISULFIDE	2000	U	UG/KG									
CARBON TETRACHLORIDE	2000	U	UG/KG									
CHLOROBENZENE	2000	U	UG/KG									
CHLOROETHANE	8000	U	UG/KG									
CHI)FORM	2000	U	UG/KG									
CHL)METHANE	4000	U	UG/KG									

SAMPLE NUMBER:	BG3BV-02			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/25/96									
LABORATORY ID:	BRNCT1*123									
QC_TYPE:	Normal									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
VOLATILES															
CHLOROPRENE	4000	U	UG/KG												
CIS-1,3-DICHLOROPROPENE	2000	U	UG/KG												
DIBROMOCHLOROMETHANE	2000	U	UG/KG												
DIBROMOCHLOROPROPANE	4000	U	UG/KG												
DIBROMOMETHANE	2000	U	UG/KG												
DICHLORODIFLUOROMETHANE	2000	U	UG/KG												
ETHYL METHACRYLATE	2000	U	UG/KG												
ETHYLBENZENE	2000	U	UG/KG												
IODOMETHANE	2000	U	UG/KG												
ISOBUTYL ALCOHOL	40000	UR	UG/KG												
METHACRYLONITRILE	2000	U	UG/KG												
METHYL METHACRYLATE	2000	U	UG/KG												
METHYLENE CHLORIDE	2000	U	UG/KG												
PENTACHLOROETHANE	2000	U	UG/KG												
PROPIONITRILE	2000	U	UG/KG												
STYRENE	2000	U	UG/KG												
TETRACHLOROETHENE	2000	U	UG/KG												
TOLUENE	2000	U	UG/KG												
TRANS-1,2-DICHLOROETHENE	2000	U	UG/KG												
TRANS-1,3-DICHLOROPROPENE	2000	U	UG/KG												
TRANS-1,4-DICHLORO-2-BUTENE	2000	U	UG/KG												
TRICHLOROETHENE	2000	U	UG/KG												
TRICHLOROFLUOROMETHANE	2000	U	UG/KG												
VINYL ACETATE	4000	U	UG/KG												
VINYL CHLORIDE	4000	U	UG/KG												
XYLENES, TOTAL	2000	U	UG/KG												

ORGANIC DATA VALIDATION
SDG G69033

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-003

TO: MR. KEVIN WALTER

DATE: MAY 1, 1996

FROM: MICHELLE L. ALLEN

CC: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - APPENDIX IX TCL SVOCs
CTO 7, NAS KEY WEST, FLORIDA
SDG G69033

SAMPLES: Fish Tissue:

S1F-01	S1F-02	S1F-03	S1F-04	S1F-05	S1F-06
S1F-07	S1F-08	S1F-09	S1F-10	S2F-01	S2F-02
S2F-03	S2F-04	S2F-05	S2F-06	S2F-07	S2F-08
S2F-09	S2F-10				

Environmental Science & Engineering (ESE), Inc. analyzed twenty environmental fish tissue samples for Appendix IX Target Compound List (TCL) semivolatile. No field duplicate pairs or field quality control blanks were included in this SDG.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8270 analytical and reporting protocols and were evaluated according to the following parameters:

- Holding times
- GC/MS tuning and mass calibration
- * Initial and continuing calibrations
- * Laboratory and field blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Semivolatile Fraction

The laboratory performed one-point standard calibrations for the Appendix IX compounds instead of a five-point calibration. No validation action was taken for this analytical method discrepancy. The laboratory is urged follow the method requirements and to provide adequate documentation regarding method variances.

The continuing calibrations contained Relative Response Factors (RRFs) for 1,4-naphthoquinone which were less than 0.050. Failure to meet this quality control criteria indicates that the laboratory's instruments could not achieve satisfactory sensitivity for this compound, and therefore, the associated positive and nondetected results for this compound are severely compromised. Only nondetected results were reported for 1,4-naphthoquinone in the affected samples and these nondetects are considered to be unreliable and are rejected, "UR". These results are biased very low.

The laboratory method blank analysis yielded the following contaminants at the maximum concentrations indicated:

Compound	Maximum Concentration	Action Level
Di-n-butylphthalate	230 µg/Kg	2300 µg/Kg
Bis(2-ethylhexyl)phthalate	770 µg/Kg	7700 µg/Kg

Sample aliquot size and dilution factors were considered prior to the application of the action level. Positive results for di-n-butylphthalate found above the detection limit but below the action level have been qualified as undetected, "U". No action was taken for bis(2-ethylhexyl)phthalate since no positive results were reported for this compound in the associated tissue samples.

It should be noted that the following Appendix IX compounds were not analyzed: thionazin, dinoseb, famphur, methyl parathion, parathion, phorate, sulfotepp, and o,o,o,-triethylphosphorothiate. These compounds were not reported by the laboratory, therefore, reporting limits are not presented within this report. Additionally, dimethoate, which is an Appendix IX compound was not reported by the laboratory. SW-846 requires a multi-point calibration and a subsequent continuing calibraton for each compound of interest. The absence of the initial calibration is noted here for completeness. No actions were taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

N-nitroso-diphenylamine was listed on the sample Form Is twice. The second listing was deleted from the sample Form Is.

The semivolatile compound 3-methylphenol was not on the sample Form Is, however, this compound was standardized for and included in the Appendix A - Qualified Laboratory Results. No further actions were taken.

The samples were diluted due to the nature of the sample matrix. In addition, the samples were reported on a wet-weight basis.

It should be noted that the laboratory failed to report all information required on the laboratory Form

I. Sample weight/volume, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this SDG.

No other problems were noted.

Executive Summary

Laboratory Performance: Major calibration noncompliances (RRFs < 0.050) were noted for one semivolatile compound. Di-n-butylphthalate and bis(2-ethylhexyl)phthalate were detected in a laboratory method blank. The laboratory failed to analyze for several Appendix IX compounds. The sample Form Is were not correct.

Other Factors Affecting Data Quality: None.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown & Root Environmental
Michelle L. Allen
Chemist/Data Validator

Brown & Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST
SDG NO. G69033

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	Semivolatile	
S1F-01	A^1	R^1
S1F-02		R^1
S1F-03	A^1	R^1
S1F-04	A^1	R^1
S1F-05		R^1
S1F-06	A^1	R^1
S1F-07	A^1	R^1
S1F-08		R^1
S1F-09		R^1
S1F-10		R^1
S2F-01		R^1
S2F-02		R^1
S2F-03		R^1
S2F-04		R^1
S2F-05		R^1
S2F-06		R^1
S2F-07		R^1
S2F-08		R^1
S2F-09		R^1
S2F-10		R^1

A^1 - Accept data, but change positive di-butylphthalate result to a revised reporting limit as a result of blank contamination.

R^1 - Reject, "UR", nondetected results for 1,4-naphthoquinone as a result of continuing calibration RRFs < 0.050.

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory or qualified as a result of blank contamination, and should not be considered present.
UR	-	Nondetected result is rejected as a result of continuing calibration RRFs < 0.050.

APPENDIX A

Qualified Analytical Results

SAMPLE NUMBER:	S1F-01			S1F-02			S1F-03			S1F-04			S1F-05		
SAMPLE DATE:	01/18/96			01/18/96			01/18/96			01/18/96			01/18/96		
LABORATORY ID:	BRNCT1*1			BRNCT1*2			BRNCT1*3			BRNCT1*4			BRNCT1*5		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
1,2,4-TRICHLOROBENZENE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
1,2-DICHLOROBENZENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
1,3,5-TRINITROBENZENE	17000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	14000	U	UG/KG	16000	U	UG/KG
1,3-DICHLOROBENZENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
1,3-DINITROBENZENE	4800	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	4000	U	UG/KG	4600	U	UG/KG
1,4-BENZENEDIAMINE	48000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	40000	U	UG/KG	46000	U	UG/KG
1,4-DICHLOROBENZENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
1,4-NAPHTHOQUINONE	3400	UR	UG/KG	2100	UR	UG/KG	2100	UR	UG/KG	2800	UR	UG/KG	3200	UR	UG/KG
1-NAPHTHYLAMINE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2,4,5-TRICHLOROPHENOL	7200	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	6000	U	UG/KG	6900	U	UG/KG
2,4,6-TRICHLOROPHENOL	7200	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	6000	U	UG/KG	6900	U	UG/KG
2,4-DICHLOROPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2,4-DIMETHYLPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2,4-DINITROPHENOL	31000	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG	26000	U	UG/KG	30000	U	UG/KG
2,4-DINITROTOLUENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2,6-DICHLOROPHENOL	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
2,6-DINITROTOLUENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2-ACETYLAMINOFLUORENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2-CHLORONAPHTHALENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
2-CHLOROPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	24000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	20000	U	UG/KG	23000	U	UG/KG
2-METHYLNAPHTHALENE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
2-METHYLPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2-NAPHTHYLAMINE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2-NITROANILINE	7200	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	6000	U	UG/KG	6900	U	UG/KG
2-NITROPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
2-PICOLINE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
3,3'-DICHLOROBENZIDINE	12000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	10000	U	UG/KG	11000	U	UG/KG
3,3'-DIMETHYLBENZIDINE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
3-METHYLCHOLANTHRENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG

SAMPLE NUMBER:	S1F-01	S1F-02	S1F-03	S1F-04	S1F-05
SAMPLE DATE:	01/18/96	01/18/96	01/18/96	01/18/96	01/18/96
LABORATORY ID:	BRNCT1*1	BRNCT1*2	BRNCT1*3	BRNCT1*4	BRNCT1*5
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
3-NITROANILINE	7200	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	6000	U	UG/KG	6900	U	UG/KG
4-AMINOBIPHENYL	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
4-CHLORO-3-METHYL PHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
4-CHLOROANILINE	7200	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	6000	U	UG/KG	6900	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
4-METHYLPHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
4-NITROANILINE	7200	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	6000	U	UG/KG	6900	U	UG/KG
4-NITROPHENOL	12000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	10000	U	UG/KG	11000	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	7200	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	6000	U	UG/KG	6900	U	UG/KG
5-NITRO-O-TOLUIDINE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	12000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	10000	U	UG/KG	11000	U	UG/KG
ACENAPHTHENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
ACENAPHTHYLENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
ACETOPHENONE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
ANILINE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
ANTHRACENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
ARAMITE'	8600	U	UG/KG	5400	U	UG/KG	5400	U	UG/KG	7200	U	UG/KG	8200	U	UG/KG
BENZO(A)ANTHRACENE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
BENZO(A)PYRENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
BENZO(B)FLUORANTHENE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
BENZO(G,H,I)PERYLENE	3800	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	3200	U	UG/KG	3700	U	UG/KG
BENZO(K)FLUORANTHENE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
BENZYL ALCOHOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
BUTYLBENZYL PHTHALATE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
CHL[illegible]ENZILATE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG

SAMPLE NUMBER:	S1F-01			S1F-02			S1F-03			S1F-04			S1F-05		
SAMPLE DATE:	01/18/96			01/18/96			01/18/96			01/18/96			01/18/96		
LABORATORY ID:	BRNCT1*1			BRNCT1*2			BRNCT1*3			BRNCT1*4			BRNCT1*5		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
DI-N-BUTYL PHTHALATE	3800	U	UG/KG	1100	U	UG/KG	1500	U	UG/KG	3900	U	UG/KG	1600	U	UG/KG
DI-N-OCTYL PHTHALATE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
DIALLATE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
DIBENZO(A,H)ANTHRACENE	3800	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	3200	U	UG/KG	3700	U	UG/KG
DIBENZOFURAN	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
DIETHYL PHTHALATE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
DIMETHYL PHTHALATE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
DIPHENYLAMINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
ETHYL METHANESULFONATE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
FLUORANTHENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
FLUORENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
HEXACHLOROBENZENE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
HEXACHLOROBUTADIENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	24000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	20000	U	UG/KG	23000	U	UG/KG
HEXACHLOROETHANE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
HEXACHLOROPHENE	380000	U	UG/KG	240000	U	UG/KG	240000	U	UG/KG	320000	U	UG/KG	370000	U	UG/KG
HEXACHLOROPROPENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
INDENO(1,2,3-CD)PYRENE	3800	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	3200	U	UG/KG	3700	U	UG/KG
ISOPHORONE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
ISOSAFROLE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
METHAPYRILENE	12000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	10000	U	UG/KG	11000	U	UG/KG
METHYL METHANESULFONATE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
N-NITROSODIETHYLAMINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
N-NITROSODIMETHYLAMINE	2400	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	2000	U	UG/KG	2300	U	UG/KG
N-NITROSODIPHENYLAMINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
N-NITROSOMORPHOLINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
N-NITROSOPIPERIDINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
N-NITROSOPYRROLIDINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG

SAMPLE NUMBER:	S1F-01	S1F-02	S1F-03	S1F-04	S1F-05
SAMPLE DATE:	01/18/96	01/18/96	01/18/96	01/18/96	01/18/96
LABORATORY ID:	BRNCT1*1	BRNCT1*2	BRNCT1*3	BRNCT1*4	BRNCT1*5
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
NITROBENZENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
O-TOLUIDINE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
PENTACHLOROBENZENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
PENTACHLORONITROBENZENE	8400	U	UG/KG	5300	U	UG/KG	5300	U	UG/KG	7000	U	UG/KG	8000	U	UG/KG
PENTACHLOROPHENOL	12000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	10000	U	UG/KG	11000	U	UG/KG
PHENACETIN	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
PHENANTHRENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
PHENOL	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
PRONAMIDE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
PYRENE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG
PYRIDINE	3400	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2800	U	UG/KG	3200	U	UG/KG
SAFROLE	1700	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1400	U	UG/KG	1600	U	UG/KG

SAMPLE NUMBER:	S1F-06	S1F-07	S1F-08	S1F-09	S1F-10
SAMPLE DATE:	01/19/96	01/20/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*6	BRNCT1*7	BRNCT1*8	BRNCT1*9	BRNCT1*10
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	21000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	5900	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	59000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,4-NAPHTHOQUINONE	2100	UR	UG/KG	4100	UR	UG/KG	2100	UR	UG/KG	2100	UR	UG/KG	2100	UR	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	8900	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	8900	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	38000	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	30000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	8900	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-PICOLINE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG

	S1F-06	S1F-07	S1F-08	S1F-09	S1F-10
SAMPLE NUMBER:	S1F-06	S1F-07	S1F-08	S1F-09	S1F-10
SAMPLE DATE:	01/19/96	01/20/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*6	BRNCT1*7	BRNCT1*8	BRNCT1*9	BRNCT1*10
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	8900	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	8900	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	8900	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	8900	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ANILINE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
ANTHRACENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ARAMITE	5400	U	UG/KG	11000	U	UG/KG	5400	U	UG/KG	5400	U	UG/KG	5400	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	4700	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BUTYLBENZYL PHTHALATE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
CHL[illegible]ENZILATE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	S1F-06	S1F-07	S1F-08	S1F-09	S1F-10
SAMPLE DATE:	01/19/96	01/20/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*6	BRNCT1*7	BRNCT1*8	BRNCT1*9	BRNCT1*10
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
DI-N-BUTYL PHTHALATE	1900	U	UG/KG	3100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
DIALLATE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	4700	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
FLUORENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	30000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	470000	U	UG/KG	240000	U	UG/KG	240000	U	UG/KG	240000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	4700	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
ISOPHORONE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
N-NITRQSODIPHENYLAMINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	S1F-06			S1F-07			S1F-08			S1F-09			S1F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*6			BRNCT1*7			BRNCT1*8			BRNCT1*9			BRNCT1*10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
NITROBENZENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	10000	U	UG/KG	5300	U	UG/KG	5300	U	UG/KG	5300	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
PHENACETIN	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PHENOL	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PRONAMIDE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PYRENE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PYRIDINE	2100	U	UG/KG	4100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
SAFROLE	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	S2F-01			S2F-02			S2F-03			S2F-04			S2F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*13			BRNCT1*14			BRNCT1*15			BRNCT1*16			BRNCT1*17		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	11000	U	UG/KG	21000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	3000	U	UG/KG	6000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	30000	U	UG/KG	60000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,4-NAPHTHOQUINONE	2100	UR	UG/KG	2100	UR	UG/KG	4200	UR	UG/KG	2100	UR	UG/KG	2100	UR	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	4500	U	UG/KG	9000	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	4500	U	UG/KG	9000	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	20000	U	UG/KG	39000	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	15000	U	UG/KG	30000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	9000	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-PICOLINE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	S2F-01	S2F-02	S2F-03	S2F-04	S2F-05
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/19/96
LABORATORY ID:	BRNCT1*13	BRNCT1*14	BRNCT1*15	BRNCT1*16	BRNCT1*17
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	9000	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	4500	U	UG/KG	9000	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	9000	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	4500	U	UG/KG	9000	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ANILINE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
ANTHRACENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ARAMITE'	5400	U	UG/KG	5400	U	UG/KG	11000	U	UG/KG	5400	U	UG/KG	5400	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	2400	U	UG/KG	4800	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BUTYLBENZYL PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
CHL[illegible]ENZILATE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	S2F-01			S2F-02			S2F-03			S2F-04			S2F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*13			BRNCT1*14			BRNCT1*15			BRNCT1*16			BRNCT1*17		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
DIALLATE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	2400	U	UG/KG	4800	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
FLUORENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	15000	U	UG/KG	30000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	240000	U	UG/KG	480000	U	UG/KG	240000	U	UG/KG	240000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	2400	U	UG/KG	4800	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
ISOPHORONE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	S2F-01	S2F-02	S2F-03	S2F-04	S2F-05
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/19/96
LABORATORY ID:	BRNCT1*13	BRNCT1*14	BRNCT1*15	BRNCT1*16	BRNCT1*17
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
NITROBENZENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	5300	U	UG/KG	11000	U	UG/KG	5300	U	UG/KG	5300	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	7500	U	UG/KG	15000	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
PHENACETIN	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PHENOL	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PRONAMIDE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PYRENE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PYRIDINE	2100	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
SAFROLE	1100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	S2F-06	S2F-07	S2F-08	S2F-09	S2F-10
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/20/96
LABORATORY ID:	BRNCT1*18	BRNCT1*19	BRNCT1*20	BRNCT1*21	BRNCT1*22
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
1,4-NAPHTHOQUINONE	2100	UR	UG/KG	2100	UR	UG/KG	2100	UR	UG/KG	2100	UR	UG/KG	2100	UR	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
2-PICOLINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	S2F-06	S2F-07	S2F-08	S2F-09	S2F-10
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/20/96
LABORATORY ID:	BRNCT1*18	BRNCT1*19	BRNCT1*20	BRNCT1*21	BRNCT1*22
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG	4500	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ANILINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
ANTHRACENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ARAMITE'	5400	U	UG/KG	5400	U	UG/KG	5400	U	UG/KG	5400	U	UG/KG	5400	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
BUTYLBENZYL PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
CHL[illegible]ENZILATE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	S2F-06	S2F-07	S2F-08	S2F-09	S2F-10
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/20/96
LABORATORY ID:	BRNCT1*18	BRNCT1*19	BRNCT1*20	BRNCT1*21	BRNCT1*22
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
DIALLATE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
FLUORENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	240000	U	UG/KG	240000	U	UG/KG	240000	U	UG/KG	240000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG	2400	U	UG/KG
ISOPHORONE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG	1500	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	S2F-06	S2F-07	S2F-08	S2F-09	S2F-10
SAMPLE DATE:	01/19/96	01/19/96	01/19/96	01/19/96	01/20/96
LABORATORY ID:	BRNCT1*18	BRNCT1*19	BRNCT1*20	BRNCT1*21	BRNCT1*22
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
NITROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	5300	U	UG/KG	5300	U	UG/KG	5300	U	UG/KG	5300	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG	7500	U	UG/KG
PHENACETIN	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PRONAMIDE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PYRENE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG
PYRIDINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
SAFROLE	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG

ORGANIC DATA VALIDATION
SDG G69043

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-04-6-240

TO: KEVIN WALTER **DATE:** MAY 20, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - SEMIVOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69043

SAMPLES: Tissue:

S3F-06	S3F-07	S3F-08
S3F-09	S3F-10	S3F-11
S3F-12	S3F-13	S3F-14
S3F-15	S3F-16	S3F-17
S3F-18	S3F-20	S3F-21
S3F-22	S3F-23	S9BV-01
S9BV-02		

The sample set for the CTO 007 NAS Key West site, SDG G69043, consists of seventeen (17) fish samples, designated S3F-, and two (2) oyster samples, designated S9BV-. All samples were analyzed for Appendix IX semivolatile organic compounds. The samples were collected by Brown and Root Environmental on January 19th, 20th, 21st, 22nd, 23rd and 25th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8270 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- * Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 2

Semivolatiles

It should be noted that the laboratory did not perform a five point initial calibration for numerous Appendix IX compounds. Instead, the laboratory performed several single point calibrations. Furthermore, continuing calibration Percent Differences (%Ds) were not calculated for these same Appendix IX compounds. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Continuing calibration Relative Response Factors (RRFs) for 1,4-naphthoquinone were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for this compound are considered unreliable and were rejected, (UR), in the affected samples.

The following semivolatile compound was detected in the laboratory method blank at the maximum concentration indicated below:

Compound	Maximum Concentration	Action Level
Bis(2-ethylhexyl)phthalate	350 µg/Kg	3,500 µg/Kg

Samples Affected: All.

Sample aliquot size and dilution factors were taken into consideration during the application of all action levels. Positive results for bis(2-ethylhexyl)phthalate reported at concentrations below the detection limit were replaced with revised detection limits and qualified nondetected, (U). It should be noted that the laboratory analyzed the method blank BLK1 at a 3-fold dilution.

The laboratory did not analyze the following Appendix IX compounds: thionazin, dinoseb, famphur, methyl parathion, parathion, phorate, sulfotepp and o,o,o-triethylphosphorothiate. Additionally, dimethoate, an Appendix IX compound, was not reported by the laboratory. No action was taken.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG. No further action was taken.

All samples contained in this SDG were analyzed at dilutions. Therefore, the reporting limits are elevated.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 3

Executive Summary

Laboratory Performance: Continuing calibration RRFs for 1,4-naphthoquinone were reported less than the 0.050 quality control limit. Bis(2-ethylhexyl)phthalate was detected in the laboratory method blank. The laboratory did not perform a 5-point calibration for numerous Appendix IX compounds. The laboratory Form Is and case narrative are not adequately documented.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 4

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69043

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	SVOA	
S3F-06		R[1]
S3F-07		R[1]
S3F-08		R[1]
S3F-09		R[1]
S3F-10		R[1]
S3F-11		R[1]
S3F-12		R[1]
S3F-13		R[1]
S3F-14		R[1]
S3F-15		R[1]
S3F-16	A[1]	R[1]
S3F-17		R[1]
S3F-18		R[1]
S3F-20		R[1]
S3F-21		R[1]
S3F-22		R[1]
S3F-23		R[1]
S9BV-01		R[1]
S9BV-02	A[1]	R[1]

If the field is left blank, the qualifier is A - Accept all data.

A[1] - Accept data, but change positive results for bis(2-ethylhexyl)phthalate to a revised detection limit and qualify as nondetected, (U), as a result of laboratory method blank contamination.

R[1] - Reject, (UR), nondetected results for 1,4-naphthoquinone, as a result of continuing calibration RRFs less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 - NAS KEY WEST
FISH SUE DATA
ESL BORATORY

	S3F-06			S3F-07			S3F-08			S3F-09			S3F-10		
SAMPLE NUMBER:	S3F-06			S3F-07			S3F-08			S3F-09			S3F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/22/96		
LABORATORY ID:	BRNCT1*43			BRNCT1*44			BRNCT1*45			BRNCT1*46			BRNCT1*47		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	4200	U	UG/KG	11000	U	UG/KG	2100	U	UG/KG	11000	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	1200	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	3000	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	12000	U	UG/KG	30000	U	UG/KG	6000	U	UG/KG	30000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
1,4-NAPHTHOQUINONE	2100	UR	UG/KG	840	UR	UG/KG	2100	UR	UG/KG	420	UR	UG/KG	2100	UR	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	4500	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	4500	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	7800	U	UG/KG	20000	U	UG/KG	3900	U	UG/KG	20000	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG	15000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	4500	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
2-PICOLINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	S3F-06	S3F-07	S3F-08	S3F-09	S3F-10
SAMPLE DATE:	01/19/96	01/20/96	01/21/96	01/21/96	01/22/96
LABORATORY ID:	BRNCT1*43	BRNCT1*44	BRNCT1*45	BRNCT1*46	BRNCT1*47
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	4500	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	4500	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	4500	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	900	U	UG/KG	4500	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
ANILINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
ANTHRACENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
ARAMITE	5400	U	UG/KG	2200	U	UG/KG	5400	U	UG/KG	1100	U	UG/KG	5400	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	480	U	UG/KG	2400	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
BUT[illegible]ENZYL PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
CHL[illegible]BENZILATE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	S3F-06	S3F-07	S3F-08	S3F-09	S3F-10
SAMPLE DATE:	01/19/96	01/20/96	01/21/96	01/21/96	01/22/96
LABORATORY ID:	BRNCT1*43	BRNCT1*44	BRNCT1*45	BRNCT1*46	BRNCT1*47
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
DIALLATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	480	U	UG/KG	2400	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
FLUORENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG	15000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	96000	U	UG/KG	240000	U	UG/KG	48000	U	UG/KG	240000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	480	U	UG/KG	2400	U	UG/KG
ISOPHORONE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	300	U	UG/KG	1500	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	S3F-06			S3F-07			S3F-08			S3F-09			S3F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/22/96		
LABORATORY ID:	BRNCT1*43			BRNCT1*44			BRNCT1*45			BRNCT1*46			BRNCT1*47		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
NITROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	2100	U	UG/KG	5300	U	UG/KG	1100	U	UG/KG	5300	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG
PHENACETIN	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
PHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
PRONAMIDE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
PYRENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG
PYRIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	2100	U	UG/KG
SAFROLE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	210	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	S3F-11			S3F-12			S3F-13			S3F-14			S3F-15		
SAMPLE DATE:	01/22/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*48			BRNCT1*49			BRNCT1*50			BRNCT1*51			BRNCT1*52		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	4200	U	UG/KG	11000	U	UG/KG	12000	U	UG/KG	3800	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	1200	U	UG/KG	3000	U	UG/KG	3500	U	UG/KG	1100	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	12000	U	UG/KG	30000	U	UG/KG	35000	U	UG/KG	11000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
1,4-NAPHTHOQUINONE	2100	UR	UG/KG	840	UR	UG/KG	2100	UR	UG/KG	2500	UR	UG/KG	760	UR	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	1600	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	1600	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	7800	U	UG/KG	20000	U	UG/KG	23000	U	UG/KG	7100	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG	18000	U	UG/KG	5500	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	1600	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
2-PICOLINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	2700	U	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG

SAMPLE NUMBER:	S3F-11	S3F-12	S3F-13	S3F-14	S3F-15
SAMPLE DATE:	01/22/96	01/22/96	01/22/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*48	BRNCT1*49	BRNCT1*50	BRNCT1*51	BRNCT1*52
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	1600	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	1600	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	1600	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	2700	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	1600	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	2700	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
ANILINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
ANTHRACENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
ARAMITE	5400	U	UG/KG	2200	U	UG/KG	5400	U	UG/KG	6400	U	UG/KG	2000	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	2800	U	UG/KG	870	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
BUT ENZYL PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
CHL OBENZILATE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG

SAMPLE NUMBER:	S3F-11	S3F-12	S3F-13	S3F-14	S3F-15
SAMPLE DATE:	01/22/96	01/22/96	01/22/96	01/22/96	01/22/96
LABORATORY ID:	BRNCT1*48	BRNCT1*49	BRNCT1*50	BRNCT1*51	BRNCT1*52
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
DIALLATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	2800	U	UG/KG	870	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
FLUORENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG	18000	U	UG/KG	5500	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	96000	U	UG/KG	240000	U	UG/KG	280000	U	UG/KG	87000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	2800	U	UG/KG	870	U	UG/KG
ISOPHORONE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	2700	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	550	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG

SAMPLE NUMBER:	S3F-11			S3F-12			S3F-13			S3F-14			S3F-15		
SAMPLE DATE:	01/22/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*48			BRNCT1*49			BRNCT1*50			BRNCT1*51			BRNCT1*52		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
NITROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	2100	U	UG/KG	5300	U	UG/KG	6200	U	UG/KG	1900	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	2700	U	UG/KG
PHENACETIN	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
PHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
PRONAMIDE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
PYRENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG
PYRIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	760	U	UG/KG
SAFROLE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	380	U	UG/KG

SAMPLE NUMBER:	S3F-16	S3F-17	S3F-18	S3F-20	S3F-21
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	01/23/96
LABORATORY ID:	BRNCT1*53	BRNCT1*54	BRNCT1*55	BRNCT1*57	BRNCT1*58
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
1,2,4-TRICHLOROBENZENE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
1,2-DICHLOROBENZENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
1,3,5-TRINITROBENZENE	2100	U	UG/KG	11000	U	UG/KG	2900	U	UG/KG	11000	U	UG/KG	2100	U	UG/KG
1,3-DICHLOROBENZENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
1,3-DINITROBENZENE	600	U	UG/KG	3000	U	UG/KG	830	U	UG/KG	3000	U	UG/KG	600	U	UG/KG
1,4-BENZENEDIAMINE	6000	U	UG/KG	30000	U	UG/KG	8300	U	UG/KG	30000	U	UG/KG	6000	U	UG/KG
1,4-DICHLOROBENZENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
1,4-NAPHTHOQUINONE	420	UR	UG/KG	2100	UR	UG/KG	580	UR	UG/KG	2100	UR	UG/KG	420	UR	UG/KG
1-NAPHTHYLAMINE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2,4,5-TRICHLOROPHENOL	900	U	UG/KG	4500	U	UG/KG	1200	U	UG/KG	4500	U	UG/KG	900	U	UG/KG
2,4,6-TRICHLOROPHENOL	900	U	UG/KG	4500	U	UG/KG	1200	U	UG/KG	4500	U	UG/KG	900	U	UG/KG
2,4-DICHLOROPHENOL	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2,4-DIMETHYLPHENOL	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2,4-DINITROPHENOL	3900	U	UG/KG	20000	U	UG/KG	5400	U	UG/KG	20000	U	UG/KG	3900	U	UG/KG
2,4-DINITROTOLUENE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2,6-DICHLOROPHENOL	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
2,6-DINITROTOLUENE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2-ACETYLAMINOFLUORENE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2-CHLORONAPHTHALENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
2-CHLOROPHENOL	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	3000	U	UG/KG	15000	U	UG/KG	4100	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG
2-METHYLNAPHTHALENE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
2-METHYLPHENOL	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2-NAPHTHYLAMINE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2-NITROANILINE	900	U	UG/KG	4500	U	UG/KG	1200	U	UG/KG	4500	U	UG/KG	900	U	UG/KG
2-NITROPHENOL	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
2-PICOLINE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
3,3'-DICHLOROBENZIDINE	1500	U	UG/KG	7500	U	UG/KG	2100	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG
3,3'-DIMETHYLBENZIDINE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
3-METHYLCHOLANTHRENE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	S3F-16		S3F-17		S3F-18		S3F-20		S3F-21	
SAMPLE DATE:	01/23/96		01/23/96		01/23/96		01/23/96		01/23/96	
LABORATORY ID:	BRNCT1*53		BRNCT1*54		BRNCT1*55		BRNCT1*57		BRNCT1*58	
QC_TYPE:	Dilution		Dilution		Dilution		Dilution		Dilution	
% SOLIDS:	100.0 %		100.0 %		100.0 %		100.0 %		100.0 %	
	RESULT QUAL UNITS		RESULT QUAL UNITS		RESULT QUAL UNITS		RESULT QUAL UNITS		RESULT QUAL UNITS	
SEMIVOLATILES										
3-METHYLPHENOL	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
3-NITROANILINE	900 U UG/KG		4500 U UG/KG		1200 U UG/KG		4500 U UG/KG		900 U UG/KG	
4-AMINOBIPHENYL	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
4-BROMOPHENYL PHENYL ETHER	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
4-CHLORO-3-METHYL PHENOL	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
4-CHLOROANILINE	900 U UG/KG		4500 U UG/KG		1200 U UG/KG		4500 U UG/KG		900 U UG/KG	
4-CHLOROPHENYLPHENYL ETHER	300 U UG/KG		1500 U UG/KG		410 U UG/KG		1500 U UG/KG		300 U UG/KG	
4-METHYLPHENOL	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
4-NITROANILINE	900 U UG/KG		4500 U UG/KG		1200 U UG/KG		4500 U UG/KG		900 U UG/KG	
4-NITROPHENOL	1500 U UG/KG		7500 U UG/KG		2100 U UG/KG		7500 U UG/KG		1500 U UG/KG	
4-NITROQUINOLINE-1-OXIDE	900 U UG/KG		4500 U UG/KG		1200 U UG/KG		4500 U UG/KG		900 U UG/KG	
5-NITRO-O-TOLUIDINE	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
7,12-DIMETHYLBENZ(A)ANTHRACENE	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
A,A-DIMETHYLPHENETHYLAMINE	1500 U UG/KG		7500 U UG/KG		2100 U UG/KG		7500 U UG/KG		1500 U UG/KG	
ACENAPHTHENE	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
ACENAPHTHYLENE	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
ACETOPHENONE	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
ANILINE	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
ANTHRACENE	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
ARAMITE	1100 U UG/KG		5400 U UG/KG		1500 U UG/KG		5400 U UG/KG		1100 U UG/KG	
BENZO(A)ANTHRACENE	300 U UG/KG		1500 U UG/KG		410 U UG/KG		1500 U UG/KG		300 U UG/KG	
BENZO(A)PYRENE	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
BENZO(B)FLUORANTHENE	300 U UG/KG		1500 U UG/KG		410 U UG/KG		1500 U UG/KG		300 U UG/KG	
BENZO(G,H,I)PERYLENE	480 U UG/KG		2400 U UG/KG		660 U UG/KG		2400 U UG/KG		480 U UG/KG	
BENZO(K)FLUORANTHENE	300 U UG/KG		1500 U UG/KG		410 U UG/KG		1500 U UG/KG		300 U UG/KG	
BENZYL ALCOHOL	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	
BIS(2-CHLOROETHOXY)METHANE	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
BIS(2-CHLOROETHYL)ETHER	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
BIS(2-CHLOROISOPROPYL) ETHER	210 U UG/KG		1100 U UG/KG		290 U UG/KG		1100 U UG/KG		210 U UG/KG	
BIS(2-ETHYLHEXYL)PHTHALATE	620 U UG/KG		1500 U UG/KG		410 U UG/KG		1500 U UG/KG		300 U UG/KG	
BUTYL BENZYL PHTHALATE	300 U UG/KG		1500 U UG/KG		410 U UG/KG		1500 U UG/KG		300 U UG/KG	
CHLORBENZILATE	420 U UG/KG		2100 U UG/KG		580 U UG/KG		2100 U UG/KG		420 U UG/KG	

SAMPLE NUMBER:	S3F-16	S3F-17	S3F-18	S3F-20	S3F-21
SAMPLE DATE:	01/23/96	01/23/96	01/23/96	01/23/96	01/23/96
LABORATORY ID:	BRNCT1*53	BRNCT1*54	BRNCT1*55	BRNCT1*57	BRNCT1*58
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
DI-N-BUTYL PHTHALATE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
DI-N-OCTYL PHTHALATE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
DIALLATE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
DIBENZO(A,H)ANTHRACENE	480	U	UG/KG	2400	U	UG/KG	660	U	UG/KG	2400	U	UG/KG	480	U	UG/KG
DIBENZOFURAN	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
DIETHYL PHTHALATE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
DIMETHYL PHTHALATE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
DIPHENYLAMINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
ETHYL METHANESULFONATE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
FLUORANTHENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
FLUORENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
HEXACHLOROBENZENE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
HEXACHLOROBUTADIENE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	3000	U	UG/KG	15000	U	UG/KG	4100	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG
HEXACHLOROETHANE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
HEXACHLOROPHENE	48000	U	UG/KG	240000	U	UG/KG	66000	U	UG/KG	240000	U	UG/KG	48000	U	UG/KG
HEXACHLOROPROPENE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
INDENO(1,2,3-CD)PYRENE	480	U	UG/KG	2400	U	UG/KG	660	U	UG/KG	2400	U	UG/KG	480	U	UG/KG
ISOPHORONE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
ISOSAFROLE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
METHAPYRILENE	1500	U	UG/KG	7500	U	UG/KG	2100	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG
METHYL METHANESULFONATE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
N-NITROSODIETHYLAMINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
N-NITROSODIMETHYLAMINE	300	U	UG/KG	1500	U	UG/KG	410	U	UG/KG	1500	U	UG/KG	300	U	UG/KG
N-NITROSODIPHENYLAMINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
N-NITROSOMORPHOLINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
N-NITROSOPIPERIDINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
N-NITROSOPYRROLIDINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG

SAMPLE NUMBER:	S3F-16			S3F-17			S3F-18			S3F-20			S3F-21		
SAMPLE DATE:	01/23/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	BRNCT1*53			BRNCT1*54			BRNCT1*55			BRNCT1*57			BRNCT1*58		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
NITROBENZENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
O-TOLUIDINE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
PENTACHLOROBENZENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
PENTACHLORONITROBENZENE	1100	U	UG/KG	5300	U	UG/KG	1400	U	UG/KG	5300	U	UG/KG	1100	U	UG/KG
PENTACHLOROPHENOL	1500	U	UG/KG	7500	U	UG/KG	2100	U	UG/KG	7500	U	UG/KG	1500	U	UG/KG
PHENACETIN	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
PHENANTHRENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
PHENOL	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
PRONAMIDE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
PYRENE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG
PYRIDINE	420	U	UG/KG	2100	U	UG/KG	580	U	UG/KG	2100	U	UG/KG	420	U	UG/KG
SAFROLE	210	U	UG/KG	1100	U	UG/KG	290	U	UG/KG	1100	U	UG/KG	210	U	UG/KG

SAMPLE NUMBER:	S3F-22	S3F-23	S9BV-01	S9BV-02	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/22/96	01/25/96	
LABORATORY ID:	BRNCT1*59	BRNCT1*60	BRNCT1*61	BRNCT1*62	
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
1,2-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
1,3,5-TRINITROBENZENE	11000	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG			
1,3-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
1,3-DINITROBENZENE	3000	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG			
1,4-BENZENEDIAMINE	30000	U	UG/KG	6000	U	UG/KG	12000	U	UG/KG	12000	U	UG/KG			
1,4-DICHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
1,4-NAPHTHOQUINONE	2100	UR	UG/KG	420	UR	UG/KG	840	UR	UG/KG	840	UR	UG/KG			
1-NAPHTHYLAMINE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	900	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG			
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	900	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG			
2,4-DICHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2,4-DIMETHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2,4-DINITROPHENOL	20000	U	UG/KG	3900	U	UG/KG	7800	U	UG/KG	7800	U	UG/KG			
2,4-DINITROTOLUENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2,6-DICHLOROPHENOL	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
2,6-DINITROTOLUENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2-CHLORONAPHTHALENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
2-CHLOROPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	3000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG			
2-METHYLNAPHTHALENE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
2-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2-NAPHTHYLAMINE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG			
2-NITROPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
2-PICOLINE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG			
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
3-METHYLCHOLANTHRENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			

SAMPLE NUMBER:	S3F-22	S3F-23	S9BV-01	S9BV-02	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/22/96	01/25/96	
LABORATORY ID:	BRNCT1*59	BRNCT1*60	BRNCT1*61	BRNCT1*62	
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
3-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG			
4-AMINOBIPHENYL	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
4-CHLOROANILINE	4500	U	UG/KG	900	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG			
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
4-METHYLPHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
4-NITROANILINE	4500	U	UG/KG	900	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG			
4-NITROPHENOL	7500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG			
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	900	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG			
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG			
ACENAPHTHENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
ACENAPHTHYLENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
ACETOPHENONE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
ANILINE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
ANTHRACENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
ARAMITE	5400	U	UG/KG	1100	U	UG/KG	2200	U	UG/KG	2200	U	UG/KG			
BENZO(A)ANTHRACENE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
BENZO(A)PYRENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
BENZO(B)FLUORANTHENE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	480	U	UG/KG	960	U	UG/KG	960	U	UG/KG			
BENZO(K)FLUORANTHENE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
BENZYL ALCOHOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	2000	U	UG/KG			
BUTYL BENZYL PHTHALATE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
CHLOROBENZILATE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			

SAMPLE NUMBER:	S3F-22			S3F-23			S9BV-01			S9BV-02					
SAMPLE DATE:	01/23/96			01/23/96			01/22/96			01/25/96			/ /		
LABORATORY ID:	BRNCT1*59			BRNCT1*60			BRNCT1*61			BRNCT1*62					
QC_TYPE:	Dilution			Dilution			Dilution			Dilution					
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
DIALLATE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	480	U	UG/KG	960	U	UG/KG	960	U	UG/KG			
DIBENZOFURAN	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
DIETHYL PHTHALATE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
DIMETHYL PHTHALATE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
DIPHENYLAMINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
ETHYL METHANESULFONATE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
FLUORANTHENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
FLUORENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
HEXACHLOROBENZENE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
HEXACHLOROBUTADIENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	3000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG			
HEXACHLOROETHANE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
HEXACHLOROPHENE	240000	U	UG/KG	48000	U	UG/KG	96000	U	UG/KG	96000	U	UG/KG			
HEXACHLOROPROPENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	480	U	UG/KG	960	U	UG/KG	960	U	UG/KG			
ISOPHORONE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
ISOSAFROLE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
METHAPYRILENE	7500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG			
METHYL METHANESULFONATE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
N-NITROSODIETHYLAMINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	300	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
N-NITROSOMORPHOLINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
N-NITROSOPIPERIDINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
N-NITROSOPYRROLIDINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			

SAMPLE NUMBER:	S3F-22	S3F-23	S9BV-01	S9BV-02	/ /
SAMPLE DATE:	01/23/96	01/23/96	01/22/96	01/25/96	
LABORATORY ID:	BRNCT1*59	BRNCT1*60	BRNCT1*61	BRNCT1*62	
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
NITROBENZENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
O-TOLUIDINE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
PENTACHLOROBENZENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
PENTACHLORONITROBENZENE	5300	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG			
PENTACHLOROPHENOL	7500	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG			
PHENACETIN	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
PHENANTHRENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
PHENOL	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
PRONAMIDE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
PYRENE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			
PYRIDINE	2100	U	UG/KG	420	U	UG/KG	840	U	UG/KG	840	U	UG/KG			
SAFROLE	1100	U	UG/KG	210	U	UG/KG	420	U	UG/KG	420	U	UG/KG			

ORGANIC DATA VALIDATION
SDG G69046

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-007

TO: KEVIN WALTER **DATE:** MAY 20, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - SEMIVOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69046

SAMPLES: Tissue:

BG2F-08

The sample set for the CTO 007 NAS Key West site, SDG G69046, consists of one (1) fish sample analyzed for Appendix IX semivolatile organic compounds. The sample was collected by Brown and Root Environmental on January 21st, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8270 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 2

Semivolatiles

It should be noted that the laboratory did not perform a five point initial calibration for numerous Appendix IX compounds. Instead, the laboratory performed several single point calibrations. Furthermore, continuing calibration Percent Differences (%Ds) were not calculated for these same Appendix IX compounds. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

A continuing calibration Relative Response Factor (RRF) for 1,4-naphthoquinone was reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, a nondetected result for this compound is considered unreliable and was rejected, (UR), in the affected sample.

The laboratory did not analyze the following Appendix IX compounds: thionazin, dinoseb, famphur, methyl parathion, parathion, phorate, sulfotepp and o,o,o-triethylphosphorothiate. Additionally, dimethoate, an Appendix IX compound, was not reported by the laboratory. No action was taken.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG. No further action was taken.

Sample BG2F-08 was analyzed at 3-fold dilution. Therefore, the reporting limits are elevated.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

Executive Summary

Laboratory Performance: A continuing calibration RRF for 1,4-naphthoquinone was reported less than the 0.050 quality control limit. The laboratory did not perform a 5-point calibration for numerous Appendix IX compounds. The laboratory Form Is and case narrative are not adequately documented.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69046

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	SVOA
BG2F-08	R^1

If the field is left blank, the qualifier is A - Accept all data.

R^1 - Reject, (UR), a nondetected result for 1,4-naphthoquinone, as a result of a continuing calibration RRF less than 0.050.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 - NAS KEY WEST
FISH ' SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG2F-08									
SAMPLE DATE:	01/21/96		/ /		/ /		/ /		/ /	
LABORATORY ID:	BRNCT1*92									
QC_TYPE:	Dilution									
% SOLIDS:	100.0 %		100.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
SEMIVOLATILES										
1,2,4,5-TETRACHLOROBENZENE	210	U UG/KG								
1,2,4-TRICHLOROBENZENE	300	U UG/KG								
1,2-DICHLOROBENZENE	210	U UG/KG								
1,3,5-TRINITROBENZENE	2100	U UG/KG								
1,3-DICHLOROBENZENE	210	U UG/KG								
1,3-DINITROBENZENE	600	U UG/KG								
1,4-BENZENEDIAMINE	6000	U UG/KG								
1,4-DICHLOROBENZENE	210	U UG/KG								
1,4-NAPHTHOQUINONE	420	UR UG/KG								
1-NAPHTHYLAMINE	420	U UG/KG								
2,3,4,6-TETRACHLOROPHENOL	420	U UG/KG								
2,4,5-TRICHLOROPHENOL	900	U UG/KG								
2,4,6-TRICHLOROPHENOL	900	U UG/KG								
2,4-DICHLOROPHENOL	420	U UG/KG								
2,4-DIMETHYLPHENOL	420	U UG/KG								
2,4-DINITROPHENOL	3900	U UG/KG								
2,4-DINITROTOLUENE	420	U UG/KG								
2,6-DICHLOROPHENOL	210	U UG/KG								
2,6-DINITROTOLUENE	420	U UG/KG								
2-ACETYLAMINOFLUORENE	420	U UG/KG								
2-CHLORONAPHTHALENE	210	U UG/KG								
2-CHLOROPHENOL	420	U UG/KG								
2-METHYL-4,6-DINITROPHENOL	3000	U UG/KG								
2-METHYLNAPHTHALENE	300	U UG/KG								
2-METHYLPHENOL	420	U UG/KG								
2-NAPHTHYLAMINE	420	U UG/KG								
2-NITROANILINE	900	U UG/KG								
2-NITROPHENOL	420	U UG/KG								
2-PICOLINE	420	U UG/KG								
3,3'-DICHLOROBENZIDINE	1500	U UG/KG								
3,3'-DIMETHYLBENZIDINE	420	U UG/KG								
3-MI CHOLANTHRENE	420	U UG/KG								

SAMPLE NUMBER:	BG2F-08			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/21/96									
LABORATORY ID:	BRNCT1*92									
QC_TYPE:	Dilution									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	420	U	UG/KG												
3-NITROANILINE	900	U	UG/KG												
4-AMINOBIPHENYL	210	U	UG/KG												
4-BROMOPHENYL PHENYL ETHER	420	U	UG/KG												
4-CHLORO-3-METHYL PHENOL	420	U	UG/KG												
4-CHLOROANILINE	900	U	UG/KG												
4-CHLOROPHENYLPHENYL ETHER	300	U	UG/KG												
4-METHYLPHENOL	420	U	UG/KG												
4-NITROANILINE	900	U	UG/KG												
4-NITROPHENOL	1500	U	UG/KG												
4-NITROQUINOLINE-1-OXIDE	900	U	UG/KG												
5-NITRO-O-TOLUIDINE	420	U	UG/KG												
7,12-DIMETHYLBENZ(A)ANTHRACENE	420	U	UG/KG												
A,A-DIMETHYLPHENETHYLAMINE	1500	U	UG/KG												
ACENAPHTHENE	210	U	UG/KG												
ACENAPHTHYLENE	210	U	UG/KG												
ACETOPHENONE	210	U	UG/KG												
ANILINE	420	U	UG/KG												
ANTHRACENE	210	U	UG/KG												
ARAMITE	1100	U	UG/KG												
BENZO(A)ANTHRACENE	300	U	UG/KG												
BENZO(A)PYRENE	420	U	UG/KG												
BENZO(B)FLUORANTHENE	300	U	UG/KG												
BENZO(G,H,I)PERYLENE	480	U	UG/KG												
BENZO(K)FLUORANTHENE	300	U	UG/KG												
BENZYL ALCOHOL	420	U	UG/KG												
BIS(2-CHLOROETHOXY)METHANE	210	U	UG/KG												
BIS(2-CHLOROETHYL)ETHER	210	U	UG/KG												
BIS(2-CHLOROISOPROPYL) ETHER	210	U	UG/KG												
BIS(2-ETHYLHEXYL)PHTHALATE	300	U	UG/KG												
BUTYLBENZYL PHTHALATE	300	U	UG/KG												
CHLOROBENZILATE	420	U	UG/KG												

SAMPLE NUMBER:	BG2F-08									
SAMPLE DATE:	01/21/96			/ /		/ /		/ /		/ /
LABORATORY ID:	BRNCT1*92									
QC_TYPE:	Dilution									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	300	U	UG/KG												
DI-N-BUTYL PHTHALATE	210	U	UG/KG												
DI-N-OCTYL PHTHALATE	420	U	UG/KG												
DIALLATE	210	U	UG/KG												
DIBENZO(A,H)ANTHRACENE	480	U	UG/KG												
DIBENZOFURAN	210	U	UG/KG												
DIETHYL PHTHALATE	210	U	UG/KG												
DIMETHYL PHTHALATE	300	U	UG/KG												
DIPHENYLAMINE	210	U	UG/KG												
ETHYL METHANESULFONATE	210	U	UG/KG												
FLUORANTHENE	210	U	UG/KG												
FLUORENE	210	U	UG/KG												
HEXACHLOROBENZENE	300	U	UG/KG												
HEXACHLOROBUTADIENE	420	U	UG/KG												
HEXACHLOROCYCLOPENTADIENE	3000	U	UG/KG												
HEXACHLOROETHANE	300	U	UG/KG												
HEXACHLOROPHENE	48000	U	UG/KG												
HEXACHLOROPROPENE	420	U	UG/KG												
INDENO(1,2,3-CD)PYRENE	480	U	UG/KG												
ISOPHORONE	420	U	UG/KG												
ISOSAFROLE	210	U	UG/KG												
METHAPYRILENE	1500	U	UG/KG												
METHYL METHANESULFONATE	210	U	UG/KG												
N-NITROSO-DI-N-BUTYLAMINE	210	U	UG/KG												
N-NITROSO-DI-N-PROPYLAMINE	300	U	UG/KG												
N-NITROSODIETHYLAMINE	210	U	UG/KG												
N-NITROSODIMETHYLAMINE	300	U	UG/KG												
N-NITROSODIPHENYLAMINE	210	U	UG/KG												
N-NITROSOMETHYLETHYLAMINE	210	U	UG/KG												
N-NITROSOMORPHOLINE	210	U	UG/KG												
N-NITROSOPIPERIDINE	210	U	UG/KG												
N-N SOPYRROLIDINE	210	U	UG/KG												

SAMPLE NUMBER:	BG2F-08			/ /		/ /		/ /		/ /
SAMPLE DATE:	01/21/96									
LABORATORY ID:	BRNCT1*92									
QC_TYPE:	Dilution									
% SOLIDS:	100.0 %			100.0 %		100.0 %		100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	UNITS
SEMIVOLATILES										
NAPHTHALENE	210	U	UG/KG							
NITROBENZENE	210	U	UG/KG							
O-TOLUIDINE	210	U	UG/KG							
P-DIMETHYLAMINOAZOBENZENE	420	U	UG/KG							
PENTACHLOROBENZENE	210	U	UG/KG							
PENTACHLORONITROBENZENE	1100	U	UG/KG							
PENTACHLOROPHENOL	1500	U	UG/KG							
PHENACETIN	210	U	UG/KG							
PHENANTHRENE	210	U	UG/KG							
PHENOL	420	U	UG/KG							
PRONAMIDE	210	U	UG/KG							
PYRENE	210	U	UG/KG							
PYRIDINE	420	U	UG/KG							
SAFROLE	210	U	UG/KG							

ORGANIC DATA VALIDATION
SDG G69047

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-018

TO: KEVIN WALTER **DATE:** MAY 20, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - SEMIVOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69047

SAMPLES: Tissue:

BG1F-23	BG1F-24	BG1F-26
BG1F-27	BG1F-28	BG3F-12
BG3F-13	BG3F-14	BG3F-15
BG3F-16	BG3F-17	BG3F-18
BG3F-19	BG3F-20	BG3F-21
BG3BV-01	BG3BV-02	BG3BV-03

The sample set for the CTO 007 NAS Key West site, SDG G69047, consists of fifteen (15) fish samples, designated BG1F- or BG3F-, and three (3) oyster samples, designated BG3BV-. All samples were analyzed for Appendix IX semivolatile organic compounds. The samples were collected by Brown and Root Environmental on January 23rd, 25th and 26th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8270 analytical and reporting protocols. The data were evaluated according to the following parameters:

*	• Data completeness
	• Holding times
	• GC/MS Tuning
*	• Initial and continuing calibrations
	• Laboratory and field blank analyses
*	• Surrogate spike recoveries
*	• Matrix Spike/Matrix Spike Duplicate analysis
*	• Blank Spike/Blank Spike Duplicate results
*	• Internal Standards
	• Instrument Performance
	• Compound Identification
	• Compound Quantitation
	• Detection limits

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 20 1996 - PAGE 2

Semivolatiles

It should be noted that the laboratory did not perform a five point initial calibration for numerous Appendix IX compounds. Instead, the laboratory performed several single point calibrations. Furthermore, continuing calibration Percent Differences (%Ds) were not calculated for these same Appendix IX compounds. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

Continuing calibration Percent Differences (%Ds) greater than the 25% quality control limit were reported for 4-chloroaniline, 3-nitroaniline, 3,3'-dichlorobenzidine and benzo(k)fluoranthene. Positive and nondetected results are affected by this noncompliance. Nondetected results for the aforementioned compounds were qualified as estimated, (UJ), in the affected samples.

A high surrogate Percent Recovery (%R) for phenol-d5 was reported in sample BG3F-12. No action was necessary since only one surrogate in the acid fraction was noncompliant.

Surrogate %Rs less than 10% were reported in samples BG3BV-01, BG3BV-02 and BG3BV-03 for 2,4,6-tribromophenol. No action was taken, however, since these samples were analyzed at high dilutions and the surrogate was diluted out.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample BG3BV-01 yielded zero %Rs for 4-nitrophenol and pentachlorophenol, and a high Relative Percent Difference (RPD) for 4-nitrophenol. The laboratory case narrative states that the compounds were diluted out of the samples, therefore, no action was taken.

The laboratory did not analyze the following Appendix IX compounds: thionazin, dinoseb, famphur, methyl parathion, parathion, phorate, sulfotepp and o,o,o-triethylphosphorothiate. Additionally, dimethoate, an Appendix IX compound, was not reported by the laboratory. No action was taken.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG. No further action was taken.

All samples contained in this SDG were analyzed at dilutions. Therefore, the reporting limits are elevated.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

No other problems were noted.

MEMO TO: KEVIN WALTER
DATE: MAY 20 1996 - PAGE 3

Executive Summary

Laboratory Performance: The laboratory did not perform a 5-point calibration for numerous Appendix IX compounds. Continuing calibration %Ds greater than 25% were reported for 4-chloroaniline, 3-nitroaniline, 3,3'-dichlorobenzidine and benzo(k)fluoranthene. The laboratory inadvertently failed to analyze several Appendix IX compounds. The dilution of all samples resulted in several poor surrogate %Rs and poor MS/MSD recoveries. The laboratory Form Is and case narrative are not adequately documented.

Other Factors Affecting Data Quality: None.

MEMO TO: **KEVIN WALTER**
DATE: **MAY 20 1996 - PAGE 4**

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69047

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	SVOA
BG1F-23	J[1]
BG1F-24	J[1,2]
BG1F-26	J[1,2]
BG1F-27	J[1]
BG1F-28	J[1,2]
BG3F-12	J[1]
BG3F-13	J[1]
BG3F-14	J[1]
BG3F-15	J[1,2]
BG3F-16	J[1,2]
BG3F-17	J[1]
BG3F-18	J[1,2]
BG3F-19	J[1,2]
BG3F-20	J[1]
BG3F-21	J[1]
BG3BV-01	J[1,2]
BG3BV-02	J[1,2]
BG3BV-03	J[1,2]

If the field is left blank, the qualifier is A - Accept all data.

J[1] - Accept data, but qualify nondetected results for 3-nitroaniline, 3,3'-dichlorobenzidine and benzo(k)fluoranthene as estimated, (UJ), as a result of continuing calibration %Ds greater than 25%.

J[2] - Accept data, but qualify nondetected results for 4-chloroaniline as estimated, (UJ), as a result of a continuing calibration %D greater than 25%.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 0[illegible] - NAS KEY WEST
FISH[illegible]SUE DATA
ESE [illegible]BORATORY

SAMPLE NUMBER:	BG1F-23			BG1F-24			BG1F-26			BG1F-27			BG1F-28		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*107			BRNCT1*108			BRNCT1*110			BRNCT1*111			BRNCT1*112		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
1,2,4-TRICHLOROBENZENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
1,2-DICHLOROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
1,3,5-TRINITROBENZENE	21000	U	UG/KG	21000	U	UG/KG	21000	U	UG/KG	7000	U	UG/KG	11000	U	UG/KG
1,3-DICHLOROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
1,3-DINITROBENZENE	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	2000	U	UG/KG	3000	U	UG/KG
1,4-BENZENEDIAMINE	60000	U	UG/KG	60000	U	UG/KG	60000	U	UG/KG	20000	U	UG/KG	30000	U	UG/KG
1,4-DICHLOROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
1,4-NAPHTHOQUINONE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
1-NAPHTHYLAMINE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2,4,5-TRICHLOROPHENOL	9000	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	3000	U	UG/KG	4500	U	UG/KG
2,4,6-TRICHLOROPHENOL	9000	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	3000	U	UG/KG	4500	U	UG/KG
2,4-DICHLOROPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2,4-DIMETHYLPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2,4-DINITROPHENOL	39000	U	UG/KG	39000	U	UG/KG	39000	U	UG/KG	13000	U	UG/KG	20000	U	UG/KG
2,4-DINITROTOLUENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2,6-DICHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
2,6-DINITROTOLUENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2-ACETYLAMINOFLUORENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2-CHLORONAPHTHALENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
2-CHLOROPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	30000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	10000	U	UG/KG	15000	U	UG/KG
2-METHYLNAPHTHALENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
2-METHYLPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2-NAPHTHYLAMINE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2-NITROANILINE	9000	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	3000	U	UG/KG	4500	U	UG/KG
2-NITROPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
2-PICOLINE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
3,3'-DICHLOROBENZIDINE	15000	UJ	UG/KG	15000	UJ	UG/KG	15000	UJ	UG/KG	5000	UJ	UG/KG	7500	UJ	UG/KG
3,3'-DIMETHYLBENZIDINE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
3-METHYLCHOLANTHRENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG

CTO 007 - NAS KEY WEST
FISH SUE DATA
ESE LABORATORY

	BG1F-23	BG1F-24	BG1F-26	BG1F-27	BG1F-28
SAMPLE NUMBER:	BG1F-23	BG1F-24	BG1F-26	BG1F-27	BG1F-28
SAMPLE DATE:	01/26/96	01/26/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*107	BRNCT1*108	BRNCT1*110	BRNCT1*111	BRNCT1*112
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
3-NITROANILINE	9000	UJ	UG/KG	9000	UJ	UG/KG	9000	UJ	UG/KG	3000	UJ	UG/KG	4500	UJ	UG/KG
4-AMINOBIPHENYL	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
4-CHLORO-3-METHYL PHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
4-CHLOROANILINE	9000	U	UG/KG	9000	UJ	UG/KG	9000	UJ	UG/KG	3000	U	UG/KG	4500	UJ	UG/KG
4-CHLOROPHENYLPHENYL ETHER	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
4-METHYLPHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
4-NITROANILINE	9000	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	3000	U	UG/KG	4500	U	UG/KG
4-NITROPHENOL	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	5000	U	UG/KG	7500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	9000	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	3000	U	UG/KG	4500	U	UG/KG
5-NITRO-O-TOLUIDINE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	5000	U	UG/KG	7500	U	UG/KG
ACENAPHTHENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
ACENAPHTHYLENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
ACETOPHENONE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
ANILINE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
ANTHRACENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
ARAMITE	11000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	3600	U	UG/KG	5400	U	UG/KG
BENZO(A)ANTHRACENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
BENZO(A)PYRENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
BENZO(B)FLUORANTHENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
BENZO(G,H,I)PERYLENE	4800	U	UG/KG	4800	U	UG/KG	4800	U	UG/KG	1600	U	UG/KG	2400	U	UG/KG
BENZO(K)FLUORANTHENE	3000	UJ	UG/KG	3000	UJ	UG/KG	3000	UJ	UG/KG	1000	UJ	UG/KG	1500	UJ	UG/KG
BENZYL ALCOHOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
BUTYL BENZYL PHTHALATE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
CHLOROBENZILATE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	BG1F-23			BG1F-24			BG1F-26			BG1F-27			BG1F-28		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*107			BRNCT1*108			BRNCT1*110			BRNCT1*111			BRNCT1*112		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
DI-N-BUTYL PHTHALATE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
DI-N-OCTYL PHTHALATE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
DIALLATE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
DIBENZO(A,H)ANTHRACENE	4800	U	UG/KG	4800	U	UG/KG	4800	U	UG/KG	1600	U	UG/KG	2400	U	UG/KG
DIBENZOFURAN	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
DIETHYL PHTHALATE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
DIMETHYL PHTHALATE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
DIPHENYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
ETHYL METHANESULFONATE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
FLUORANTHENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
FLUORENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
HEXACHLOROBENZENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
HEXACHLOROBUTADIENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	30000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	10000	U	UG/KG	15000	U	UG/KG
HEXACHLOROETHANE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
HEXACHLOROPHENE	480000	U	UG/KG	480000	U	UG/KG	480000	U	UG/KG	160000	U	UG/KG	240000	U	UG/KG
HEXACHLOROPROPENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
INDENO(1,2,3-CD)PYRENE	4800	U	UG/KG	4800	U	UG/KG	4800	U	UG/KG	1600	U	UG/KG	2400	U	UG/KG
ISOPHORONE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
ISOSAFROLE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
METHAPYRILENE	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	5000	U	UG/KG	7500	U	UG/KG
METHYL METHANESULFONATE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
N-NITROSODIETHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
N-NITROSODIMETHYLAMINE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1000	U	UG/KG	1500	U	UG/KG
N-NITROSODIPHENYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
N-NITROSOMORPHOLINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
N-NITROSOPIPERIDINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
N-NITROSOPYRROLIDINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	BG1F-23			BG1F-24			BG1F-26			BG1F-27			BG1F-28		
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*107			BRNCT1*108			BRNCT1*110			BRNCT1*111			BRNCT1*112		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
NITROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
O-TOLUIDINE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
PENTACHLOROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
PENTACHLORONITROBENZENE	11000	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	3500	U	UG/KG	5300	U	UG/KG
PENTACHLOROPHENOL	15000	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	5000	U	UG/KG	7500	U	UG/KG
PHENACETIN	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
PHENANTHRENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
PHENOL	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
PRONAMIDE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
PYRENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG
PYRIDINE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	1400	U	UG/KG	2100	U	UG/KG
SAFROLE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	700	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	BG3BV-01			BG3BV-02			BG3BV-03			BG3F-12			BG3F-13		
SAMPLE DATE:	01/26/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*122			BRNCT1*123			BRNCT1*124			BRNCT1*106			BRNCT1*113		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	21000	U	UG/KG	21000	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	60000	U	UG/KG	60000	U	UG/KG	12000	U	UG/KG	12000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,4-NAPHTHOQUINONE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	39000	U	UG/KG	39000	U	UG/KG	7800	U	UG/KG	7800	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-PICOLINE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	UJ	UG/KG	15000	UJ	UG/KG	15000	UJ	UG/KG	3000	UJ	UG/KG	3000	UJ	UG/KG
3,3'-DIMETHYLBENZIDINE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
3-METHYLCHOLANTHRENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG

SAMPLE NUMBER:	BG3BV-01	BG3BV-02	BG3BV-03	BG3F-12	BG3F-13
SAMPLE DATE:	01/26/96	01/25/96	01/25/96	01/25/96	01/25/96
LABORATORY ID:	BRNCT1*122	BRNCT1*123	BRNCT1*124	BRNCT1*106	BRNCT1*113
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
3-NITROANILINE	4500	UJ	UG/KG	9000	UJ	UG/KG	9000	UJ	UG/KG	1800	UJ	UG/KG	1800	UJ	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
4-CHLOROANILINE	4500	UJ	UG/KG	9000	UJ	UG/KG	9000	UJ	UG/KG	1800	U	UG/KG	1800	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	9000	U	UG/KG	9000	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ANILINE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
ANTHRACENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ARAMITE	5400	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	2200	U	UG/KG	2200	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	4800	U	UG/KG	4800	U	UG/KG	960	U	UG/KG	960	U	UG/KG
BENZO(K)FLUORANTHENE	1500	UJ	UG/KG	3000	UJ	UG/KG	3000	UJ	UG/KG	600	UJ	UG/KG	600	UJ	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
BUTYL BENZYL PHTHALATE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
CHLOROBENZILATE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG

SAMPLE NUMBER:	BG3BV-01			BG3BV-02			BG3BV-03			BG3F-12			BG3F-13		
SAMPLE DATE:	01/26/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*122			BRNCT1*123			BRNCT1*124			BRNCT1*106			BRNCT1*113		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
DIALLATE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	4800	U	UG/KG	4800	U	UG/KG	960	U	UG/KG	960	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
FLUORENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	30000	U	UG/KG	30000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
HEXACHLOROPHENE	240000	U	UG/KG	480000	U	UG/KG	480000	U	UG/KG	96000	U	UG/KG	96000	U	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	4800	U	UG/KG	4800	U	UG/KG	960	U	UG/KG	960	U	UG/KG
ISOPHORONE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	600	U	UG/KG	600	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSOPIPERIDINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSOPYRROLIDINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG3BV-01			BG3BV-02			BG3BV-03			BG3F-12			BG3F-13		
SAMPLE DATE:	01/26/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*122			BRNCT1*123			BRNCT1*124			BRNCT1*106			BRNCT1*113		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
NITROBENZENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	840	U	UG/KG	840	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PENTACHLOROPHENOL	7500	U	UG/KG	15000	U	UG/KG	15000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
PHENACETIN	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PHENOL	2100	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	10000		UG/KG	1400		UG/KG
PRONAMIDE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PYRENE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PYRIDINE	4200		UG/KG	20000		UG/KG	11000		UG/KG	3700		UG/KG	840	U	UG/KG
SAFROLE	1100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG3F-14			BG3F-15			BG3F-16			BG3F-17			BG3F-18		
SAMPLE DATE:	01/25/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*114			BRNCT1*115			BRNCT1*116			BRNCT1*117			BRNCT1*118		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
1,2,4-TRICHLOROBENZENE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
1,2-DICHLOROBENZENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
1,3,5-TRINITROBENZENE	4200	U	UG/KG	12000	U	UG/KG	15000	U	UG/KG	4200	U	UG/KG	11000	U	UG/KG
1,3-DICHLOROBENZENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
1,3-DINITROBENZENE	1200	U	UG/KG	3300	U	UG/KG	4300	U	UG/KG	1200	U	UG/KG	3000	U	UG/KG
1,4-BENZENEDIAMINE	12000	U	UG/KG	33000	U	UG/KG	43000	U	UG/KG	12000	U	UG/KG	30000	U	UG/KG
1,4-DICHLOROBENZENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
1,4-NAPHTHOQUINONE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
1-NAPHTHYLAMINE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2,4,5-TRICHLOROPHENOL	1800	U	UG/KG	5000	U	UG/KG	6400	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG
2,4,6-TRICHLOROPHENOL	1800	U	UG/KG	5000	U	UG/KG	6400	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG
2,4-DICHLOROPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2,4-DIMETHYLPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2,4-DINITROPHENOL	7800	U	UG/KG	22000	U	UG/KG	28000	U	UG/KG	7800	U	UG/KG	20000	U	UG/KG
2,4-DINITROTOLUENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2,6-DICHLOROPHENOL	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
2,6-DINITROTOLUENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2-ACETYLAMINOFLUORENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2-CHLORONAPHTHALENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
2-CHLOROPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	6000	U	UG/KG	17000	U	UG/KG	21000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG
2-METHYLNAPHTHALENE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
2-METHYLPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2-NAPHTHYLAMINE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2-NITROANILINE	1800	U	UG/KG	5000	U	UG/KG	6400	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG
2-NITROPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
2-PICOLINE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
3,3'-DICHLOROBENZIDINE	3000	UJ	UG/KG	8300	UJ	UG/KG	11000	UJ	UG/KG	3000	UJ	UG/KG	7500	UJ	UG/KG
3,3'-DIMETHYLBENZIDINE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
3-METHYLCHOLANTHRENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	BG3F-14	BG3F-15	BG3F-16	BG3F-17	BG3F-18
SAMPLE DATE:	01/25/96	01/26/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*114	BRNCT1*115	BRNCT1*116	BRNCT1*117	BRNCT1*118
QC_TYPE:	Dilution	Dilution	Dilution	Dilution	Dilution
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
3-NITROANILINE	1800	UJ	UG/KG	5000	UJ	UG/KG	6400	UJ	UG/KG	1800	UJ	UG/KG	4500	UJ	UG/KG
4-AMINOBIPHENYL	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
4-CHLORO-3-METHYL PHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
4-CHLOROANILINE	1800	U	UG/KG	5000	UJ	UG/KG	6400	UJ	UG/KG	1800	U	UG/KG	4500	UJ	UG/KG
4-CHLOROPHENYLPHENYL ETHER	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
4-METHYLPHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
4-NITROANILINE	1800	U	UG/KG	5000	U	UG/KG	6400	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG
4-NITROPHENOL	3000	U	UG/KG	8300	U	UG/KG	11000	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	1800	U	UG/KG	5000	U	UG/KG	6400	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG
5-NITRO-O-TOLUIDINE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	3000	U	UG/KG	8300	U	UG/KG	11000	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG
ACENAPHTHENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
ACENAPHTHYLENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
ACETOPHENONE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
ANILINE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
ANTHRACENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
ARAMITE	2200	U	UG/KG	6000	U	UG/KG	7700	U	UG/KG	2200	U	UG/KG	5400	U	UG/KG
BENZO(A)ANTHRACENE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
BENZO(A)PYRENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
BENZO(B)FLUORANTHENE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
BENZO(G,H,I)PERYLENE	960	U	UG/KG	2700	U	UG/KG	3400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG
BENZO(K)FLUORANTHENE	600	UJ	UG/KG	1700	UJ	UG/KG	2100	UJ	UG/KG	600	UJ	UG/KG	1500	UJ	UG/KG
BENZYL ALCOHOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
BUT[illegible]ENZYL PHTHALATE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
CHL[illegible]BENZILATE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG

SAMPLE NUMBER:	BG3F-14			BG3F-15			BG3F-16			BG3F-17			BG3F-18		
SAMPLE DATE:	01/25/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*114			BRNCT1*115			BRNCT1*116			BRNCT1*117			BRNCT1*118		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
DI-N-BUTYL PHTHALATE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
DI-N-OCTYL PHTHALATE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
DIALLATE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
DIBENZO(A,H)ANTHRACENE	960	U	UG/KG	2700	U	UG/KG	3400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG
DIBENZOFURAN	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
DIETHYL PHTHALATE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
DIMETHYL PHTHALATE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
DIPHENYLAMINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
ETHYL METHANESULFONATE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
FLUORANTHENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
FLUORENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
HEXACHLOROBENZENE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
HEXACHLOROBUTADIENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	6000	U	UG/KG	17000	U	UG/KG	21000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG
HEXACHLOROETHANE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
HEXACHLOROPHENE	96000	U	UG/KG	270000	U	UG/KG	340000	U	UG/KG	96000	U	UG/KG	240000	U	UG/KG
HEXACHLOROPROPENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
INDENO(1,2,3-CD)PYRENE	960	U	UG/KG	2700	U	UG/KG	3400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG
ISOPHORONE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
ISOSAFROLE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
METHAPYRILENE	3000	U	UG/KG	8300	U	UG/KG	11000	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG
METHYL METHANESULFONATE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
N-NITROSODIETHYLAMINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
N-NITROSODIMETHYLAMINE	600	U	UG/KG	1700	U	UG/KG	2100	U	UG/KG	600	U	UG/KG	1500	U	UG/KG
N-NITROSODIPHENYLAMINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
N-NITROSOMORPHOLINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
N-NITROSOPIPERIDINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
N-NITROSOPYRROLIDINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	BG3F-14			BG3F-15			BG3F-16			BG3F-17			BG3F-18		
SAMPLE DATE:	01/25/96			01/26/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*114			BRNCT1*115			BRNCT1*116			BRNCT1*117			BRNCT1*118		
QC_TYPE:	Dilution			Dilution			Dilution			Dilution			Dilution		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
NITROBENZENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
O-TOLUIDINE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
PENTACHLOROBENZENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
PENTACHLORONITROBENZENE	2100	U	UG/KG	5800	U	UG/KG	7500	U	UG/KG	2100	U	UG/KG	5300	U	UG/KG
PENTACHLOROPHENOL	3000	U	UG/KG	8300	U	UG/KG	11000	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG
PHENACETIN	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
PHENANTHRENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
PHENOL	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
PRONAMIDE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
PYRENE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG
PYRIDINE	840	U	UG/KG	2300	U	UG/KG	3000	U	UG/KG	840	U	UG/KG	2100	U	UG/KG
SAFROLE	420	U	UG/KG	1200	U	UG/KG	1500	U	UG/KG	420	U	UG/KG	1100	U	UG/KG

SAMPLE NUMBER:	BG3F-19			BG3F-20			BG3F-21							
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			/ /			/ /	
LABORATORY ID:	BRNCT1*119			BRNCT1*120			BRNCT1*121							
QC_TYPE:	Dilution			Dilution			Dilution							
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS
SEMIVOLATILES														
1,2,4,5-TETRACHLOROBENZENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
1,2,4-TRICHLOROBENZENE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG					
1,2-DICHLOROBENZENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
1,3,5-TRINITROBENZENE	12000	U	UG/KG	4500	U	UG/KG	4200	U	UG/KG					
1,3-DICHLOROBENZENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
1,3-DINITROBENZENE	3500	U	UG/KG	1300	U	UG/KG	1200	U	UG/KG					
1,4-BENZENEDIAMINE	35000	U	UG/KG	13000	U	UG/KG	12000	U	UG/KG					
1,4-DICHLOROBENZENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
1,4-NAPHTHOQUINONE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
1-NAPHTHYLAMINE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2,3,4,6-TETRACHLOROPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2,4,5-TRICHLOROPHENOL	5300	U	UG/KG	1900	U	UG/KG	1800	U	UG/KG					
2,4,6-TRICHLOROPHENOL	5300	U	UG/KG	1900	U	UG/KG	1800	U	UG/KG					
2,4-DICHLOROPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2,4-DIMETHYLPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2,4-DINITROPHENOL	23000	U	UG/KG	8300	U	UG/KG	7800	U	UG/KG					
2,4-DINITROTOLUENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2,6-DICHLOROPHENOL	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
2,6-DINITROTOLUENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2-ACETYLAMINOFLUORENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2-CHLORONAPHTHALENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
2-CHLOROPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2-METHYL-4,6-DINITROPHENOL	18000	U	UG/KG	6400	U	UG/KG	6000	U	UG/KG					
2-METHYLNAPHTHALENE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG					
2-METHYLPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2-NAPHTHYLAMINE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2-NITROANILINE	5300	U	UG/KG	1900	U	UG/KG	1800	U	UG/KG					
2-NITROPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
2-PICOLINE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
3,3'-DICHLOROBENZIDINE	8800	UJ	UG/KG	3200	UJ	UG/KG	3000	UJ	UG/KG					
3,3'-DIMETHYLBENZIDINE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
3-METHYLCHOLANTHRENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					

SAMPLE NUMBER:	BG3F-19			BG3F-20			BG3F-21			/ /		/ /
SAMPLE DATE:	01/26/96			01/26/96			01/26/96					
LABORATORY ID:	BRNCT1*119			BRNCT1*120			BRNCT1*121					
QC_TYPE:	Dilution			Dilution			Dilution					
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS	RESULT QUAL UNITS
SEMIVOLATILES												
3-METHYLPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
3-NITROANILINE	5300	UJ	UG/KG	1900	UJ	UG/KG	1800	UJ	UG/KG			
4-AMINOBIPHENYL	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
4-BROMOPHENYL PHENYL ETHER	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
4-CHLORO-3-METHYL PHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
4-CHLOROANILINE	5300	UJ	UG/KG	1900	U	UG/KG	1800	U	UG/KG			
4-CHLOROPHENYLPHENYL ETHER	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
4-METHYLPHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
4-NITROANILINE	5300	U	UG/KG	1900	U	UG/KG	1800	U	UG/KG			
4-NITROPHENOL	8800	U	UG/KG	3200	U	UG/KG	3000	U	UG/KG			
4-NITROQUINOLINE-1-OXIDE	5300	U	UG/KG	1900	U	UG/KG	1800	U	UG/KG			
5-NITRO-O-TOLUIDINE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
7,12-DIMETHYLBENZ(A)ANTHRACENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
A,A-DIMETHYLPHENETHYLAMINE	8800	U	UG/KG	3200	U	UG/KG	3000	U	UG/KG			
ACENAPHTHENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
ACENAPHTHYLENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
ACETOPHENONE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
ANILINE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
ANTHRACENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
ARAMITE	6300	U	UG/KG	2300	U	UG/KG	2200	U	UG/KG			
BENZO(A)ANTHRACENE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
BENZO(A)PYRENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
BENZO(B)FLUORANTHENE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
BENZO(G,H,I)PERYLENE	2800	U	UG/KG	1000	U	UG/KG	960	U	UG/KG			
BENZO(K)FLUORANTHENE	1800	UJ	UG/KG	640	UJ	UG/KG	600	UJ	UG/KG			
BENZYL ALCOHOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
BIS(2-CHLOROETHOXY)METHANE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
BIS(2-CHLOROETHYL)ETHER	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
BIS(2-CHLOROISOPROPYL) ETHER	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
BIS(2-ETHYLHEXYL)PHTHALATE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
BUT[illegible]ENZYL PHTHALATE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
CHL[illegible]BENZILATE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			

SAMPLE NUMBER:	BG3F-19			BG3F-20			BG3F-21			/ /		/ /
SAMPLE DATE:	01/26/96			01/26/96			01/26/96					
LABORATORY ID:	BRNCT1*119			BRNCT1*120			BRNCT1*121					
QC_TYPE:	Dilution			Dilution			Dilution					
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %		100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS		RESULT QUAL UNITS
SEMIVOLATILES												
CHRYSENE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
DI-N-BUTYL PHTHALATE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
DI-N-OCTYL PHTHALATE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
DIALLATE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
DIBENZO(A,H)ANTHRACENE	2800	U	UG/KG	1000	U	UG/KG	960	U	UG/KG			
DIBENZOFURAN	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
DIETHYL PHTHALATE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
DIMETHYL PHTHALATE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
DIPHENYLAMINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
ETHYL METHANESULFONATE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
FLUORANTHENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
FLUORENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
HEXACHLOROBENZENE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
HEXACHLOROBUTADIENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
HEXACHLOROCYCLOPENTADIENE	18000	U	UG/KG	6400	U	UG/KG	6000	U	UG/KG			
HEXACHLOROETHANE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
HEXACHLOROPHENE	280000	U	UG/KG	100000	U	UG/KG	96000	U	UG/KG			
HEXACHLOROPROPENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
INDENO(1,2,3-CD)PYRENE	2800	U	UG/KG	1000	U	UG/KG	960	U	UG/KG			
ISOPHORONE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG			
ISOSAFROLE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
METHAPYRILENE	8800	U	UG/KG	3200	U	UG/KG	3000	U	UG/KG			
METHYL METHANESULFONATE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
N-NITROSO-DI-N-BUTYLAMINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
N-NITROSO-DI-N-PROPYLAMINE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
N-NITROSODIETHYLAMINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
N-NITROSODIMETHYLAMINE	1800	U	UG/KG	640	U	UG/KG	600	U	UG/KG			
N-NITROSODIPHENYLAMINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
N-NITROSOMETHYLETHYLAMINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
N-NITROSOMORPHOLINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
N-NITROSOPIPERIDINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			
N-NITROSOPYRROLIDINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG			

SAMPLE NUMBER:	BG3F-19			BG3F-20			BG3F-21							
SAMPLE DATE:	01/26/96			01/26/96			01/26/96			/ /			/ /	
LABORATORY ID:	BRNCT1*119			BRNCT1*120			BRNCT1*121							
QC_TYPE:	Dilution			Dilution			Dilution							
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %	
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL UNITS
SEMIVOLATILES														
NAPHTHALENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
NITROBENZENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
O-TOLUIDINE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
P-DIMETHYLAMINOAZOBENZENE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
PENTACHLOROBENZENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
PENTACHLORONITROBENZENE	6200	U	UG/KG	2200	U	UG/KG	2100	U	UG/KG					
PENTACHLOROPHENOL	8800	U	UG/KG	3200	U	UG/KG	3000	U	UG/KG					
PHENACETIN	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
PHENANTHRENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
PHENOL	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
PRONAMIDE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
PYRENE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					
PYRIDINE	2500	U	UG/KG	900	U	UG/KG	840	U	UG/KG					
SAFROLE	1200	U	UG/KG	450	U	UG/KG	420	U	UG/KG					

ORGANIC DATA VALIDATION
SDG G69048

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-006

TO: KEVIN WALTER **DATE:** MAY 20, 1996

FROM: ANNE K. BATTISTA **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION - SEMIVOLATILE ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69048

SAMPLES: Tissue:

BG2F-01	BG2F-02	BG2F-03
BG2F-04	BG2F-05	BG2F-06
BG2F-07	BG2F-09	BG2F-10
BG3F-01	BG3F-02	BG3F-03
BG3F-04	BG3F-06	BG3F-07
BG3F-08	BG3F-09	BG3F-10
BG3F-11		

The sample set for the CTO 007 NAS Key West site, SDG G69048, consists of nineteen (19) fish samples. All samples were analyzed for Appendix IX semivolatile organic compounds. The samples were collected by Brown and Root Environmental on January 21st, 24th and 25th, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8270 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- GC/MS Tuning
- * Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 2

Semivolatiles

Initial and/or continuing calibration Relative Response Factors (RRFs) for o-toluidine, a,a-dimethylphenethylamine, 1,4-benzenediamine, isosafrole, pentachloronitrobenzene, 2-acetylaminofluorene and 1,4-naphthoquinone were reported less than the 0.050 quality control limit. Both positive and nondetected results are affected by this noncompliance. As a result of this major calibration noncompliance, nondetected results for these compounds are considered unreliable and were rejected. (UR), in the affected samples.

The compounds 4-nitrophenol, dibenzofuran and 2,4-dinitrotoluene were not detected in the continuing calibration standards analyzed on 02/29/96 (12:04) and 03/01/96 (10:14). An additional standard was not analyzed containing these compounds. Hence, the nondetected results reported for these compounds in the samples associated with these continuing calibrations were rejected, (UR).

The laboratory did not analyze the following Appendix IX compounds: thionazin, dinoseb, famphur, disulfoton, methyl parathion, parathion, phorate, sulfotepp and o,o,o-triethylphosphorothiate. Additionally, dimethoate, an Appendix IX compound, not reported by the laboratory. SW-846 Methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of calibrations for the aforementioned compounds is noted for completeness. No action has been taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

It should be noted that the laboratory failed to report all information required on the laboratory Form I. Sample wt/vol, concentrated extract volume and injection volume were not reported. Furthermore, the laboratory case narrative does not adequately document the noncompliances noted in this particular SDG. No further action was taken.

All samples contained in this SDG were analyzed at dilutions. Therefore, the reporting limits are elevated.

It should be noted that numerous compounds are reported in an abbreviated format on the laboratory Form Is.

Executive Summary

Laboratory Performance: Initial and/or continuing calibration RRFs were reported less than the 0.050 quality control limit for several compounds. The compounds 4-nitrophenol, dibenzofuran and 2,4-dinitrotoluene were not detected in the continuing calibration standards. Numerous Appendix IX compounds were not analyzed. The laboratory Form Is and case narrative are not adequately documented.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 20, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista

Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69048

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	SVOA
BG2F-01	$R^{1,2}$
BG2F-02	$R^{1,2}$
BG2F-03	$R^{1,2}$
BG2F-04	$R^{1,2}$
BG2F-05	$R^{1,2}$
BG2F-06	$R^{1,2}$
BG2F-07	$R^{1,2}$
BG2F-09	$R^{1,2}$
BG2F-10	$R^{1,2}$
BG3F-01	$R^{1,2}$
BG3F-02	$R^{1,2}$
BG3F-03	$R^{1,2}$
BG3F-04	$R^{1,2}$
BG3F-06	$R^{1,2}$
BG3F-07	$R^{1,2}$
BG3F-08	$R^{1,2}$
BG3F-09	$R^{1,2}$
BG3F-10	$R^{1,2}$
BG3F-11	$R^{1,2}$

If the field is left blank, the qualifier is A - Accept all data.

R^1 - Reject, (UR), nondetected results for o-toluidine, a,a-dimethylphenethylamine, 1,4-benzenediamine, isosafrole, pentachlorobenzene, 2-acetylaminofluorene and 1,4-naphthoquinone, as a result of initial and/or continuing calibration RRFs less than 0.050.

R^2 - Reject, (UR), nondetected results for 4-nitrophenol, dibenzofuran and 2,4-dinitrotoluene since a calibration standard was not run for this compound during a particular continuing calibration.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 - NAS KEY WEST
FISH SUE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG2F-01			BG2F-02			BG2F-03			BG2F-04			BG2F-05		
SAMPLE DATE:	01/21/96			01/21/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*85			BRNCT1*86			BRNCT1*87			BRNCT1*88			BRNCT1*89		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
1,2,4-TRICHLOROBENZENE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
1,2-DICHLOROBENZENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
1,3,5-TRINITROBENZENE	1400	U	UG/KG	2800	U	UG/KG	1400	U	UG/KG	1400	U	UG/KG	1400	U	UG/KG
1,3-DICHLOROBENZENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
1,3-DINITROBENZENE	400	U	UG/KG	800	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
1,4-BENZENEDIAMINE	4000	UR	UG/KG	8000	UR	UG/KG	4000	UR	UG/KG	4000	UR	UG/KG	4000	UR	UG/KG
1,4-DICHLOROBENZENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
1,4-NAPHTHOQUINONE	280	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG
1-NAPHTHYLAMINE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2,4,5-TRICHLOROPHENOL	600	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
2,4,6-TRICHLOROPHENOL	600	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
2,4-DICHLOROPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2,4-DIMETHYLPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2,4-DINITROPHENOL	2600	U	UG/KG	5200	U	UG/KG	2600	U	UG/KG	2600	U	UG/KG	2600	U	UG/KG
2,4-DINITROTOLUENE	280	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG
2,6-DICHLOROPHENOL	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
2,6-DINITROTOLUENE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2-ACETYLAMINOFLUORENE	280	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG
2-CHLORONAPHTHALENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
2-CHLOROPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	2000	U	UG/KG	4000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
2-METHYLNAPHTHALENE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
2-METHYLPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2-NAPHTHYLAMINE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2-NITROANILINE	600	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
2-NITROPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2-PICOLINE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
3,3'-DICHLOROBENZIDINE	1000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
3,3'-[illegible]ETHYLBENZIDINE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
3-M[illegible]LCHOLANTHRENE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG

SAMPLE NUMBER:	BG2F-01	BG2F-02	BG2F-03	BG2F-04	BG2F-05
SAMPLE DATE:	01/21/96	01/21/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*85	BRNCT1*86	BRNCT1*87	BRNCT1*88	BRNCT1*89
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
3-NITROANILINE	600	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
4-AMINOBIPHENYL	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
4-CHLORO-3-METHYL PHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
4-CHLOROANILINE	600	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
4-METHYLPHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
4-NITROANILINE	600	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
4-NITROPHENOL	1000	UR	UG/KG	2000	UR	UG/KG	1000	UR	UG/KG	1000	UR	UG/KG	1000	UR	UG/KG
4-NITROQUINOLINE-1-OXIDE	600	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG
5-NITRO-O-TOLUIDINE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	1000	UR	UG/KG	2000	UR	UG/KG	1000	UR	UG/KG	1000	UR	UG/KG	1000	UR	UG/KG
ACENAPHTHENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
ACENAPHTHYLENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
ACETOPHENONE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
ANILINE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ANTHRACENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
ARAMITE	720	U	UG/KG	1400	U	UG/KG	720	U	UG/KG	720	U	UG/KG	720	U	UG/KG
BENZO(A)ANTHRACENE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
BENZO(A)PYRENE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BENZO(B)FLUORANTHENE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
BENZO(G,H,I)PERYLENE	320	U	UG/KG	640	U	UG/KG	320	U	UG/KG	320	U	UG/KG	320	U	UG/KG
BENZO(K)FLUORANTHENE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
BENZYL ALCOHOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	2300	D	UG/KG
BUTYLBENZYL PHTHALATE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
CHLOROBENZILATE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG

	BG2F-01			BG2F-02			BG2F-03			BG2F-04			BG2F-05		
SAMPLE NUMBER:	BG2F-01			BG2F-02			BG2F-03			BG2F-04			BG2F-05		
SAMPLE DATE:	01/21/96			01/21/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*85			BRNCT1*86			BRNCT1*87			BRNCT1*88			BRNCT1*89		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
DI-N-BUTYL PHTHALATE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
DI-N-OCTYL PHTHALATE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
DIALLATE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
DIBENZO(A,H)ANTHRACENE	320	U	UG/KG	640	U	UG/KG	320	U	UG/KG	320	U	UG/KG	320	U	UG/KG
DIBENZOFURAN	140	UR	UG/KG	280	UR	UG/KG	140	UR	UG/KG	140	UR	UG/KG	140	UR	UG/KG
DIETHYL PHTHALATE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
DIMETHYL PHTHALATE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
DIPHENYLAMINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
ETHYL METHANESULFONATE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
FLUORANTHENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
FLUORENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
HEXACHLOROBENZENE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
HEXACHLOROBUTADIENE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	2000	U	UG/KG	4000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
HEXACHLOROETHANE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
HEXACHLOROPHENE	32000	U	UG/KG	64000	U	UG/KG	32000	U	UG/KG	32000	U	UG/KG	32000	U	UG/KG
HEXACHLOROPROPENE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
INDENO(1,2,3-CD)PYRENE	320	U	UG/KG	640	U	UG/KG	320	U	UG/KG	320	U	UG/KG	320	U	UG/KG
ISOPHORONE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ISOSAFROLE	140	UR	UG/KG	280	UR	UG/KG	140	UR	UG/KG	140	UR	UG/KG	140	UR	UG/KG
METHAPYRILENE	1000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
METHYL METHANESULFONATE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
N-NITROSODIETHYLAMINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
N-NITROSODIMETHYLAMINE	200	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG	200	U	UG/KG
N-NITROSODIPHENYLAMINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
N-NITROSOMORPHOLINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
N-NITROSOPIPERIDINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
N-N; ;OPYRROLIDINE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG

SAMPLE NUMBER:	BG2F-01			BG2F-02			BG2F-03			BG2F-04			BG2F-05		
SAMPLE DATE:	01/21/96			01/21/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*85			BRNCT1*86			BRNCT1*87			BRNCT1*88			BRNCT1*89		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
NITROBENZENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
O-TOLUIDINE	140	UR	UG/KG	280	UR	UG/KG	140	UR	UG/KG	140	UR	UG/KG	140	UR	UG/KG
P-DIMETHYLAMINOAZOBENZENE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PENTACHLOROBENZENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
PENTACHLORONITROBENZENE	700	UR	UG/KG	1400	UR	UG/KG	700	UR	UG/KG	700	UR	UG/KG	700	UR	UG/KG
PENTACHLOROPHENOL	1000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG
PHENACETIN	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
PHENANTHRENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
PHENOL	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PRONAMIDE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
PYRENE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG
PYRIDINE	280	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
SAFROLE	140	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	140	U	UG/KG

SAMPLE NUMBER:	BG2F-06			BG2F-07			BG2F-09			BG2F-10			BG3F-01		
SAMPLE DATE:	01/21/96			01/21/96			01/21/96			01/23/96			01/24/96		
LABORATORY ID:	BRNCT1*90			BRNCT1*91			BRNCT1*93			BRNCT1*94			BRNCT1*95		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,2,4-TRICHLOROBENZENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
1,2-DICHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,3,5-TRINITROBENZENE	2800	U	UG/KG	2800	U	UG/KG	1400	U	UG/KG	2800	U	UG/KG	2800	U	UG/KG
1,3-DICHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,3-DINITROBENZENE	800	U	UG/KG	800	U	UG/KG	400	U	UG/KG	800	U	UG/KG	800	U	UG/KG
1,4-BENZENEDIAMINE	8000	UR	UG/KG	8000	UR	UG/KG	4000	UR	UG/KG	8000	UR	UG/KG	8000	UR	UG/KG
1,4-DICHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,4-NAPHTHOQUINONE	560	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG
1-NAPHTHYLAMINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,4,5-TRICHLOROPHENOL	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
2,4,6-TRICHLOROPHENOL	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
2,4-DICHLOROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,4-DIMETHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,4-DINITROPHENOL	5200	U	UG/KG	5200	U	UG/KG	2600	U	UG/KG	5200	U	UG/KG	5200	U	UG/KG
2,4-DINITROTOLUENE	560	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG
2,6-DICHLOROPHENOL	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2,6-DINITROTOLUENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-ACETYLAMINOFLUORENE	560	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG
2-CHLORONAPHTHALENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2-CHLOROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	4000	U	UG/KG	4000	U	UG/KG	2000	U	UG/KG	4000	U	UG/KG	4000	U	UG/KG
2-METHYLNAPHTHALENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
2-METHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-NAPHTHYLAMINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-NITROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
2-NITROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-PICOLINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
3,3'-DICHLOROBENZIDINE	2000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3,3'-ETHYLBENZIDINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
3-M-YLCHOLANTHRENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG

SAMPLE NUMBER:	BG2F-06			BG2F-07			BG2F-09			BG2F-10			BG3F-01		
SAMPLE DATE:	01/21/96			01/21/96			01/21/96			01/23/96			01/24/96		
LABORATORY ID:	BRNCT1*90			BRNCT1*91			BRNCT1*93			BRNCT1*94			BRNCT1*95		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
3-NITROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
4-AMINOBIPHENYL	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
4-CHLORO-3-METHYL PHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
4-CHLOROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
4-METHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
4-NITROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
4-NITROPHENOL	2000	UR	UG/KG	2000	UR	UG/KG	1000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
4-NITROQUINOLINE-1-OXIDE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
5-NITRO-O-TOLUIDINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	2000	UR	UG/KG	2000	UR	UG/KG	1000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
ACENAPHTHENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ACENAPHTHYLENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ACETOPHENONE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ANILINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
ANTHRACENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ARAMITE	1400	U	UG/KG	1400	U	UG/KG	720	U	UG/KG	1400	U	UG/KG	1400	U	UG/KG
BENZO(A)ANTHRACENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
BENZO(A)PYRENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
BENZO(B)FLUORANTHENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
BENZO(G,H,I)PERYLENE	640	U	UG/KG	640	U	UG/KG	320	U	UG/KG	640	U	UG/KG	640	U	UG/KG
BENZO(K)FLUORANTHENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
BENZYL ALCOHOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	12000		UG/KG	400	U	UG/KG	200	U	UG/KG	6300		UG/KG	6900		UG/KG
BUTYLBENZYL PHTHALATE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
CHLOROBENZILATE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG

SAMPLE NUMBER:	BG2F-06	BG2F-07	BG2F-09	BG2F-10	BG3F-01
SAMPLE DATE:	01/21/96	01/21/96	01/21/96	01/23/96	01/24/96
LABORATORY ID:	BRNCT1*90	BRNCT1*91	BRNCT1*93	BRNCT1*94	BRNCT1*95
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
DI-N-BUTYL PHTHALATE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
DI-N-OCTYL PHTHALATE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
DIALLATE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
DIBENZO(A,H)ANTHRACENE	640	U	UG/KG	640	U	UG/KG	320	U	UG/KG	640	U	UG/KG	640	U	UG/KG
DIBENZOFURAN	280	UR	UG/KG	280	UR	UG/KG	140	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG
DIETHYL PHTHALATE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
DIMETHYL PHTHALATE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
DIPHENYLAMINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ETHYL METHANESULFONATE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
FLUORANTHENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
FLUORENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
HEXACHLOROBENZENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
HEXACHLOROBUTADIENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	4000	U	UG/KG	4000	U	UG/KG	2000	U	UG/KG	4000	U	UG/KG	4000	U	UG/KG
HEXACHLOROETHANE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
HEXACHLOROPHENE	64000	U	UG/KG	64000	U	UG/KG	32000	U	UG/KG	64000	U	UG/KG	64000	U	UG/KG
HEXACHLOROPROPENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
INDENO(1,2,3-CD)PYRENE	640	U	UG/KG	640	U	UG/KG	320	U	UG/KG	640	U	UG/KG	640	U	UG/KG
ISOPHORONE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
ISOSAFROLE	280	UR	UG/KG	280	UR	UG/KG	140	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG
METHAPYRILENE	2000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
METHYL METHANESULFONATE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
N-NITROSODIETHYLAMINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
N-NITROSODIMETHYLAMINE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG
N-NITROSODIPHENYLAMINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
N-NITROSOMORPHOLINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
N-NI[illegible]OSOPIPERIDINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
N-N[illegible]SOPYRROLIDINE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG

SAMPLE NUMBER:	BG2F-06			BG2F-07			BG2F-09			BG2F-10			BG3F-01		
SAMPLE DATE:	01/21/96			01/21/96			01/21/96			01/23/96			01/24/96		
LABORATORY ID:	BRNCT1*90			BRNCT1*91			BRNCT1*93			BRNCT1*94			BRNCT1*95		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
NITROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
O-TOLUIDINE	280	UR	UG/KG	280	UR	UG/KG	140	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG
P-DIMETHYLAMINOAZOBENZENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
PENTACHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PENTACHLORONITROBENZENE	1400	UR	UG/KG	1400	UR	UG/KG	700	UR	UG/KG	1400	UR	UG/KG	1400	UR	UG/KG
PENTACHLOROPHENOL	2000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
PHENACETIN	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PHENANTHRENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
PRONAMIDE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PYRENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PYRIDINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG
SAFROLE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG

SAMPLE NUMBER:	BG3F-02	BG3F-03	BG3F-04	BG3F-06	BG3F-07
SAMPLE DATE:	01/24/96	01/25/96	01/25/96	01/25/96	01/25/96
LABORATORY ID:	BRNCT1*96	BRNCT1*97	BRNCT1*98	BRNCT1*100	BRNCT1*101
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,2,4-TRICHLOROBENZENE	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
1,2-DICHLOROBENZENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,3,5-TRINITROBENZENE	2800	U	UG/KG	1400	U	UG/KG	2800	U	UG/KG	2800	U	UG/KG	2800	U	UG/KG
1,3-DICHLOROBENZENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,3-DINITROBENZENE	800	U	UG/KG	400	U	UG/KG	800	U	UG/KG	800	U	UG/KG	800	U	UG/KG
1,4-BENZENEDIAMINE	8000	UR	UG/KG	4000	UR	UG/KG	8000	UR	UG/KG	8000	UR	UG/KG	8000	UR	UG/KG
1,4-DICHLOROBENZENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
1,4-NAPHTHOQUINONE	560	UR	UG/KG	280	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG
1-NAPHTHYLAMINE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,4,5-TRICHLOROPHENOL	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
2,4,6-TRICHLOROPHENOL	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
2,4-DICHLOROPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,4-DIMETHYLPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2,4-DINITROPHENOL	5200	U	UG/KG	2600	U	UG/KG	5200	U	UG/KG	5200	U	UG/KG	5200	U	UG/KG
2,4-DINITROTOLUENE	560	UR	UG/KG	280	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG
2,6-DICHLOROPHENOL	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2,6-DINITROTOLUENE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-ACETYLAMINOFLUORENE	560	UR	UG/KG	280	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG	560	UR	UG/KG
2-CHLORONAPHTHALENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
2-CHLOROPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	4000	U	UG/KG	2000	U	UG/KG	4000	U	UG/KG	4000	U	UG/KG	4000	U	UG/KG
2-METHYLNAPHTHALENE	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
2-METHYLPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-NAPHTHYLAMINE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-NITROANILINE	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
2-NITROPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
2-PICOLINE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
3,3'-DICHLOROBENZIDINE	2000	U	UG/KG	1000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
3,3'-D THYLBENZIDINE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
3-ME LCHOLANTHRENE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG

SAMPLE NUMBER:	BG3F-02			BG3F-03			BG3F-04			BG3F-06			BG3F-07		
SAMPLE DATE:	01/24/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*96			BRNCT1*97			BRNCT1*98			BRNCT1*100			BRNCT1*101		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
3-NITROANILINE	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
4-AMINOBIPHENYL	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
4-CHLORO-3-METHYL PHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
4-CHLOROANILINE	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
4-METHYLPHENOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
4-NITROANILINE	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
4-NITROPHENOL	2000	UR	UG/KG	1000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
4-NITROQUINOLINE-1-OXIDE	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
5-NITRO-O-TOLUIDINE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	2000	UR	UG/KG	1000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG	2000	UR	UG/KG
ACENAPHTHENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ACENAPHTHYLENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ACETOPHENONE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ANILINE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
ANTHRACENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
ARAMITE	1400	U	UG/KG	720	U	UG/KG	1400	U	UG/KG	1400	U	UG/KG	1400	U	UG/KG
BENZO(A)ANTHRACENE	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
BENZO(A)PYRENE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
BENZO(B)FLUORANTHENE	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
BENZO(G,H,I)PERYLENE	640	U	UG/KG	320	U	UG/KG	640	U	UG/KG	640	U	UG/KG	640	U	UG/KG
BENZO(K)FLUORANTHENE	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
BENZYL ALCOHOL	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	11000		UG/KG	1600		UG/KG	13000		UG/KG	400	U	UG/KG	400	U	UG/KG
BUTYLBENZYL PHTHALATE	400	U	UG/KG	200	U	UG/KG	400	U	UG/KG	400	U	UG/KG	400	U	UG/KG
CHLOROBENZILATE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG

SAMPLE NUMBER:	BG3F-02		BG3F-03		BG3F-04		BG3F-06		BG3F-07	
SAMPLE DATE:	01/24/96		01/25/96		01/25/96		01/25/96		01/25/96	
LABORATORY ID:	BRNCT1*96		BRNCT1*97		BRNCT1*98		BRNCT1*100		BRNCT1*101	
QC_TYPE:	Normal		Normal		Normal		Normal		Normal	
% SOLIDS:	100.0 %		100.0 %		100.0 %		100.0 %		100.0 %	
	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS	RESULT	QUAL UNITS
SEMIVOLATILES										
CHRYSENE	400	U UG/KG	200	U UG/KG	400	U UG/KG	400	U UG/KG	400	U UG/KG
DI-N-BUTYL PHTHALATE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
DI-N-OCTYL PHTHALATE	560	U UG/KG	280	U UG/KG	560	U UG/KG	560	U UG/KG	560	U UG/KG
DIALLATE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
DIBENZO(A,H)ANTHRACENE	640	U UG/KG	320	U UG/KG	640	U UG/KG	640	U UG/KG	640	U UG/KG
DIBENZOFURAN	280	UR UG/KG	140	UR UG/KG	280	UR UG/KG	280	UR UG/KG	280	UR UG/KG
DIETHYL PHTHALATE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
DIMETHYL PHTHALATE	400	U UG/KG	200	U UG/KG	400	U UG/KG	400	U UG/KG	400	U UG/KG
DIPHENYLAMINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
ETHYL METHANESULFONATE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
FLUORANTHENE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
FLUORENE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
HEXACHLOROBENZENE	400	U UG/KG	200	U UG/KG	400	U UG/KG	400	U UG/KG	400	U UG/KG
HEXACHLOROBUTADIENE	560	U UG/KG	280	U UG/KG	560	U UG/KG	560	U UG/KG	560	U UG/KG
HEXACHLOROCYCLOPENTADIENE	4000	U UG/KG	2000	U UG/KG	4000	U UG/KG	4000	U UG/KG	4000	U UG/KG
HEXACHLOROETHANE	400	U UG/KG	200	U UG/KG	400	U UG/KG	400	U UG/KG	400	U UG/KG
HEXACHLOROPHENE	64000	U UG/KG	32000	U UG/KG	64000	U UG/KG	64000	U UG/KG	64000	U UG/KG
HEXACHLOROPROPENE	560	U UG/KG	280	U UG/KG	560	U UG/KG	560	U UG/KG	560	U UG/KG
INDENO(1,2,3-CD)PYRENE	640	U UG/KG	320	U UG/KG	640	U UG/KG	640	U UG/KG	640	U UG/KG
ISOPHORONE	560	U UG/KG	280	U UG/KG	560	U UG/KG	560	U UG/KG	560	U UG/KG
ISOSAFROLE	280	UR UG/KG	140	UR UG/KG	280	UR UG/KG	280	UR UG/KG	280	UR UG/KG
METHAPYRILENE	2000	U UG/KG	1000	U UG/KG	2000	U UG/KG	2000	U UG/KG	2000	U UG/KG
METHYL METHANESULFONATE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
N-NITROSO-DI-N-BUTYLAMINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
N-NITROSO-DI-N-PROPYLAMINE	400	U UG/KG	200	U UG/KG	400	U UG/KG	400	U UG/KG	400	U UG/KG
N-NITROSODIETHYLAMINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
N-NITROSODIMETHYLAMINE	400	U UG/KG	200	U UG/KG	400	U UG/KG	400	U UG/KG	400	U UG/KG
N-NITROSODIPHENYLAMINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
N-NITROSOMETHYLETHYLAMINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
N-NITROSOMORPHOLINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
N-NI[illegible]SOPIPERIDINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG
N-N[illegible]SOPYRROLIDINE	280	U UG/KG	140	U UG/KG	280	U UG/KG	280	U UG/KG	280	U UG/KG

SAMPLE NUMBER:	BG3F-02			BG3F-03			BG3F-04			BG3F-06			BG3F-07		
SAMPLE DATE:	01/24/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*96			BRNCT1*97			BRNCT1*98			BRNCT1*100			BRNCT1*101		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
NITROBENZENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
O-TOLUIDINE	280	UR	UG/KG	140	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG
P-DIMETHYLAMINOAZOBENZENE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
PENTACHLOROBENZENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PENTACHLORONITROBENZENE	1400	UR	UG/KG	700	UR	UG/KG	1400	UR	UG/KG	1400	UR	UG/KG	1400	UR	UG/KG
PENTACHLOROPHENOL	2000	U	UG/KG	1000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG
PHENACETIN	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PHENANTHRENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PHENOL	560	U	UG/KG	280	U	UG/KG	1500	D	UG/KG	560	U	UG/KG	560	U	UG/KG
PRONAMIDE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PYRENE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG
PYRIDINE	560	U	UG/KG	280	U	UG/KG	560	U	UG/KG	560	U	UG/KG	560	U	UG/KG
SAFROLE	280	U	UG/KG	140	U	UG/KG	280	U	UG/KG	280	U	UG/KG	280	U	UG/KG

SAMPLE NUMBER:	BG3F-08	BG3F-09	BG3F-10	BG3F-11	
SAMPLE DATE:	01/25/96	01/25/96	01/25/96	01/25/96	/ /
LABORATORY ID:	BRNCT1*102	BRNCT1*103	BRNCT1*104	BRNCT1*105	
QC_TYPE:	Normal	Normal	Normal	Normal	
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
1,2,4-TRICHLOROBENZENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
1,2-DICHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
1,3,5-TRINITROBENZENE	2800	U	UG/KG	2800	U	UG/KG	1400	U	UG/KG	1400	U	UG/KG			
1,3-DICHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
1,3-DINITROBENZENE	800	U	UG/KG	800	U	UG/KG	400	U	UG/KG	400	U	UG/KG			
1,4-BENZENEDIAMINE	8000	UR	UG/KG	8000	UR	UG/KG	4000	UR	UG/KG	4000	UR	UG/KG			
1,4-DICHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
1,4-NAPHTHOQUINONE	560	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG			
1-NAPHTHYLAMINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2,3,4,6-TETRACHLOROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2,4,5-TRICHLOROPHENOL	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
2,4,6-TRICHLOROPHENOL	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
2,4-DICHLOROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2,4-DIMETHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2,4-DINITROPHENOL	5200	U	UG/KG	5200	U	UG/KG	2600	U	UG/KG	2600	U	UG/KG			
2,4-DINITROTOLUENE	560	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG			
2,6-DICHLOROPHENOL	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
2,6-DINITROTOLUENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2-ACETYLAMINOFLUORENE	560	UR	UG/KG	560	UR	UG/KG	280	UR	UG/KG	280	UR	UG/KG			
2-CHLORONAPHTHALENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
2-CHLOROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2-METHYL-4,6-DINITROPHENOL	4000	U	UG/KG	4000	U	UG/KG	2000	U	UG/KG	2000	U	UG/KG			
2-METHYLNAPHTHALENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
2-METHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2-NAPHTHYLAMINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2-NITROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
2-NITROPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
2-PICOLINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
3,3'-DICHLOROBENZIDINE	2000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG			
3,3'-D[illegible]ETHYLBENZIDINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
3-M[illegible]LCHOLANTHRENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			

SAMPLE NUMBER:	BG3F-08	BG3F-09	BG3F-10	BG3F-11	
SAMPLE DATE:	01/25/96	01/25/96	01/25/96	01/25/96	/ /
LABORATORY ID:	BRNCT1*102	BRNCT1*103	BRNCT1*104	BRNCT1*105	
QC_TYPE:	Normal	Normal	Normal	Normal	
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
3-NITROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
4-AMINOBIPHENYL	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
4-BROMOPHENYL PHENYL ETHER	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
4-CHLORO-3-METHYL PHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
4-CHLOROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
4-CHLOROPHENYLPHENYL ETHER	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
4-METHYLPHENOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
4-NITROANILINE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
4-NITROPHENOL	2000	UR	UG/KG	2000	UR	UG/KG	1000	UR	UG/KG	1000	UR	UG/KG			
4-NITROQUINOLINE-1-OXIDE	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	600	U	UG/KG			
5-NITRO-O-TOLUIDINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
7,12-DIMETHYLBENZ(A)ANTHRACENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
A,A-DIMETHYLPHENETHYLAMINE	2000	UR	UG/KG	2000	UR	UG/KG	1000	UR	UG/KG	1000	UR	UG/KG			
ACENAPHTHENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
ACENAPHTHYLENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
ACETOPHENONE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
ANILINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
ANTHRACENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
ARAMITE	1400	U	UG/KG	1400	U	UG/KG	720	U	UG/KG	720	U	UG/KG			
BENZO(A)ANTHRACENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
BENZO(A)PYRENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
BENZO(B)FLUORANTHENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
BENZO(G,H,I)PERYLENE	640	U	UG/KG	640	U	UG/KG	320	U	UG/KG	320	U	UG/KG			
BENZO(K)FLUORANTHENE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
BENZYL ALCOHOL	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			
BIS(2-CHLOROETHOXY)METHANE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
BIS(2-CHLOROETHYL)ETHER	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
BIS(2-CHLOROISOPROPYL) ETHER	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG			
BIS(2-ETHYLHEXYL)PHTHALATE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
BUTYLBENZYL PHTHALATE	400	U	UG/KG	400	U	UG/KG	200	U	UG/KG	200	U	UG/KG			
CHLOROBENZILATE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG			

SAMPLE NUMBER:	BG3F-08				BG3F-09				BG3F-10				BG3F-11			
SAMPLE DATE:	01/25/96				01/25/96				01/25/96				01/25/96			/ /
LABORATORY ID:	BRNCT1*102				BRNCT1*103				BRNCT1*104				BRNCT1*105			
QC_TYPE:	Normal				Normal				Normal				Normal			
% SOLIDS:	100.0 %				100.0 %				100.0 %				100.0 %			100.0 %
	RESULT	QUAL	UNITS		RESULT	QUAL	UNITS		RESULT	QUAL	UNITS		RESULT	QUAL	UNITS	RESULT QUAL UNITS
SEMIVOLATILES																
CHRYSENE	400	U	UG/KG		400	U	UG/KG		200	U	UG/KG		200	U	UG/KG	
DI-N-BUTYL PHTHALATE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
DI-N-OCTYL PHTHALATE	560	U	UG/KG		560	U	UG/KG		280	U	UG/KG		280	U	UG/KG	
DIALLATE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
DIBENZO(A,H)ANTHRACENE	640	U	UG/KG		640	U	UG/KG		320	U	UG/KG		320	U	UG/KG	
DIBENZOFURAN	280	UR	UG/KG		280	UR	UG/KG		140	UR	UG/KG		140	UR	UG/KG	
DIETHYL PHTHALATE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
DIMETHYL PHTHALATE	400	U	UG/KG		400	U	UG/KG		200	U	UG/KG		200	U	UG/KG	
DIPHENYLAMINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
ETHYL METHANESULFONATE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
FLUORANTHENE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
FLUORENE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
HEXACHLOROBENZENE	400	U	UG/KG		400	U	UG/KG		200	U	UG/KG		200	U	UG/KG	
HEXACHLOROBUTADIENE	560	U	UG/KG		560	U	UG/KG		280	U	UG/KG		280	U	UG/KG	
HEXACHLOROCYCLOPENTADIENE	4000	U	UG/KG		4000	U	UG/KG		2000	U	UG/KG		2000	U	UG/KG	
HEXACHLOROETHANE	400	U	UG/KG		400	U	UG/KG		200	U	UG/KG		200	U	UG/KG	
HEXACHLOROPHENE	64000	U	UG/KG		64000	U	UG/KG		32000	U	UG/KG		32000	U	UG/KG	
HEXACHLOROPROPENE	560	U	UG/KG		560	U	UG/KG		280	U	UG/KG		280	U	UG/KG	
INDENO(1,2,3-CD)PYRENE	640	U	UG/KG		640	U	UG/KG		320	U	UG/KG		320	U	UG/KG	
ISOPHORONE	560	U	UG/KG		560	U	UG/KG		280	U	UG/KG		280	U	UG/KG	
ISOSAFROLE	280	UR	UG/KG		280	UR	UG/KG		140	UR	UG/KG		140	UR	UG/KG	
METHAPYRILENE	2000	U	UG/KG		2000	U	UG/KG		1000	U	UG/KG		1000	U	UG/KG	
METHYL METHANESULFONATE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
N-NITROSO-DI-N-BUTYLAMINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
N-NITROSO-DI-N-PROPYLAMINE	400	U	UG/KG		400	U	UG/KG		200	U	UG/KG		200	U	UG/KG	
N-NITROSODIETHYLAMINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
N-NITROSODIMETHYLAMINE	400	U	UG/KG		400	U	UG/KG		200	U	UG/KG		200	U	UG/KG	
N-NITROSODIPHENYLAMINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
N-NITROSOMETHYLETHYLAMINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
N-NITROSOMORPHOLINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
N-NITROSOPIPERIDINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	
N-N SOPYRROLIDINE	280	U	UG/KG		280	U	UG/KG		140	U	UG/KG		140	U	UG/KG	

SAMPLE NUMBER:	BG3F-08			BG3F-09			BG3F-10			BG3F-11			
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			/ /
LABORATORY ID:	BRNCT1*102			BRNCT1*103			BRNCT1*104			BRNCT1*105			
QC_TYPE:	Normal			Normal			Normal			Normal			
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT QUAL UNITS
SEMIVOLATILES													
NAPHTHALENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	
NITROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	
O-TOLUIDINE	280	UR	UG/KG	280	UR	UG/KG	140	UR	UG/KG	140	UR	UG/KG	
P-DIMETHYLAMINOAZOBENZENE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	
PENTACHLOROBENZENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	
PENTACHLORONITROBENZENE	1400	UR	UG/KG	1400	UR	UG/KG	700	UR	UG/KG	700	UR	UG/KG	
PENTACHLOROPHENOL	2000	U	UG/KG	2000	U	UG/KG	1000	U	UG/KG	1000	U	UG/KG	
PHENACETIN	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	
PHENANTHRENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	
PHENOL	1500		UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	
PRONAMIDE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	
PYRENE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	
PYRIDINE	560	U	UG/KG	560	U	UG/KG	280	U	UG/KG	280	U	UG/KG	
SAFROLE	280	U	UG/KG	280	U	UG/KG	140	U	UG/KG	140	U	UG/KG	

ORGANIC DATA VALIDATION
SDG G69051

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-135

TO: KEVIN WALTER

DATE: MAY 15, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - PESTICIDE/PCB ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69051

SAMPLES: Tissue:

BG1F-01	BG1F-02	BG1F-03
BG1F-04	BG1F-05	BG1F-06
BG1F-07	BG1F-08	BG1F-09
BG1F-10	BG1F-11	BG1F-13
BG1F-14	BG1F-15	BG1F-16
BG1F-17	BG1F-18	BG1F-19
BG1F-21	BG1F-22	

The sample set for the CTO 007 NAS Key West site, SDG G69051, consists of twenty (20) tissue samples analyzed for Appendix IX pesticide/PCB organic compounds. The samples were collected by Brown and Root Environmental on January 22, 23, 25, and 26, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8080 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 10, 1996 - PAGE 2

Pesticides/PCBs

The laboratory failed to provide a Form X: Pesticide Identification Summary with Percent Differences calculated for each positive result. Therefore, the data reviewer was unable to evaluate for this parameter.

The laboratory only provided calibration summaries for analyses performed on column one (DB-608). Furthermore, all results have been reported and quantitated using column one (DB-608).

The laboratory only analyzed a single point calibration for Kepone. Therefore, as a result of the low response and the lack of associated performance data for Kepone, the nondetected results for this compound have been qualified as estimated, "UJ".

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory did not provide a Form X. The laboratory only used one column for quantitation for several analytes. The laboratory did not analyze a multi point calibration for Kepone.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 10, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69051

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	PEST/PCB
BG1F-01	J^1
BG1F-02	J^1
BG1F-03	J^1
BG1F-04	J^1
BG1F-05	J^1
BG1F-06	J^1
BG1F-07	J^1
BG1F-08	J^1
BG1F-09	J^1
BG1F-10	J^1
BG1F-11	J^1
BG1F-13	J^1
BG1F-14	J^1
BG1F-15	J^1
BG1F-16	J^1
BG1F-17	J^1
BG1F-18	J^1
BG1F-19	J^1
BG1F-21	J^1
BG1F-22	J^1

If the field is left blank, the qualifier is A - Accept all data.

J^1 - Accept data but qualify nondetected results for Keypone as estimated, "UJ", as a result of calibration noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 00[illegible] - NAS KEY WEST
FISH [illegible]SUE DATA
ESE LABORATORY

	BG1F-01			BG1F-02			BG1F-03			BG1F-04			BG1F-05		
SAMPLE NUMBER:	BG1F-01			BG1F-02			BG1F-03			BG1F-04			BG1F-05		
SAMPLE DATE:	01/22/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*63			BRNCT1*64			BRNCT1*65			BRNCT1*66			BRNCT1*67		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	4.6		UG/KG	1.6		UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
4,4'-DDE	73.6		UG/KG	282		UG/KG	39.6		UG/KG	68.4		UG/KG	20.2		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	130		UG/KG	294		UG/KG	127		UG/KG	148		UG/KG	59		UG/KG
BETA-BHC	6.3		UG/KG	4.2		UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	BG1F-06	BG1F-07	BG1F-08	BG1F-09	BG1F-10
SAMPLE DATE:	01/22/96	01/22/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*68	BRNCT1*69	BRNCT1*70	BRNCT1*71	BRNCT1*72
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	3.2		UG/KG	2.0		UG/KG	1.6		UG/KG
4,4'-DDE	90.1		UG/KG	19.4		UG/KG	165		UG/KG	119		UG/KG	120		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	182		UG/KG	61		UG/KG	116		UG/KG	75		UG/KG	145		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	4.9		UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	BG1F-11	BG1F-13	BG1F-14	BG1F-15	BG1F-16
SAMPLE DATE:	01/25/96	01/25/96	01/25/96	01/25/96	01/25/96
LABORATORY ID:	BRNCT1*73	BRNCT1*75	BRNCT1*76	BRNCT1*77	BRNCT1*78
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.8		UG/KG	2.2		UG/KG	2.3		UG/KG	2.7		UG/KG	1.0	U	UG/KG
4,4'-DDE	27.8		UG/KG	26.5		UG/KG	30.1		UG/KG	26.5		UG/KG	6.9		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	21	U	UG/KG	20	U	UG/KG
AROCLOR-1260	50		UG/KG	47		UG/KG	54		UG/KG	48		UG/KG	20	U	UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	5.6		UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.9	U	UG/KG	5.2	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	4.9		UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	235	UJ	UG/KG	206	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	118	U	UG/KG	103	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	BG1F-17			BG1F-18			BG1F-19			BG1F-21			BG1F-22		
SAMPLE DATE:	01/25/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	BRNCT1*79			BRNCT1*80			BRNCT1*81			BRNCT1*83			BRNCT1*84		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.7		UG/KG	1.0	U	UG/KG	2.1		UG/KG	2.1		UG/KG	1.8		UG/KG
4,4'-DDE	29.2		UG/KG	6.0		UG/KG	21.5		UG/KG	20.2		UG/KG	18.3		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	55		UG/KG	20	U	UG/KG	35		UG/KG	31		UG/KG	29		UG/KG
BETA-BHC	1.0	U	UG/KG	4.4		UG/KG	1.0	U	UG/KG	6.0		UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

ORGANIC DATA VALIDATION
SDG G69058

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-040

TO: KEVIN WALTER

DATE: MAY 17, 1996

FROM: ANNE K. BATTISTA

COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - PESTICIDE/PCB ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69058

SAMPLES: Tissue:

S1F-01	S1F-02	S1F-03
S1F-04	S1F-05	S1F-06
S1F-07	S1F-08	S1F-09
S1F-10	S2F-01	S2F-02
S2F-03	S2F-04	S2F-05
S2F-06	S2F-07	S2F-08
S2F-09	S2F-10	

The sample set for the CTO 007 NAS Key West site, SDG G69058, consists of twenty (20) fish samples analyzed for Appendix IX volatile organic compounds. The samples were collected by Brown and Root Environmental on January 18th, 19th, 20th and 21st, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8080 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

MEMO TO: KEVIN WALTER
DATE: MAY 17, 1996 - PAGE 2

Pesticides/PCBs

The laboratory only analyzed a single point calibration for Kepone. Therefore, as a result of the low response and the lack of associated performance data for Kepone, the nondetected results for this compound have been qualified as estimated, (UJ).

It should be noted that the laboratory used column DB-608 or column DB1701 to quantitate for analytes detected in the samples contained in this SDG. However, in other SDGs, the laboratory chose column DB-608 only for the quantitation of all positive results. This inconsistency was not documented in the laboratory case narrative. No further action was taken.

A calibration curve for Methoxychlor and Endosulfan sulfate was reported from column DB-608 only. This is inconsistent with the remaining analytes which had calibration curves reported from columns DB-608 and DB1701.

It should be noted that the laboratory did not conduct GC/MS confirmation on positive single component pesticide results which were reported at concentrations greater than 100 µg/Kg.

The laboratory failed to provide a Form X: Pesticide Identification Summary with Percent Differences calculated for each positive result. The laboratory also failed to provide Endrin and 4,4'-DDT breakdown values. Therefore, the data reviewer was unable to evaluate for these parameters.

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory only analyzed a single point calibration for Kepone. The laboratory did not provide a Form X. GC/MS confirmation was not performed. Inconsistencies were noted concerning the quantitation of positive results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Anne K. Battista
Brown and Root Environmental

Anne K. Battista
Chemist/Data Validator

Brown and Root Environmental

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69058

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	PEST/PCB
S1F-01	J[1]
S1F-02	J[1]
S1F-03	J[1]
S1F-04	J[1]
S1F-05	J[1]
S1F-06	J[1]
S1F-07	J[1]
S1F-08	J[1]
S1F-09	J[1]
S1F-10	J[1]
S2F-01	J[1]
S2F-02	J[1]
S2F-03	J[1]
S2F-04	J[1]
S2F-05	J[1]
S2F-06	J[1]
S2F-07	J[1]
S2F-08	J[1]
S2F-09	J[1]
S2F-10	J[1]

If the field is left blank, the qualifier is A - Accept all data.

J[1] - Accept data, but qualify nondetected results for Kepone as estimated, (UJ), as a result of poor calibration performance.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 00[illegible] NAS KEY WEST
FISH TISSUE DATA
ESE LABORATORY

	S1F-01			S1F-02			S1F-03			S1F-04			S1F-05		
SAMPLE NUMBER:	S1F-01			S1F-02			S1F-03			S1F-04			S1F-05		
SAMPLE DATE:	01/18/96			01/18/96			01/18/96			01/18/96			01/18/96		
LABORATORY ID:	BRNCT1*1			BRNCT1*2			BRNCT1*3			BRNCT1*4			BRNCT1*5		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	14.6		UG/KG	18.3		UG/KG	33.0		UG/KG	27.6		UG/KG	19.6		UG/KG
4,4'-DDE	60.6		UG/KG	60.2		UG/KG	118		UG/KG	107		UG/KG	59.7		UG/KG
4,4'-DDT	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ALDRIN	1.6	U	UG/KG	1.0	U	UG/KG	1.4		UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ALPHA-BHC	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ALPHA-CHLORDANE	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
AROCLOR-1016	32	U	UG/KG	20	U	UG/KG	20	U	UG/KG	27	U	UG/KG	31	U	UG/KG
AROCLOR-1221	32	U	UG/KG	20	U	UG/KG	20	U	UG/KG	27	U	UG/KG	31	U	UG/KG
AROCLOR-1232	32	U	UG/KG	20	U	UG/KG	20	U	UG/KG	27	U	UG/KG	31	U	UG/KG
AROCLOR-1242	32	U	UG/KG	20	U	UG/KG	20	U	UG/KG	27	U	UG/KG	31	U	UG/KG
AROCLOR-1248	32	U	UG/KG	20	U	UG/KG	20	U	UG/KG	27	U	UG/KG	31	U	UG/KG
AROCLOR-1254	32	U	UG/KG	20	U	UG/KG	20	U	UG/KG	27	U	UG/KG	31	U	UG/KG
AROCLOR-1260	32	U	UG/KG	41		UG/KG	81		UG/KG	67		UG/KG	31	U	UG/KG
BETA-BHC	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
CHLORDANE	8.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	6.7	U	UG/KG	7.8	U	UG/KG
DELTA-BHC	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
DIELDRIN	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ENDOSULFAN I	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ENDOSULFAN II	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ENDOSULFAN SULFATE	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ENDRIN	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ENDRIN ALDEHYDE	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
GAMMA-BHC (LINDANE)	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
GAMMA-CHLORDANE	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
HEPTACHLOR	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
HEPTACHLOR EPOXIDE	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
ISODRIN	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
KEPONE	322	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	266	UJ	UG/KG	311	UJ	UG/KG
METHOXYCHLOR	1.6	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.3	U	UG/KG	1.6	U	UG/KG
TOXAPHENE	161	U	UG/KG	100	U	UG/KG	100	U	UG/KG	133	U	UG/KG	156	U	UG/KG

SAMPLE NUMBER:	S1F-06			S1F-07			S1F-08			S1F-09			S1F-10		
SAMPLE DATE:	01/19/96			01/20/96			01/21/96			01/21/96			01/21/96		
LABORATORY ID:	BRNCT1*6			BRNCT1*7			BRNCT1*8			BRNCT1*9			BRNCT1*10		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	19.8		UG/KG	14.6		UG/KG	9.1		UG/KG	7.9		UG/KG	9.0		UG/KG
4,4'-DDE	74.8		UG/KG	77.4		UG/KG	196		UG/KG	155		UG/KG	162		UG/KG
4,4'-DDT	1.5		UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	39	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	39	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	39	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	39	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	39	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	39	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	53		UG/KG	39	U	UG/KG	58		UG/KG	73		UG/KG	48		UG/KG
BETA-BHC	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	9.8	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	3.3		UG/KG	7.6		UG/KG	3.3		UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	392	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	2.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	196	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

CTO 007 NAS KEY WEST
FISH T. JE DATA
ESE LABORATORY

SAMPLE NUMBER:	S2F-01			S2F-02			S2F-03			S2F-04			S2F-05		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/19/96		
LABORATORY ID:	BRNCT1*13			BRNCT1*14			BRNCT1*15			BRNCT1*16			BRNCT1*17		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	360		UG/KG	133		UG/KG	441		UG/KG	80.7		UG/KG	142		UG/KG
4,4'-DDE	1900		UG/KG	414		UG/KG	2240		UG/KG	222		UG/KG	599		UG/KG
4,4'-DDT	30.0		UG/KG	21.1		UG/KG	18.1		UG/KG	7.8		UG/KG	16.3		UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	482		UG/KG	117		UG/KG	514		UG/KG	303		UG/KG	669		UG/KG
BETA-BHC	7.4		UG/KG	1.0	U	UG/KG	11.5		UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	S2F-06			S2F-07			S2F-08			S2F-09			S2F-10		
SAMPLE DATE:	01/19/96			01/19/96			01/19/96			01/19/96			01/20/96		
LABORATORY ID:	BRNCT1*18			BRNCT1*19			BRNCT1*20			BRNCT1*21			BRNCT1*22		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	118		UG/KG	1140		UG/KG	813		UG/KG	1770		UG/KG	563		UG/KG
4,4'-DDE	429		UG/KG	817		UG/KG	628		UG/KG	1450		UG/KG	574		UG/KG
4,4'-DDT	10.4		UG/KG	13.4		UG/KG	19.2		UG/KG	49.8		UG/KG	21.4		UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	565		UG/KG	220		UG/KG	245		UG/KG	271		UG/KG	177		UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	2.6		UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

ORGANIC DATA VALIDATION
SDG G69076

Brown & Root Environmental INTERNAL CORRESPONDENCE

C-49-05-6-043

TO:	**MR. KEVIN WALTER**	**DATE:**	**MAY 6, 1996**
FROM:	**MICHELLE L. ALLEN**	**CC:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - APPENDIX IX TCL SVOCs**
CTO 7, NAS KEY WEST, FLORIDA
SDG G69076

SAMPLES: Fish Tissue:

BG1F-01	BG1F-02	BG1F-03	BG1F-04	BG1F-05	BG1F-06
BG1F-07	BG1F-08	BG1F-09	BG1F-10	BG1F-11	BG1F-13
BG1F-14	BG1F-15	BG1F-16	BG1F-17	BG1F-18	BG1F-19
BG1F-21	BG1F-22				

Environmental Science & Engineering (ESE), Inc. analyzed twenty environmental fish tissue samples for Appendix IX Target Compound List (TCL) semivolatile organic compounds. No field duplicate pairs or field quality control blanks were included in this SDG.

The data for these analyses were reviewed with reference to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (2/94) and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance requirements for the Navy Installation Restoration Program" (NEESA 20.2-047B; June, 1988.) The analyses were conducted under NEESA Level C QA/QC criteria using SW846/8270 analytical and reporting protocols and were evaluated according to the following parameters:

- Holding times
- GC/MS tuning and mass calibration
- * Initial and continuing calibrations
- * Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Semivolatile Fraction

Some continuing calibrations contained Relative Response Factors (RRFs) for 1,4-benzenediamine, hexachlorophene, and pentachloronitrobenzene which were less than 0.050. Failure to meet this quality control criteria indicates that the laboratory's instruments could not achieve satisfactory sensitivity for these compounds, and therefore, the associated positive and nondetected results for these compounds are severely compromised. Only nondetected results were reported for these compounds in the affected samples and these nondetects are considered to be unreliable and are rejected, "UR". These results are biased very low.

The laboratory performed one-point standard calibrations for the Appendix IX compounds (i.e., not

including the Contract Laboratory Program (CLP) TCL compounds) instead of a five-point calibration. No validation action was taken for this analytical method discrepancy. The laboratory is urged to follow the method requirements and to provide adequate documentation regarding method variances.

The laboratory method blank analysis yielded the following contaminant at the maximum concentrations indicated:

Compound	Maximum Concentration	Action Level
Bis(2-ethylhexyl)phthalate	340 µg/Kg	3400 µg/Kg

Sample aliquot size and dilution factors were considered prior to the application of the action level. Positive results for this compound found above the detection limit but below the action level have been qualified as undetected, "U".

It should be noted that the following Appendix IX compounds were not analyzed: thionazin, dinoseb, famphur disulfoton, methyl patathion, parathion, phorate, sulfotepp, and o,o,o-triethylphosphorothiate. These compounds were not reported by the laboratory, therefore, reporting limits are not presented within this report. Additionally, dimethoate, which is an Appendix IX compound was not reported by the laboratory. SW-846 methodology requires a multi-point calibration and a subsequent continuing calibration for each compound of interest. The absence of the initial calibration is noted here for completeness. No actions were taken as a result of this method variance. The laboratory is urged to follow method requirements and to provide documentation identifying method variances.

The semivolatile compound 3-methylphenol was not on the sample Form Is, however, this compound was standardized for and included in the Appendix A - Qualified Laboratory Results. No further actions were taken.

The samples were diluted due to the nature of the sample matrix. In addition, the samples were reported on a wet-weight basis.

No other problems were noted.

Executive Summary

Laboratory Performance: Major calibration noncompliances (RRFs < 0.050) were noted for some semivolatile compounds. The Appendix IX compounds were only standardized with a one-point calibration. Bis(2-ethylhexyl)phthalate was detected in the laboratory method blank. The laboratory failed to analyze for several Appendix IX compounds. The sample Form Is were not correct.

Other Factors Affecting Data Quality: None.

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown & Root Environmental
Michelle L. Allen
Chemist/Data Validator

Brown & Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST
SDG NO. G69076

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	Semivolatile	
BG1F-01		R[1]
BG1F-02		R[1]
BG1F-03		R[1]
BG1F-04	A[1]	R[1]
BG1F-05		R[1]
BG1F-06	A[1]	R[1]
BG1F-07	A[1]	R[1]
BG1F-08		R[1]
BG1F-09		R[1]
BG1F-10		R[1]
BG1F-11		R[1]
BG1F-13		R[1]
BG1F-14		R[1]
BG1F-15		R[1]
BG1F-16	A[1]	R[1]
BG1F-17		R[1]
BG1F-18	A[1]	R[1]
BG1F-19		R[1]
BG1F-21		R[1]
BG1F-22	A[1]	R[1]

A[1] - Accept data, but change positive bis(2-ethylhexyl)phthalate result to a revised reporting limit as a result of blank contamination.

R[1] - Reject, "UR", nondetected results for pentachloronitrobenzene, hexachlorophene, and/or 1,4-benzenediamine as a result of continuing calibration RRFs < 0.050.

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory or qualified as a result of blank contamination, and should not be considered present.
UR	-	Nondetected result is rejected as a result of continuing calibration RRFs < 0.050.

APPENDIX A

Qualified Analytical Results

Data Qualifier Key:

U	-	Value is a nondetect as reported by the laboratory or qualified as a result of blank contamination, and should not be considered present.
UR	-	Nondetected result is rejected as a result of continuing calibration RRFs < 0.050.

CTO 00[illegible] NAS KEY WEST
FISH TI[illegible]UE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG1F-01			BG1F-02			BG1F-03			BG1F-04			BG1F-05		
SAMPLE DATE:	01/22/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*63			BRNCT1*64			BRNCT1*65			BRNCT1*66			BRNCT1*67		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
1,2,4-TRICHLOROBENZENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
1,2-DICHLOROBENZENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
1,3,5-TRINITROBENZENE	4200	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG	2100	U	UG/KG	4200	U	UG/KG
1,3-DICHLOROBENZENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
1,3-DINITROBENZENE	1200	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG	600	U	UG/KG	1200	U	UG/KG
1,4-BENZENEDIAMINE	12000	U	UG/KG	12000	UR	UG/KG	12000	UR	UG/KG	6000	U	UG/KG	12000	U	UG/KG
1,4-DICHLOROBENZENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
1,4-NAPHTHOQUINONE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
1-NAPHTHYLAMINE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2,4,5-TRICHLOROPHENOL	1800	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	900	U	UG/KG	1800	U	UG/KG
2,4,6-TRICHLOROPHENOL	1800	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	900	U	UG/KG	1800	U	UG/KG
2,4-DICHLOROPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2,4-DIMETHYLPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2,4-DINITROPHENOL	7800	U	UG/KG	7800	U	UG/KG	7800	U	UG/KG	3900	U	UG/KG	7800	U	UG/KG
2,4-DINITROTOLUENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2,6-DICHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
2,6-DINITROTOLUENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2-ACETYLAMINOFLUORENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2-CHLORONAPHTHALENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
2-CHLOROPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	3000	U	UG/KG	6000	U	UG/KG
2-METHYLNAPHTHALENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
2-METHYLPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2-NAPHTHYLAMINE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2-NITROANILINE	1800	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	900	U	UG/KG	1800	U	UG/KG
2-NITROPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
2-PICOLINE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
3,3'-DICHLOROBENZIDINE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG
3,3'-DI[illegible]HYLBENZIDINE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
3-MET[illegible]CHOLANTHRENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840		UG/KG

SAMPLE NUMBER:	BG1F-01			BG1F-02			BG1F-03			BG1F-04			BG1F-05		
SAMPLE DATE:	01/22/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*63			BRNCT1*64			BRNCT1*65			BRNCT1*66			BRNCT1*67		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
3-NITROANILINE	1800	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	900	U	UG/KG	1800	U	UG/KG
4-AMINOBIPHENYL	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
4-CHLORO-3-METHYL PHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
4-CHLOROANILINE	1800	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	900	U	UG/KG	1800	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
4-METHYLPHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
4-NITROANILINE	1800	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	900	U	UG/KG	1800	U	UG/KG
4-NITROPHENOL	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	1800	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG	900	U	UG/KG	1800	U	UG/KG
5-NITRO-O-TOLUIDINE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG
ACENAPHTHENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
ACENAPHTHYLENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
ACETOPHENONE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
ANILINE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
ANTHRACENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
ARAMITE	2200	U	UG/KG	2200	U	UG/KG	2200	U	UG/KG	1100	U	UG/KG	2200	U	UG/KG
BENZO(A)ANTHRACENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
BENZO(A)PYRENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
BENZO(B)FLUORANTHENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
BENZO(G,H,I)PERYLENE	960	U	UG/KG	960	U	UG/KG	960	U	UG/KG	480	U	UG/KG	960	U	UG/KG
BENZO(K)FLUORANTHENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
BENZYL ALCOHOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	690	U	UG/KG	600	U	UG/KG
BUTYLBENZYL PHTHALATE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
CHLOROBENZILATE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG

SAMPLE NUMBER:	BG1F-01			BG1F-02			BG1F-03			BG1F-04			BG1F-05		
SAMPLE DATE:	01/22/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*63			BRNCT1*64			BRNCT1*65			BRNCT1*66			BRNCT1*67		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
DI-N-BUTYL PHTHALATE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
DI-N-OCTYL PHTHALATE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
DIALLATE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
DIBENZO(A,H)ANTHRACENE	960	U	UG/KG	960	U	UG/KG	960	U	UG/KG	480	U	UG/KG	960	U	UG/KG
DIBENZOFURAN	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
DIETHYL PHTHALATE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
DIMETHYL PHTHALATE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
DIPHENYLAMINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
ETHYL METHANESULFONATE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
FLUORANTHENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
FLUORENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
HEXACHLOROBENZENE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
HEXACHLOROBUTADIENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	6000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG	3000	U	UG/KG	6000	U	UG/KG
HEXACHLOROETHANE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
HEXACHLOROPHENE	96000	UR	UG/KG	96000	UR	UG/KG	96000	UR	UG/KG	48000	UR	UG/KG	96000	UR	UG/KG
HEXACHLOROPROPENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
INDENO(1,2,3-CD)PYRENE	960	U	UG/KG	960	U	UG/KG	960	U	UG/KG	480	U	UG/KG	960	U	UG/KG
ISOPHORONE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
ISOSAFROLE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
METHAPYRILENE	3000	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG	1500	U	UG/KG	3000	U	UG/KG
METHYL METHANESULFONATE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
N-NITROSODIETHYLAMINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
N-NITROSODIMETHYLAMINE	600	U	UG/KG	600	U	UG/KG	600	U	UG/KG	300	U	UG/KG	600	U	UG/KG
N-NITROSODIPHENYLAMINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
N-NITROSOMORPHOLINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
N-NITRC ...IPERIDINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
N-NITRC ...YRROLIDINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG1F-01			BG1F-02			BG1F-03			BG1F-04			BG1F-05		
SAMPLE DATE:	01/22/96			01/22/96			01/22/96			01/22/96			01/22/96		
LABORATORY ID:	BRNCT1*63			BRNCT1*64			BRNCT1*65			BRNCT1*66			BRNCT1*67		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
NITROBENZENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
O-TOLUIDINE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
PENTACHLOROBENZENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
PENTACHLORONITROBENZENE	2100	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG	1100	U	UG/KG	2100	U	UG/KG
PENTACHLOROPHENOL	3000	UR	UG/KG	3000	UR	UG/KG	3000	UR	UG/KG	1500	UR	UG/KG	3000	UR	UG/KG
PHENACETIN	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
PHENANTHRENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
PHENOL	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
PRONAMIDE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
PYRENE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG
PYRIDINE	840	U	UG/KG	840	U	UG/KG	840	U	UG/KG	420	U	UG/KG	840	U	UG/KG
SAFROLE	420	U	UG/KG	420	U	UG/KG	420	U	UG/KG	210	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG1F-06	BG1F-07	BG1F-08	BG1F-09	BG1F-10
SAMPLE DATE:	01/22/96	01/22/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*68	BRNCT1*69	BRNCT1*70	BRNCT1*71	BRNCT1*72
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,2,4-TRICHLOROBENZENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
1,2-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,3,5-TRINITROBENZENE	2100	U	UG/KG	2100	U	UG/KG	11000	U	UG/KG	4200	U	UG/KG	4200	U	UG/KG
1,3-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,3-DINITROBENZENE	600	U	UG/KG	600	U	UG/KG	3000	U	UG/KG	1200	U	UG/KG	1200	U	UG/KG
1,4-BENZENEDIAMINE	6000	UR	UG/KG	6000	UR	UG/KG	30000	UR	UG/KG	12000	U	UG/KG	12000	U	UG/KG
1,4-DICHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
1,4-NAPHTHOQUINONE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
1-NAPHTHYLAMINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,4,5-TRICHLOROPHENOL	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
2,4,6-TRICHLOROPHENOL	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
2,4-DICHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,4-DIMETHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,4-DINITROPHENOL	3900	U	UG/KG	3900	U	UG/KG	20000	U	UG/KG	7800	U	UG/KG	7800	U	UG/KG
2,4-DINITROTOLUENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2,6-DICHLOROPHENOL	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2,6-DINITROTOLUENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-ACETYLAMINOFLUORENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-CHLORONAPHTHALENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
2-CHLOROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	3000	U	UG/KG	3000	U	UG/KG	15000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG
2-METHYLNAPHTHALENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
2-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-NAPHTHYLAMINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-NITROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
2-NITROPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
2-PICOLINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
3,3'-DICHLOROBENZIDINE	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
3,3'-DIM YLBENZIDINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840		UG/KG
3-METH HOLANTHRENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840		UG/KG

SAMPLE NUMBER:	BG1F-06	BG1F-07	BG1F-08	BG1F-09	BG1F-10
SAMPLE DATE:	01/22/96	01/22/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*68	BRNCT1*69	BRNCT1*70	BRNCT1*71	BRNCT1*72
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
3-NITROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
4-AMINOBIPHENYL	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
4-CHLORO-3-METHYL PHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
4-CHLOROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
4-METHYLPHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
4-NITROANILINE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
4-NITROPHENOL	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	900	U	UG/KG	900	U	UG/KG	4500	U	UG/KG	1800	U	UG/KG	1800	U	UG/KG
5-NITRO-O-TOLUIDINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
ACENAPHTHENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ACENAPHTHYLENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ACETOPHENONE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ANILINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
ANTHRACENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ARAMITE	1100	U	UG/KG	1100	U	UG/KG	5400	U	UG/KG	2200	U	UG/KG	2200	U	UG/KG
BENZO(A)ANTHRACENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
BENZO(A)PYRENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
BENZO(B)FLUORANTHENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
BENZO(G,H,I)PERYLENE	480	U	UG/KG	480	U	UG/KG	2400	U	UG/KG	960	U	UG/KG	960	U	UG/KG
BENZO(K)FLUORANTHENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
BENZYL ALCOHOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	330	U	UG/KG	380	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
BUTYLBENZYL PHTHALATE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
CHLOROBENZILATE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG

SAMPLE NUMBER:	BG1F-06	BG1F-07	BG1F-08	BG1F-09	BG1F-10
SAMPLE DATE:	01/22/96	01/22/96	01/26/96	01/26/96	01/26/96
LABORATORY ID:	BRNCT1*68	BRNCT1*69	BRNCT1*70	BRNCT1*71	BRNCT1*72
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
DI-N-BUTYL PHTHALATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DI-N-OCTYL PHTHALATE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
DIALLATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIBENZO(A,H)ANTHRACENE	480	U	UG/KG	480	U	UG/KG	2400	U	UG/KG	960	U	UG/KG	960	U	UG/KG
DIBENZOFURAN	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIETHYL PHTHALATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
DIMETHYL PHTHALATE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
DIPHENYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
ETHYL METHANESULFONATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
FLUORANTHENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
FLUORENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
HEXACHLOROBENZENE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
HEXACHLOROBUTADIENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	3000	U	UG/KG	3000	U	UG/KG	15000	U	UG/KG	6000	U	UG/KG	6000	U	UG/KG
HEXACHLOROETHANE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
HEXACHLOROPHENE	48000	UR	UG/KG	48000	UR	UG/KG	240000	UR	UG/KG	96000	UR	UG/KG	96000	UR	UG/KG
HEXACHLOROPROPENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
INDENO(1,2,3-CD)PYRENE	480	U	UG/KG	480	U	UG/KG	2400	U	UG/KG	960	U	UG/KG	960	U	UG/KG
ISOPHORONE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
ISOSAFROLE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
METHAPYRILENE	1500	U	UG/KG	1500	U	UG/KG	7500	U	UG/KG	3000	U	UG/KG	3000	U	UG/KG
METHYL METHANESULFONATE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
N-NITROSODIETHYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSODIMETHYLAMINE	300	U	UG/KG	300	U	UG/KG	1500	U	UG/KG	600	U	UG/KG	600	U	UG/KG
N-NITROSODIPHENYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSOMORPHOLINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NIT)PIPERIDINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
N-NITROSOPYRROLIDINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG1F-06			BG1F-07			BG1F-08			BG1F-09			BG1F-10		
SAMPLE DATE:	01/22/96			01/22/96			01/26/96			01/26/96			01/26/96		
LABORATORY ID:	BRNCT1*68			BRNCT1*69			BRNCT1*70			BRNCT1*71			BRNCT1*72		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
NITROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
O-TOLUIDINE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
PENTACHLOROBENZENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PENTACHLORONITROBENZENE	1100	U	UG/KG	1100	U	UG/KG	5300	U	UG/KG	2100	U	UG/KG	2100	U	UG/KG
PENTACHLOROPHENOL	1500	UR	UG/KG	1500	UR	UG/KG	7500	UR	UG/KG	3000	UR	UG/KG	3000	UR	UG/KG
PHENACETIN	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PHENANTHRENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PHENOL	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
PRONAMIDE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PYRENE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG
PYRIDINE	420	U	UG/KG	420	U	UG/KG	2100	U	UG/KG	840	U	UG/KG	840	U	UG/KG
SAFROLE	210	U	UG/KG	210	U	UG/KG	1100	U	UG/KG	420	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG1F-11			BG1F-13			BG1F-14			BG1F-15			BG1F-16		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*73			BRNCT1*75			BRNCT1*76			BRNCT1*77			BRNCT1*78		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	11000	U	UG/KG	12000	U	UG/KG	11000	U	UG/KG	4200	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	3000	U	UG/KG	3500	U	UG/KG	3100	U	UG/KG	1200	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	30000	U	UG/KG	35000	U	UG/KG	31000	U	UG/KG	12000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,4-NAPHTHOQUINONE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	4600	U	UG/KG	1800	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	4600	U	UG/KG	1800	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	20000	U	UG/KG	23000	U	UG/KG	20000	U	UG/KG	7800	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	15000	U	UG/KG	18000	U	UG/KG	15000	U	UG/KG	6000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	4600	U	UG/KG	1800	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-PICOLINE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	7700	U	UG/KG	3000	U	UG/KG
3,3'-DI[illegible]HYLBENZIDINE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
3-MET[illegible]CHOLANTHRENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG

CTO 007 NAS KEY WEST
FISH [illegible]UE DATA
ESE LABORATORY

SAMPLE NUMBER:	BG1F-11	BG1F-13	BG1F-14	BG1F-15	BG1F-16
SAMPLE DATE:	01/25/96	01/25/96	01/25/96	01/25/96	01/25/96
LABORATORY ID:	BRNCT1*73	BRNCT1*75	BRNCT1*76	BRNCT1*77	BRNCT1*78
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	4600	U	UG/KG	1800	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	4600	U	UG/KG	1800	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	4600	U	UG/KG	1800	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	7700	U	UG/KG	3000	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	4500	U	UG/KG	5300	U	UG/KG	4600	U	UG/KG	1800	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	7700	U	UG/KG	3000	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ANILINE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
ANTHRACENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ARAMITE	5400	U	UG/KG	5400	U	UG/KG	6400	U	UG/KG	5600	U	UG/KG	2200	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	2400	U	UG/KG	2800	U	UG/KG	2500	U	UG/KG	960	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	630	U	UG/KG
BUTYLBENZYL PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
CHLOROBENZILATE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG

SAMPLE NUMBER:	BG1F-11			BG1F-13			BG1F-14			BG1F-15			BG1F-16		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*73			BRNCT1*75			BRNCT1*76			BRNCT1*77			BRNCT1*78		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
DIALLATE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	2400	U	UG/KG	2800	U	UG/KG	2500	U	UG/KG	960	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
FLUORENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	15000	U	UG/KG	18000	U	UG/KG	15000	U	UG/KG	6000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
HEXACHLOROPHENE	240000	UR	UG/KG	240000	UR	UG/KG	280000	UR	UG/KG	250000	UR	UG/KG	96000	UR	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	2400	U	UG/KG	2800	U	UG/KG	2500	U	UG/KG	960	U	UG/KG
ISOPHORONE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	7500	U	UG/KG	8800	U	UG/KG	7700	U	UG/KG	3000	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	1500	U	UG/KG	1800	U	UG/KG	1500	U	UG/KG	600	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITR[illegible]PIPERIDINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITR[illegible]OPYRROLIDINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG1F-11			BG1F-13			BG1F-14			BG1F-15			BG1F-16		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*73			BRNCT1*75			BRNCT1*76			BRNCT1*77			BRNCT1*78		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
NITROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	5300	U	UG/KG	6200	U	UG/KG	5400	U	UG/KG	2100	U	UG/KG
PENTACHLOROPHENOL	7500	UR	UG/KG	7500	UR	UG/KG	8800	UR	UG/KG	7700	UR	UG/KG	3000	UR	UG/KG
PHENACETIN	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PHENOL	2100	U	UG/KG	2100	U	UG/KG	2500	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
PRONAMIDE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PYRENE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PYRIDINE	2100	U	UG/KG	2100	U	UG/KG	4600	D	UG/KG	3000	D	UG/KG	840	U	UG/KG
SAFROLE	1100	U	UG/KG	1100	U	UG/KG	1200	U	UG/KG	1100	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG1F-17	BG1F-18	BG1F-19	BG1F-21	BG1F-22
SAMPLE DATE:	01/25/96	01/23/96	01/23/96	01/23/96	01/23/96
LABORATORY ID:	BRNCT1*79	BRNCT1*80	BRNCT1*81	BRNCT1*83	BRNCT1*84
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
1,2,4,5-TETRACHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,2,4-TRICHLOROBENZENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
1,2-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,3,5-TRINITROBENZENE	11000	U	UG/KG	4200	U	UG/KG	11000	U	UG/KG	11000	U	UG/KG	4200	U	UG/KG
1,3-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,3-DINITROBENZENE	3000	U	UG/KG	1200	U	UG/KG	3000	U	UG/KG	3100	U	UG/KG	1200	U	UG/KG
1,4-BENZENEDIAMINE	30000	U	UG/KG	12000	U	UG/KG	30000	U	UG/KG	31000	U	UG/KG	12000	U	UG/KG
1,4-DICHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
1,4-NAPHTHOQUINONE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
1-NAPHTHYLAMINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,3,4,6-TETRACHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,4,5-TRICHLOROPHENOL	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	4700	U	UG/KG	1800	U	UG/KG
2,4,6-TRICHLOROPHENOL	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	4700	U	UG/KG	1800	U	UG/KG
2,4-DICHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,4-DIMETHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,4-DINITROPHENOL	20000	U	UG/KG	7800	U	UG/KG	20000	U	UG/KG	20000	U	UG/KG	7800	U	UG/KG
2,4-DINITROTOLUENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2,6-DICHLOROPHENOL	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
2,6-DINITROTOLUENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-ACETYLAMINOFLUORENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-CHLORONAPHTHALENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
2-CHLOROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-METHYL-4,6-DINITROPHENOL	15000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG	16000	U	UG/KG	6000	U	UG/KG
2-METHYLNAPHTHALENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
2-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-NAPHTHYLAMINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	4700	U	UG/KG	1800	U	UG/KG
2-NITROPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
2-PICOLINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
3,3'-DICHLOROBENZIDINE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	7800	U	UG/KG	3000	U	UG/KG
3,3'-DIM[illegible]YLBENZIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
3-MET[illegible]HOLANTHRENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG

SAMPLE NUMBER:	BG1F-17	BG1F-18	BG1F-19	BG1F-21	BG1F-22
SAMPLE DATE:	01/25/96	01/23/96	01/23/96	01/23/96	01/23/96
LABORATORY ID:	BRNCT1*79	BRNCT1*80	BRNCT1*81	BRNCT1*83	BRNCT1*84
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
3-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
3-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	4700	U	UG/KG	1800	U	UG/KG
4-AMINOBIPHENYL	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
4-BROMOPHENYL PHENYL ETHER	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
4-CHLORO-3-METHYL PHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
4-CHLOROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	4700	U	UG/KG	1800	U	UG/KG
4-CHLOROPHENYLPHENYL ETHER	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
4-METHYLPHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
4-NITROANILINE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	4700	U	UG/KG	1800	U	UG/KG
4-NITROPHENOL	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	7800	U	UG/KG	3000	U	UG/KG
4-NITROQUINOLINE-1-OXIDE	4500	U	UG/KG	1800	U	UG/KG	4500	U	UG/KG	4700	U	UG/KG	1800	U	UG/KG
5-NITRO-O-TOLUIDINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
7,12-DIMETHYLBENZ(A)ANTHRACENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
A,A-DIMETHYLPHENETHYLAMINE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	7800	U	UG/KG	3000	U	UG/KG
ACENAPHTHENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ACENAPHTHYLENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ACETOPHENONE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ANILINE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
ANTHRACENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ARAMITE	5400	U	UG/KG	2200	U	UG/KG	5400	U	UG/KG	5600	U	UG/KG	2200	U	UG/KG
BENZO(A)ANTHRACENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
BENZO(A)PYRENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
BENZO(B)FLUORANTHENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
BENZO(G,H,I)PERYLENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	2500	U	UG/KG	960	U	UG/KG
BENZO(K)FLUORANTHENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
BENZYL ALCOHOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
BIS(2-CHLOROETHOXY)METHANE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROETHYL)ETHER	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U	UG/KG	1100	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	1100	U	UG/KG
BUTYLBENZYL PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
CHLOROBENZILATE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG

SAMPLE NUMBER:	BG1F-17	BG1F-18	BG1F-19	BG1F-21	BG1F-22
SAMPLE DATE:	01/25/96	01/23/96	01/23/96	01/23/96	01/23/96
LABORATORY ID:	BRNCT1*79	BRNCT1*80	BRNCT1*81	BRNCT1*83	BRNCT1*84
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
CHRYSENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
DI-N-BUTYL PHTHALATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DI-N-OCTYL PHTHALATE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
DIALLATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DIBENZO(A,H)ANTHRACENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	2500	U	UG/KG	960	U	UG/KG
DIBENZOFURAN	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DIETHYL PHTHALATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
DIMETHYL PHTHALATE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
DIPHENYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
ETHYL METHANESULFONATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
FLUORANTHENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
FLUORENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
HEXACHLOROBENZENE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
HEXACHLOROBUTADIENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
HEXACHLOROCYCLOPENTADIENE	15000	U	UG/KG	6000	U	UG/KG	15000	U	UG/KG	16000	U	UG/KG	6000	U	UG/KG
HEXACHLOROETHANE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
HEXACHLOROPHENE	240000	UR	UG/KG	96000	UR	UG/KG	240000	UR	UG/KG	250000	UR	UG/KG	96000	UR	UG/KG
HEXACHLOROPROPENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
INDENO(1,2,3-CD)PYRENE	2400	U	UG/KG	960	U	UG/KG	2400	U	UG/KG	2500	U	UG/KG	960	U	UG/KG
ISOPHORONE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
ISOSAFROLE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
METHAPYRILENE	7500	U	UG/KG	3000	U	UG/KG	7500	U	UG/KG	7800	U	UG/KG	3000	U	UG/KG
METHYL METHANESULFONATE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-BUTYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
N-NITROSODIETHYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSODIMETHYLAMINE	1500	U	UG/KG	600	U	UG/KG	1500	U	UG/KG	1600	U	UG/KG	600	U	UG/KG
N-NITROSODIPHENYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSOMETHYLETHYLAMINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITROSOMORPHOLINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITF [illegible]PIPERIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
N-NITR [illegible]OPYRROLIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG

SAMPLE NUMBER:	BG1F-17			BG1F-18			BG1F-19			BG1F-21			BG1F-22		
SAMPLE DATE:	01/25/96			01/23/96			01/23/96			01/23/96			01/23/96		
LABORATORY ID:	BRNCT1*79			BRNCT1*80			BRNCT1*81			BRNCT1*83			BRNCT1*84		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
SEMIVOLATILES															
NAPHTHALENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
NITROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
O-TOLUIDINE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
P-DIMETHYLAMINOAZOBENZENE	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
PENTACHLOROBENZENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PENTACHLORONITROBENZENE	5300	U	UG/KG	2100	U	UG/KG	5300	U	UG/KG	5500	U	UG/KG	2100	U	UG/KG
PENTACHLOROPHENOL	7500	UR	UG/KG	3000	UR	UG/KG	7500	UR	UG/KG	7800	UR	UG/KG	3000	UR	UG/KG
PHENACETIN	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PHENANTHRENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PHENOL	2100	U	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
PRONAMIDE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PYRENE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG
PYRIDINE	3300	D	UG/KG	840	U	UG/KG	2100	U	UG/KG	2200	U	UG/KG	840	U	UG/KG
SAFROLE	1100	U	UG/KG	420	U	UG/KG	1100	U	UG/KG	1100	U	UG/KG	420	U	UG/KG

ORGANIC DATA VALIDATION
SDG G69107

Brown & Root Environmental

INTERNAL CORRESPONDENCE

C-49-05-6-140

TO: KEVIN WALTER

DATE: MAY 15, 1996

FROM: WILLIAM J. BROTZ

COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION - PESTICIDE/PCB ORGANIC COMPOUNDS
CTO 007, NAS KEY WEST, KEY WEST, FLORIDA
SDG G69107

SAMPLES: Tissue:

BG2F-01	BG2F-02	BG2F-03
BG2F-04	BG2F-05	BG2F-06
BG2F-07	BG2F-08	BG2F-09
BG2F-10	BG3F-01	BG3F-02
BG3F-03	BG3F-04	BG3F-06
BG3F-07	BG3F-08	BG3F-09
BG3F-10	BG3F-11	

The sample set for the CTO 007 NAS Key West site, SDG G69107, consists of twenty (20) tissue samples analyzed for Appendix IX pesticide/PCB organic compounds. The samples were collected by Brown and Root Environmental on January 21, 23, 24, and 25, 1996 and analyzed by Environmental Science and Engineering, Inc. under Naval Energy and Environmental Support Activity (NEESA) Level C Quality Assurance/Quality Control (QA/QC) criteria. All analyses were conducted using EPA SW-846 Method 8080 analytical and reporting protocols. The data were evaluated according to the following parameters:

- Holding times
- Initial and continuing calibrations
- Laboratory blank analyses

The symbol (*) indicates that quality control criteria were not met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

Pesticides/PCBs

The laboratory failed to provide a Form X: Pesticide Identification Summary with Percent Differences calculated for each positive result. Therefore, the data reviewer was unable to evaluate for this parameter.

The laboratory only provided calibration summaries for analyses performed on column one (DB-608). Furthermore, all results have been reported and quantitated using column one (DB-608).

The laboratory only analyzed a single point calibration for Kepone. Therefore as a result of the low response and the lack of associated performance data for Kepone, the nondetected results for this compound have been qualified as estimated, "UJ".

No other problems were noted.

Executive Summary

Laboratory Performance: The laboratory did not provide a Form X. The laboratory only used one column for quantitation of several analytes. The laboratory did not analyze a multi point calibration for Kepone.

Other Factors Affecting Data Quality: None.

MEMO TO: KEVIN WALTER
DATE: MAY 10, 1996 - PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Data Validation" (2/94), and the NEESA guidelines entitled "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program (NEESA 20.2-047B; 6/88).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NEESA Guidelines and the Quality Assurance Project Plan (QAPP)."

Brown and Root Environmental
William J. Brotz
Chemist/Data Validator

Brown and Root Environmental
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

NAS KEY WEST

SDG G69107

TABLE 1 - RECOMMENDATION SUMMARY

Sample No.	PEST/PCB
BG2F-01	J[1]
BG2F-02	J[1]
BG2F-03	J[1]
BG2F-04	J[1]
BG2F-05	J[1]
BG2F-06	J[1]
BG2F-07	J[1]
BG2F-08	J[1]
BG2F-09	J[1]
BG2F-10	J[1]
BG3F-01	J[1]
BG3F-02	J[1]
BG3F-03	J[1]
BG3F-04	J[1]
BG3F-06	J[1]
BG3F-07	J[1]
BG3F-08	J[1]
BG3F-09	J[1]
BG3F-10	J[1]
BG3F-11	J[1]

If the field is left blank, the qualifier is A - Accept all data.

J[1] - Accept data but qualify nondetected Kepone results as estimated, "UJ", as a result of calibration noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

CTO 007 NAS KEY WEST
FISH TI[illegible]E DATA
ESE LABORATORY

SAMPLE NUMBER:	BG2F-01	BG2F-02	BG2F-03	BG2F-04	BG2F-05
SAMPLE DATE:	01/21/96	01/21/96	01/21/96	01/21/96	01/21/96
LABORATORY ID:	BRNCT1*85	BRNCT1*86	BRNCT1*87	BRNCT1*88	BRNCT1*89
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	1.1		UG/KG	1.0	U	UG/KG	2.3		UG/KG
4,4'-DDE	1.0	U	UG/KG	1.0	U	UG/KG	5.2		UG/KG	2.4		UG/KG	7.2		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
BETA-BHC	2.8		UG/KG	3.1		UG/KG	3.5		UG/KG	1.0	U	UG/KG	3.3		UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	BG2F-06	BG2F-07	BG2F-08	BG2F-09	BG2F-10
SAMPLE DATE:	01/21/96	01/21/96	01/21/96	01/21/96	01/23/96
LABORATORY ID:	BRNCT1*90	BRNCT1*91	BRNCT1*92	BRNCT1*93	BRNCT1*94
QC_TYPE:	Normal	Normal	Normal	Normal	Normal
% SOLIDS:	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.2		UG/KG	1.5		UG/KG	1.0	U	UG/KG	2.5		UG/KG	4.2		UG/KG
4,4'-DDE	5.4		UG/KG	6.3		UG/KG	2.2		UG/KG	12.1		UG/KG	10.3		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	2.0		UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	31	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	31	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	31	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	31	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	31	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	31	U	UG/KG
AROCLOR-1260	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	31	U	UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	2.1		UG/KG	1.5	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	7.7	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.9		UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	308	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.5	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	154	U	UG/KG

SAMPLE NUMBER:	BG3F-01			BG3F-02			BG3F-03			BG3F-04			BG3F-06		
SAMPLE DATE:	01/24/96			01/24/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*95			BRNCT1*96			BRNCT1*97			BRNCT1*98			BRNCT1*100		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	1.0	U	UG/KG	1.0	U	UG/KG	14.0		UG/KG	8.8		UG/KG	7.7		UG/KG
4,4'-DDE	1.0	U	UG/KG	4.0		UG/KG	90.1		UG/KG	89.3		UG/KG	25.6		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	2.5		UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	24	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	20	U	UG/KG	20	U	UG/KG	124		UG/KG	39		UG/KG	20	U	UG/KG
BETA-BHC	3.1		UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.9	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.3		UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.9		UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	235	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.2	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	118	U	UG/KG	100	U	UG/KG	100	U	UG/KG

SAMPLE NUMBER:	BG3F-07			BG3F-08			BG3F-09			BG3F-10			BG3F-11		
SAMPLE DATE:	01/25/96			01/25/96			01/25/96			01/25/96			01/25/96		
LABORATORY ID:	BRNCT1*101			BRNCT1*102			BRNCT1*103			BRNCT1*104			BRNCT1*105		
QC_TYPE:	Normal			Normal			Normal			Normal			Normal		
% SOLIDS:	100.0 %			100.0 %			100.0 %			100.0 %			100.0 %		
	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS	RESULT	QUAL	UNITS
PESTICIDES/PCBs															
4,4'-DDD	9.5		UG/KG	13.5		UG/KG	13.1		UG/KG	7.8		UG/KG	11.6		UG/KG
4,4'-DDE	22.0		UG/KG	106		UG/KG	34.1		UG/KG	27.6		UG/KG	46.8		UG/KG
4,4'-DDT	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ALPHA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
AROCLOR-1016	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1221	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1232	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1242	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1248	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1254	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG	20	U	UG/KG
AROCLOR-1260	20	U	UG/KG	48		UG/KG	27		UG/KG	20	U	UG/KG	20	U	UG/KG
BETA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
CHLORDANE	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG	5.0	U	UG/KG
DELTA-BHC	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
DIELDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN I	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN II	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDOSULFAN SULFATE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ENDRIN ALDEHYDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-BHC (LINDANE)	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
GAMMA-CHLORDANE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
HEPTACHLOR EPOXIDE	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
ISODRIN	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
KEPONE	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG	200	UJ	UG/KG
METHOXYCHLOR	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG	1.0	U	UG/KG
TOXAPHENE	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG	100	U	UG/KG