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TRENCH INVESTIGATION REPORT FOR TRUMAN ANNEX DEFENSE REUTILIZATION AND MARKETING OFFICE WASTE STORAGE AREA WITH TRANSMITTAL LETTER NAS KEY WEST FL

8/19/2005

TETRA TECH NUS

TETRA TECH NUS, INC.

AIK-05-0214

August 19, 2005

Project Number HK N0693 *via FedEx*

Commander
Department of the Navy
SOUTHDIV NAVFACENGCOM
ATTN: Jeff Adams (Code OPT1)
P.O. Box 190010
North Charleston, South Carolina 29419-9010

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 0349

Subject: Trench Investigation Report for Truman Annex DRMO Waste Storage Area, Rev. 0, Naval Air Station, Key West, Florida

Dear Mr. Adams:

I have enclosed a CD containing an electronic copy of the Trench Investigation Report for Truman Annex DRMO Waste Storage Area, Rev. 0, Naval Air Station Key West, Florida. Copies of this file are also being sent to members of the NAS Key West Partnering Team for review and concurrence. A copy of this report is being transmitted to the LRA as a courtesy to the City of Key West.

Please call me at (803) 649-7963, extension 345, if you have any questions regarding the enclosed document.

Sincerely,

C. M. Bryan
Project Manager

CMB:spc

c: Ms. Debra M. Humbert (Cover Letter Only)
Mr. R. Courtright, NAS Key West
Mr. R. Demes, NAS Key West
Ms. T. Vaught, FDEP
Mr. J. Meyers, NAVFAC EFD South
Mr. D. Bradshaw, Key West LRA
Mr. M. Perry/File
Files 0639-7.8.1

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Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-94-D-0888

Rev. 0
08/19/05

Trench Investigation Report for Truman Annex DRMO Waste Storage Area

Naval Air Station Key West
Key West, Florida

Contract Task Order 0349

August 2005

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

TETRA TECH NUS, Inc.

Rev. 0
08/19/05

TRENCH INVESTIGATION REPORT
AT THE
TRUMAN ANNEX DRMO WASTE STORAGE AREA

NAVAL AIR STATION
KEY WEST, 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:
Tetra Tech NUS
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220

CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0349

AUGUST 2005

PREPARED UNDER THE SUPERVISION OF:

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ACRONYMS

bls	below land surface
BRAC	Base Realignment and Closure
CLEAN	Comprehensive Long-term Environmental Action Navy
CTO	Contract Task Order
DRMO	Defense Reutilization and Marketing Office
FDEP	Florida Department of Environmental Protection
GPS	Global Positioning System
µg/kg	microgram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NAS	Naval Air Station
NAVFAC EFD SOUTH	Southern Division, Naval Facilities Engineering Command
NOAA	National Oceanic and Atmospheric Administration
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
ppm	parts per million
QC	quality control
SCTL	Soil Cleanup Target Levels
SOP	Standard Operating Procedure
SSI	Supplemental Site Inspection
SVOC	Semi-Volatile Organic Compound
TCL	Target Compound List
TtNUS	Tetra Tech NUS, Inc.

1.0 INTRODUCTION

Tetra Tech NUS, Inc. (TtNUS) has been contracted by the Department of the Navy, Southern Division, Naval Facilities Engineering Command (NAVFAC EFD SOUTH) to perform sampling to support installation of a utility trench at Truman Annex Defense Reutilization and Marketing Office (DRMO) Waste Storage Area at the Naval Air Station (NAS) Key West, Florida. This investigation report was prepared under the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D-0888, Contract Task Order (CTO) Number 0349.

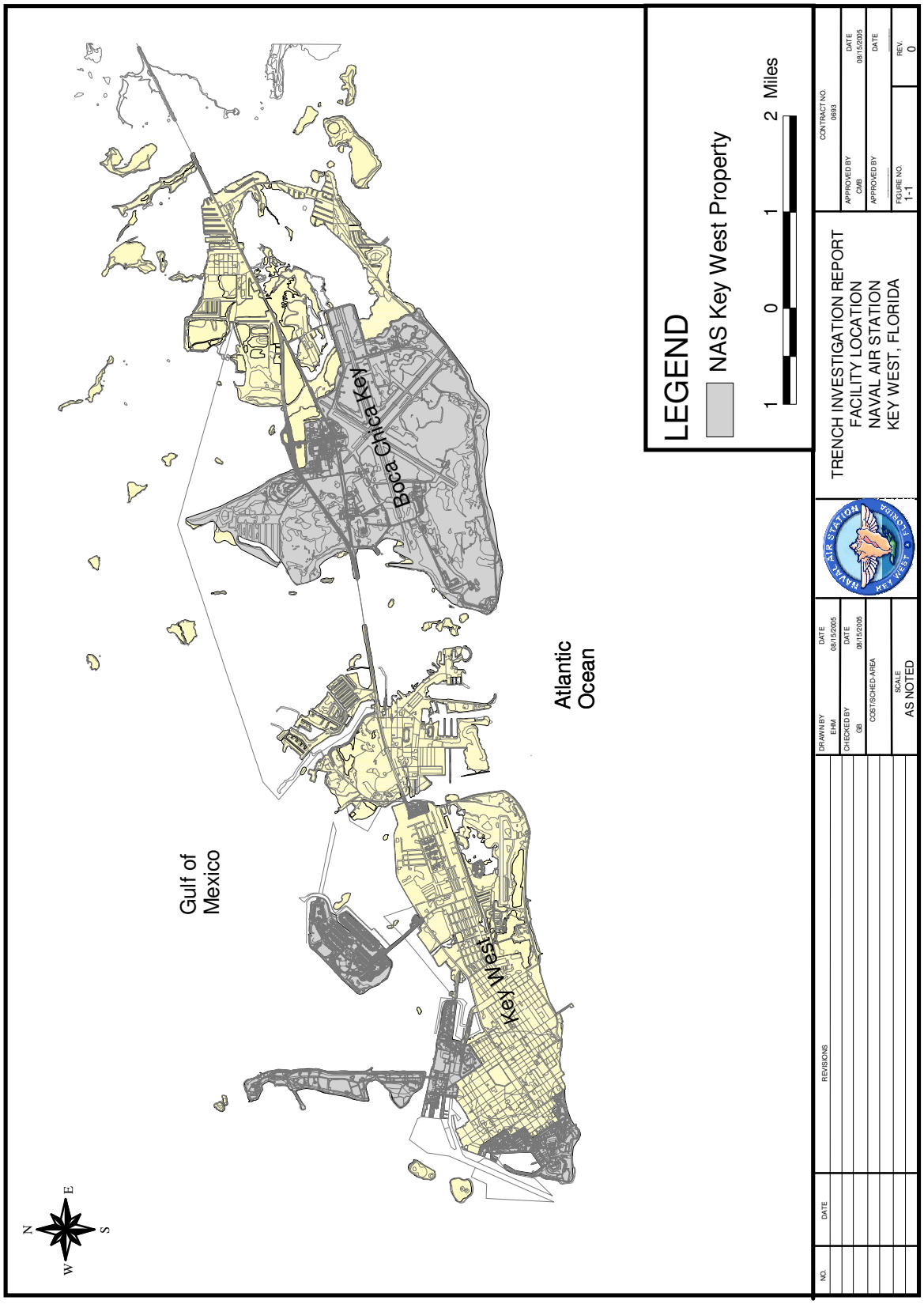
1.1 SITE BACKGROUND AND HISTORY

Several installations in various parts of the lower Florida Keys comprise NAS Key West. The Navy manages 6,323 acres of land divided into 20 separate tracts in the lower Florida Keys, concentrated around Key West and Boca Chica Key (Figure 1-1) in southern Monroe County (Brown and Root Environmental, 1998). Key West, one of the two most western major islands of the Florida Keys, is approximately 150 miles southwest of Miami and 90 miles north of Havana, Cuba. Key West connects to the mainland by the Overseas Highway (U.S. Highway 1). The environmental setting at Key West is described in the Supplemental Site Inspection (SSI) Work Plan for Base Realignment and Closure (BRAC) Parcels at Truman Annex (TtNUS, 1999).

The DRMO Waste Storage Area at Truman Annex (Figure 1-2) was used primarily to store metal debris, including motors, vehicles, boats, refugee debris, and fuel trucks. Some hazardous materials were also stored there. Interim remedial actions were performed at the DRMO Waste Storage Area in 1999. Approximately 16,000 tons of soil were removed from the area and replaced with clean backfill. The majority of the DRMO Waste Storage Area was transferred to the City of Key West in 2003.

1.2 PURPOSE AND SCOPE

The National Oceanic and Atmospheric Administration (NOAA) has plans to install underground utility lines within the DRMO Waste Storage Area, which is owned by the City of Key West. However, polychlorinated biphenyls (PCBs) have recently been discovered in previously remediated areas of DRMO Waste Storage Area. PCB analyses were not performed at the majority of the DRMO Waste Storage Area during 1999 because PCBs had not been identified as chemicals of concern. The backfill used in 1999 to fill excavated areas at DRMO Waste Storage Area also was not analyzed for PCBs but was analyzed for metals and semivolatile organic compounds (SVOCs). Because the backfill has been analyzed for metals and SVOCs previously and results were below residential action levels, TtNUS was tasked to collect samples in the area of the proposed utility trench for analysis of PCBs only to support the Navy's commitment to support NOAA's current utility installation project.


Gulf of Mexico
Atlantic Ocean
Boca Chica Key
Key West
LEGEND
NAS Key West Property
1 0 1 2 Miles
N
E
S
W
TRENCH INVESTIGATION REPORT
FACILITY LOCATION
NAVAL AIR STATION
KEY WEST, FLORIDA
NAVAL AIR STATION KEY WEST FLORIDA
DRAWN BY EHM
DATE 08/15/2005
CHECKED BY GB
DATE 08/15/2005
COST/SCHED-AREA
SCALE AS NOTED
CONTRACT NO. 0693
APPROVED BY CMB
DATE 08/15/2005
APPROVED BY
DATE
FIGURE NO. 1-1
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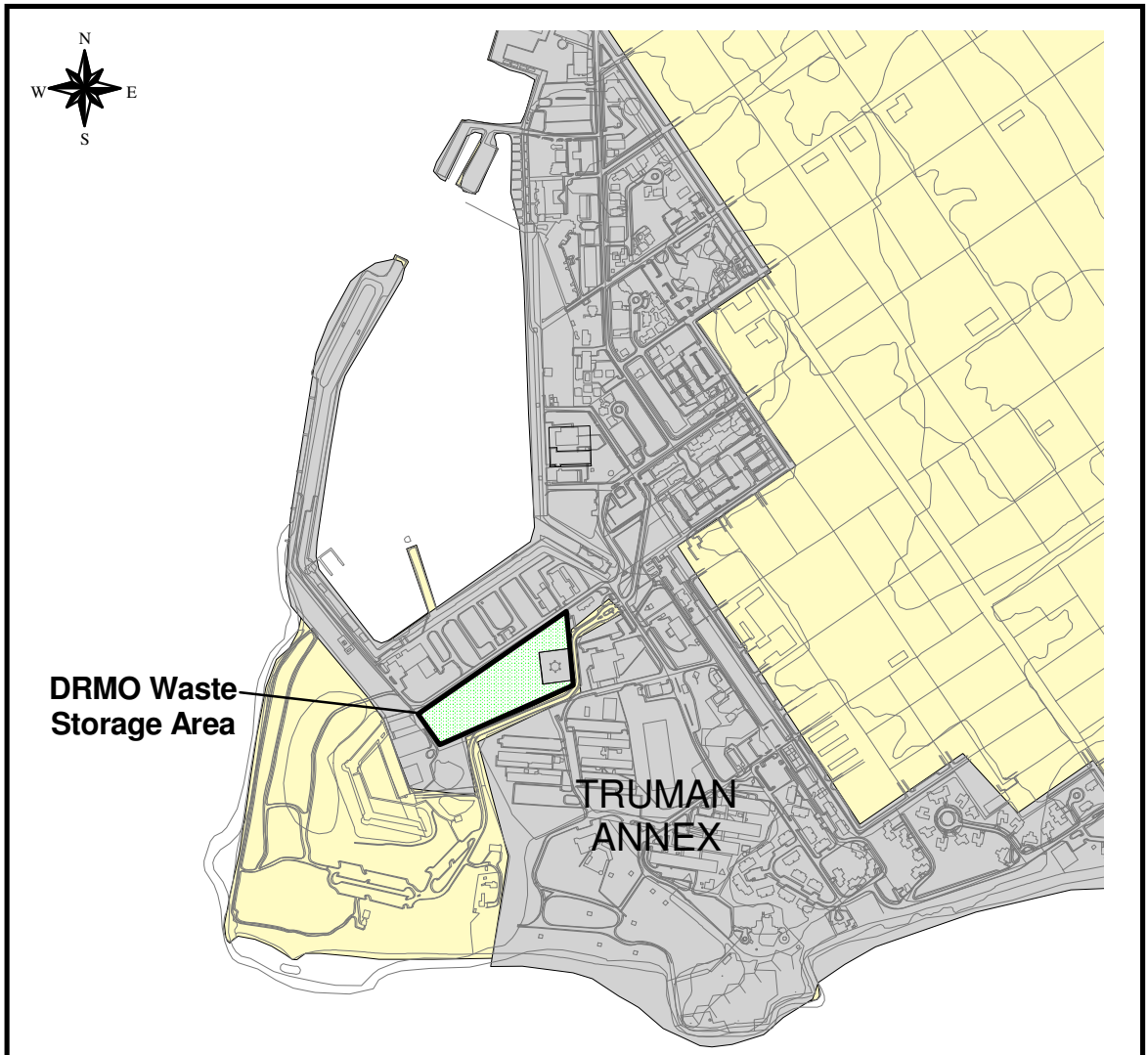
K:\UTILITY TRENCH WORKPLAN.APR LAYOUT: FIGURE 1-1 REPORT BY: EHM DATE: 08/15/2005



LEGEND

Truman Annex

City of Key West Property

500 0 500 1000 Feet

NO.	DATE	REVISIONS

DRAWN BY EHM DATE 08/15/2005
CHECKED BY GB DATE 08/15/2005
COST/SCHED-AREA
SCALE AS NOTED

TRENCH INVESTIGATION REPORT
SITE LOCATION
DRMO WASTE STORAGE AREA
NAVAL AIR STATION
KEY WEST, FLORIDA

CONTRACT NO. 0693
APPROVED BY CMB DATE 08/15/2005
APPROVED BY DATE
FIGURE NO. 1-2 REV. 0

K:\UTILITY TRENCH WORKPLAN.APR LAYOUT: FIGURE 1-2 REPORT BY:EHM DATE: 08/15/2005

2.0 FIELD ACTIVITIES REPORT SUMMARY

In June 2005, TtNUS performed the investigative sampling at the site in accordance with the Abbreviated Work Plan for Sampling to Support Utility Trench Installation at the Truman Annex DRMO Waste Storage Area (TtNUS, 2005). This section describes the activities performed during the field event and presents the results of the investigation.

2.1 SAMPLING METHODOLOGY

TtNUS installed a total of 15 soil borings at 10-foot intervals along the proposed utility trench route known as Option A using a powered auger sampling technique (Figure 2-1). Soil borings were taken to a depth of 4 feet below land surface (bls). Two samples were collected from each boring (0 to 2 feet bls and 2 to 4 feet bls) for field analysis of PCBs using immunoassay to provide immediate results for field decisions. Approximately 10 percent of the samples collected were sent to a fixed-base laboratory to confirm field test results. Field boring logs are in Appendix A.

Soil sampling was performed in accordance with the Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOPs) (FDEP, 2002). Samples were collected using a 3-inch-diameter power auger. Soil were homogenized in stainless steel bowls with stainless steel spoons before being placed in certified pre-cleaned sample jars for shipment to the laboratory. Soils for field analyses were temporarily stored in zip-lock bags. Samples sent to a fixed-base laboratory were analyzed for Target Compound List (TCL) PCBs using method SW-846 8081A/8082.

2.2 PCB ANALYSIS

2.2.1 Field Analyses

Immunoassay was chosen for field analysis because of its speed, sensitivity, selectivity, and relatively easy use. Strategic Diagnostics, Inc. of Newark, Delaware provided two kits, a sample extraction kit and an Ensys PCB Soil Test Kit (EPA Method 4020), for the immunoassay field analysis. The Ensys PCB Soil Test Kit is a semi-quantitative enzyme immunoassay used for the detection of PCBs in soil. The test identifies samples that are PCB-free and those containing 0.5 part per million (ppm) or greater of PCBs. The kit standard used is Aroclor-1260 (which is approximately 60 percent chlorine by weight), with a detection range of 0.5 to 50 ppm.

The determination of the presence of PCBs was made by comparing the color developed by a sample of unknown concentration with the color formed by the standard containing the analyte (Aroclor-1260) at a known concentration. The determination of the PCB concentration in the sample was interpreted relative to the kit standard by reading with a spectrophotometer. A positive photometer reading indicates that the

PCB concentration in the sample is less than the testing level (standard) in the sample. A negative or zero photometer reading indicates that the PCB concentration in the sample is greater than or equal to the testing level (standard).

Thirty soil samples were collected along the proposed utility trench on June 28, 2005 and immediately analyzed in the field for the presence of PCBs. The samples were not diluted and specific quantification levels were not achieved. Duplicate standards were run to provide an internal test system quality control (QC).

2.2.2 Fixed-Based Laboratory Analyses

Soil samples were sent to Katahdin Analytical Services on June 29, 2005 for TCL PCB analysis (SW-846 8081A/8082). The samples selected for laboratory analysis included those identified by immunoassay as containing PCBs (CO3-UTIL-03-02-0605 and CO3-UTIL-08-02-0605). Quality Control (QC) samples were collected as specified in the FDEP SOP FQ1000 – Field Quality Control Requirements (FDEP, 2002) and the Tetra Tech Corporate QA Manual (TtNUS, 2002). One duplicate sample of CO3-UTIL-12-04-0605 (KWFD062805), one each matrix spike (MS) and matrix spike duplicate (MSD) (CO3-UTIL-12-04-0605MS and CO3-UTIL-12-04-0605MSD) and one rinsate blank (KWRB062805) were also collected.

2.3 SURVEYING

A Trimble PRO XRS global positioning system (GPS) device was used to document sample locations. Each sample location was tied to the state plane system, where the X coordinate describes the east-west axis location (Easting) and the Y coordinate describes the north-south axis location (Northing). All locations were reported using the Florida State Plane Coordinate System-Eastern Zone. Horizontal locations were measured to the nearest tenth of a foot. Survey data is presented in Appendix B.

2.4 RESULTS AND CONCLUSIONS

The immunoassay field analyses results indicated the presence of PCBs at concentrations greater than 10 ppm but less than 50 ppm in samples CO3-UTIL-03-02 and CO3-UTIL-08-02. No other samples had PCB detections. The results obtained from the immunoassay are presented in Table 2-1. The field notes recorded during testing are included in Appendix A.

Results of the fixed based laboratory analyses indicate that Aroclor-1260 was detected in CO3-UTIL-12-04-0605 at a concentration of 24 micrograms per kilogram (μg/kg). This concentration is below FDEP's Direct Exposure Residential soil cleanup target level (SCTL) of 500 μg/kg. An identical Aroclor-1260 concentration was detected in the duplicate sample KWD062805. The location of the boring is shown on Figure 2-1. PCBs were not detected in either of the two samples identified by the immunoassay field test

kits as containing PCBs. The validated fixed-base laboratory results are presented in Table 2-2. A copy of the analytical validation report is included in Appendix C.

Soil samples collected during this investigation indicate that PCBs were not detected above FDEP's Direct Exposure Residential SCTLs in the proposed location of the utility trench.

TABLE 2-1

PCB IMMUNOASSAY RESULTS
UTILITY TRENCH REPORT
NAVAL AIR STATION
KEY WEST, FLORIDA
PAGE 1 OF 2

		First Analysis				Second Analysis				
		Standard	Sample Photometric Result			Standard	Sample Photometric Result			
Date	Sample ID	Photometric Result	0.5 ppm	10 ppm	50 ppm	Photometric Result	0.5 ppm	10 ppm	50 ppm	Interpretation
6/28/2005	UTIL-01-02	0.28	0.8	0.47	0.71	-0.31	1.12	0.75	1.02	Sample < 0.5 ppm
6/28/2005	UTIL-01-04	0.28	0.35	0.59	0.13	-0.31	0.66	0.88	0.43	Sample < 0.5 ppm
6/28/2005	UTIL-02-02	0.28	0.54	0.43	0.47	-0.31	0.84	0.72	0.76	Sample < 0.5 ppm
6/28/2005	UTIL-02-04	0.28	0.37	0.23	0.09	-0.31	0.66	0.52	0.39	Sample < 0.5 ppm
6/29/2005	UTIL-03-02	0.11	0.71	-0.1	1.58	-0.14	0.83	0.02	1.83	10 ppm < Sample < 50 ppm
6/29/2005	UTIL-03-04	0.11	0.15	0.88	0.52	-0.14	0.29	1	0.64	Sample < 0.5 ppm
6/29/2005	UTIL-04-02	0.11	1.04	0.53	0.62	-0.14	1.15	0.66	0.73	Sample < 0.5 ppm
6/29/2005	UTIL-04-04	0.11	0.83	0.7	0.71	-0.14	0.93	0.81	0.83	Sample < 0.5 ppm
6/29/2005	UTIL-05-02	-0.03	1.26	1.03	1.37	0.01	1.25	1	1.35	Sample < 0.5 ppm
6/29/2005	UTIL-05-04	-0.03	0.65	1.13	0.79	0.01	0.63	1.1	0.77	Sample < 0.5 ppm
6/30/2005	UTIL-06-02	-0.08	1.29	0.68	1.1	0.05	1.23	0.64	1.05	Sample < 0.5 ppm
6/30/2005	UTIL-06-04	-0.08	0.69	0.54	0.61	0.05	0.62	0.49	0.55	Sample < 0.5 ppm
6/30/2005	UTIL-07-02	-0.08	0.95	0.72	0.66	0.05	0.91	0.68	0.6	Sample < 0.5 ppm
6/30/2005	UTIL-07-04	-0.08	0.65	0.63	0.83	0.05	0.6	0.56	0.77	Sample < 0.5 ppm
6/28/2005	UTIL-08-02	0.02	0.42	-0.02	0.34	-0.04	0.46	0.01	0.35	10 ppm < Sample < 50 ppm
6/28/2005	UTIL-08-04	0.02	0.53	0.59	0.63	-0.04	0.56	0.6	0.64	Sample < 0.5 ppm
6/28/2005	UTIL-09-02	0.02	0.26	0.3	0.48	-0.04	0.28	0.32	0.51	Sample < 0.5 ppm
6/28/2005	UTIL-09-04	0.02	0.64	0.41	0.31	-0.04	0.65	0.44	0.34	Sample < 0.5 ppm
6/28/2005	UTIL-10-02	0.02	0.68	0.42	0.63	-0.04	0.7	0.43	0.64	Sample < 0.5 ppm
6/30/2005	UTIL-10-04	-0.08	1.21	0.99	1.34	0.05	1.15	0.91	1.27	Sample < 0.5 ppm

TABLE 2-1

PCB IMMUNOASSAY RESULTS
UTILITY TRENCH REPORT
NAVAL AIR STATION
KEY WEST, FLORIDA
PAGE 2 OF 2

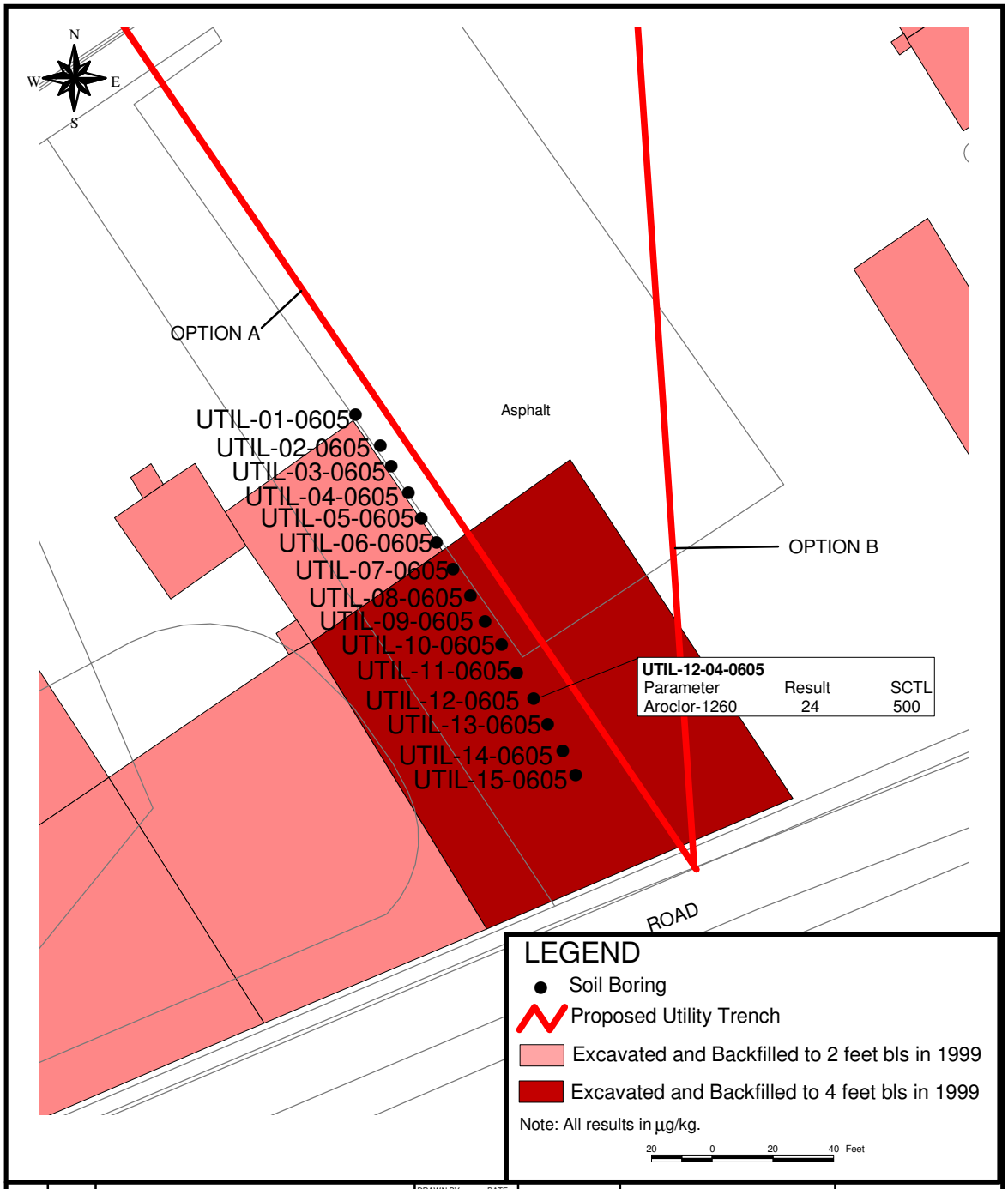
		First Analysis				Second Analysis				
		Standard	Sample Photometric Result			Standard	Sample Photometric Result			
Date	Sample ID	Photometric Result	0.5 ppm	10 ppm	50 ppm	Photometric Result	0.5 ppm	10 ppm	50 ppm	Interpretation
6/29/2005	UTIL-11-02	-0.03	1.17	1.17	1.09	0.01	1.14	1.16	1.09	Sample < 0.5 ppm
6/29/2005	UTIL-11-04	-0.03	0.91	1.53	1.11	0.01	0.9	1.51	1.09	Sample < 0.5 ppm
6/29/2005	UTIL-12-02	0.03	1.02	0.7	0.74	-0.06	1.06	0.74	0.78	Sample < 0.5 ppm
6/29/2005	UTIL-12-04	0.03	0.54	0.78	0.56	-0.06	0.59	0.82	0.6	Sample < 0.5 ppm
6/29/2005	UTIL-13-02	0.03	0.77	0.72	0.66	-0.06	0.8	0.75	0.7	Sample < 0.5 ppm
6/29/2005	UTIL-13-04	0.03	0.55	0.85	0.64	-0.06	0.61	0.89	0.67	Sample < 0.5 ppm
6/29/2005	UTIL-14-02	0.17	0.75	0.64	0.9	-0.2	0.91	0.79	1.06	Sample < 0.5 ppm
6/29/2005	UTIL-14-04	0.17	0.38	0.67	0.29	-0.2	0.56	0.84	0.46	Sample < 0.5 ppm
6/29/2005	UTIL-15-02	0.17	0.66	0.46	0.85	-0.2	0.81	0.62	0.99	Sample < 0.5 ppm
6/29/2005	UTIL-15-04	0.17	0.82	0.81	0.56	-0.2	0.99	0.99	0.73	Sample < 0.5 ppm

TABLE 2-2

**PCBS DETECTED BY FIXED-BASE LABORATORY
UTILITY TRENCH REPORT
NAVAL AIR STATION
KEY WEST, FLORIDA**

Sample ID	Parameter	Result (µg/kg)	Qualifier	Action Level (µg/kg)
CO3-UTIL-12-04-0605-AVG	AROCLOR-1260	24	J	500

Qualifer – J – The result is less than the practical quantitation limit and greater than the method detection limit.



NO.	DATE	REVISIONS

DRAWN BY EHM DATE 08/10/2005
CHECKED BY GB DATE 8/10/2005
COST/SCHED-AREA
SCALE AS NOTED

TRENCH INVESTIGATION REPORT
SOIL SAMPLES
DRMO WASTE STORAGE AREA
NAVAL AIR STATION
KEY WEST, FLORIDA

CONTRACT NO. 0693
APPROVED BY CMB DATE 18/15/2005
APPROVED BY DATE
FIGURE NO. 2-1 REV. 0

K:\UTILITY TRENCH WORKPLAN.APR LAYOUT: FIGURE 2-1 REPORT BY:EHM DATE: 08/17/2005

REFERENCES

Brown and Root Environmental. 1998. Supplemental RCRA Facility Investigation and Remedial Investigation Report for Eight Sites; Naval Air Station Key West, Florida. Prepared for Department of the Navy, Southern Division Naval Facilities Engineering Command. Aiken, South Carolina, January.

FDEP (Florida Department of Environmental Protection). 2002. SOPs for Field Activities, DEP-SOP-001/01, Tallahassee, Florida, January.

TtNUS (Tetra Tech NUS, Inc.). 2005. Abbreviated Work Plan for Sampling to Support Utility Trench Installation at Truman Annex DRMO Waste Storage Area, prepared for the Department of the Navy, Southern Division, Naval Facilities Engineering Command, Aiken, SC, June

TtNUS. 2002. Florida Regional Quality Assurance Program Manual, October.

TtNUS. 1999. Supplemental Site Inspection Work Plan for BRAC Parcels at Truman Annex, Naval Air Station Key West, prepared for the Department of the Navy, Southern Division, Naval Facilities Engineering Command, Aiken, SC, March.

APPENDIX A

FIELD LOGS

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
PROJECT NUMBER: N0693
DRILLING COMPANY: TtNUS
DRILLING RIG: —

BORING No.: C03-UTIL-01-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel, crushed						
							limestone + shell, light		increased moisture	—	—	—	—
							brown to brown, poorly		with depth				
4	—		—	N/A	N/A.		sorted.			—	—	—	—

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage
PROJECT NUMBER: N0693
DRILLING COMPANY: T+NUS
DRILLING RIG: —

BORING No.: C03-UTIL-01-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel + crushed						
							limestone, light brown		Increased moisture	–	–	–	–
							unsorted fill material		with depth.				
4							↓			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

Page ___ of ___

BORING LOG

PROJECT NAME: DRMO-Waste Storage Area. BORING No.: C03-UTIL-02-02
PROJECT NUMBER: N0693 DATE: 6/28/05
DRILLING COMPANY: TTNUS GEOLOGIST: GB
DRILLING RIG: DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							coarse sand, gravel						
							crushed limestone + shell.			–	–	–	–
							light brown to brown		increased moisture				
4							poorly sorted		with depth.	–	–	–	–
–													

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
BORING No.: C03-UTIL-02-04
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: TFNUS
GEOLOGIST: GB
DRILLING RIG:
DRILLER: GB+SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell fragments			–	–	–	–
							light brown to brown, fill						
4							poorly sorted			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): —

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-WASTE STORAGE AREA
PROJECT NUMBER: N0693
DRILLING COMPANY: TNUS
DRILLING RIG: —
BORING No.: C03-UTIL-03-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB & SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell, fill		increased moisture	-	-	-	-
							material, moderately		with depth				
4							consolidated,		↓	-	-	-	-

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): X

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
PROJECT NUMBER: N0693
DRILLING COMPANY: TtNUS
DRILLING RIG: —

BORING No.: C03-UTIL-03-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel, crushed						
							limestone + shell, light		increased moisture	–	–	–	–
							brown to brown, poorly		with depth				
4	–		–	N/A	N/A.		sorted.			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-WASTE STORAGE AREA
PROJECT NUMBER: N0693
DRILLING COMPANY: TtNUS
DRILLING RIG: —
BORING No.: C03-UTIL-04-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: SB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell, fill		increased moisture	-	-	-	-
							material, moderately		with depth				
4							consolidated,		↓	-	-	-	-

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): X

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage
PROJECT NUMBER: N0693
DRILLING COMPANY: T+NUS
DRILLING RIG: —

BORING No.: C03-UTIL-04-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel + crushed						
							limestone, light brown		Increased moisture	–	–	–	–
							unsorted fill material		with depth.				
4							↓			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
BORING No.: C03-UTIL-05-02
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: TTNUS
GEOLOGIST: GB
DRILLING RIG: —
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell fragments			—	—	—	—
							light brown to brown, f'd						
4							poorly sorted			—	—	—	—

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): —

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

Page ___ of ___

BORING LOG

PROJECT NAME: DRMO-West Storage Area. BORING No.: C03-UTIL-05-04
PROJECT NUMBER: N0693 DATE: 6/28/05
DRILLING COMPANY: TTNUS GEOLOGIST: GB
DRILLING RIG: DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							coarse sand, gravel						
							crushed limestone + shell.			–	–	–	–
							light brown to brown		increased moisture				
4							poorly sorted		with depth.	–	–	–	–
–													

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
PROJECT NUMBER: N0693
DRILLING COMPANY: TNUS
DRILLING RIG: —

BORING No.: C03-GTL-06-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel, crushed						
							limestone + shell, light		increased moisture	–	–	–	–
							brown to brown, poorly		with depth				
4	–		–	N/A	N/A.		sorted.			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage
PROJECT NUMBER: N0693
DRILLING COMPANY: T+NUS
DRILLING RIG: —

BORING No.: C03-GTIL-06-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel + crushed						
							limestone, light brown		Increased moisture	–	–	–	–
							unsorted fill material		with depth.				
4							↓			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-West Storage Area. BORING No.: C03-UTL-07-02
PROJECT NUMBER: N0693 DATE: 6/28/05
DRILLING COMPANY: TtNUS GEOLOGIST: GB
DRILLING RIG: DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							coarse sand, gravel						
							crushed limestone + shell.			–	–	–	–
							light brown to brown		increased moisture				
4							poorly sorted		with depth.	–	–	–	–
–													

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
PROJECT NUMBER: N0693
DRILLING COMPANY: TTNUS
DRILLING RIG: —
BORING No.: B03-UT1L-07-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB+SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell fragments			—	—	—	—
							light brown to brown, f'd						
4							poorly sorted			—	—	—	—

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): —

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-WASTE STORAGE AREA
BORING No.: C03-UTIL-08-02
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: TNUS
GEOLOGIST: GB
DRILLING RIG: —
DRILLER: SB & SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell, fill		increased moisture	-	-	-	-
							material, moderately		with depth				
4							consolidated,		↓	-	-	-	-

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): X

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-WASTE STORAGE AREA
PROJECT NUMBER: N0693
DRILLING COMPANY: TNUS
DRILLING RIG: —

BORING No.: C03-UTIL-08-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: SB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell, fill		increased moisture	-	-	-	-
							material, moderately		with depth				
4							consolidated,		↓	-	-	-	-

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): X

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage
PROJECT NUMBER: N0693
DRILLING COMPANY: T+NUS
DRILLING RIG: —

BORING No.: C03-UTIL-09-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel + crushed						
							limestone, light brown		Increased moisture	–	–	–	–
							unsorted fill material		with depth.				
4							↓			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
PROJECT NUMBER: N0693
DRILLING COMPANY: HNUS
DRILLING RIG: —

BORING No.: C03-UTIL-09-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel, crushed						
							limestone + shell, light		increased moisture	–	–	–	–
							brown to brown, poorly		with depth				
4	–		–	N/A	N/A.		sorted.			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
BORING No.: CD3-UTL-10-02
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: TtNUS
GEOLOGIST: GB
DRILLING RIG:
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell fragments			–	–	–	–
							light brown to brown, f'd						
4							poorly sorted			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): —

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-West Storage Area. BORING No.: C03-UTIL-10-04
PROJECT NUMBER: N0693 DATE: 6/28/05
DRILLING COMPANY: TtNUS GEOLOGIST: GB
DRILLING RIG: DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							coarse sand, gravel						
							crushed limestone + shell.			–	–	–	–
							light brown to brown		increased moisture				
4							poorly sorted		with depth.	–	–	–	–
–													

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
PROJECT NUMBER: N0693
DRILLING COMPANY: TNUS
DRILLING RIG: —

BORING No.: C03-UTIL-11-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel, crushed						
							limestone + shell, light		increased moisture	–	–	–	–
							brown to brown, poorly		with depth				
4	–		–	N/A	N/A.		sorted.			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-WASTE STORAGE AREA
BORING No.: C03-UTIL-11-04
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: TNUS
GEOLOGIST: GB
DRILLING RIG: —
DRILLER: SB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell, fill		increased moisture	-	-	-	
							material, moderately		with depth				
4							consolidated,		↓	-	-	-	-

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): X

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
BORING No.: C03-UTIL-012-02
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: TtNUS
GEOLOGIST: GB
DRILLING RIG: —
DRILLER: GB+SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell fragments			—	—	—	—
							light brown to brown, fill						
4							poorly sorted			—	—	—	—

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): —

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-Waste Storage Area. BORING No.: C03-UTIL-12-04
PROJECT NUMBER: N0693 DATE: 6/28/05
DRILLING COMPANY: TT NUS GEOLOGIST: GB
DRILLING RIG: DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							coarse sand, gravel						
							crushed limestone + shell.			–	–	–	–
							light brown to brown		increased moisture				
4							poorly sorted		with depth.	–	–	–	–
–													

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage
PROJECT NUMBER: N0693
DRILLING COMPANY: T+NUS
DRILLING RIG: —

BORING No.: C03-UTIL-13-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel + crushed						
							limestone, light brown		Increased moisture	–	–	–	–
							unsorted fill material		with depth.				
4							↓			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
BORING No.: C03-UTIL-13-04
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: TtNUS
GEOLOGIST: GB
DRILLING RIG: —
DRILLER: GB+SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell fragments			—	—	—	—
							light brown to brown, f/m						
4							poorly sorted			—	—	—	—

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): —

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-West Storage Area. BORING No.: C03-UTIL-14-02
PROJECT NUMBER: N0693 DATE: 6/28/05
DRILLING COMPANY: TtNUS GEOLOGIST: GB
DRILLING RIG: DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							coarse sand, gravel						
							crushed limestone + shell.			–	–	–	–
							light brown to brown		increased moisture				
4							poorly sorted		with depth.	–	–	–	–
–													

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO-WASTE STORAGE AREA
BORING No.: C03-4TIL-14-04
PROJECT NUMBER: N0693
DATE: 6/28/05
DRILLING COMPANY: THNUS
GEOLOGIST: GB
DRILLING RIG: —
DRILLER: SB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel, crushed						
							limestone + shell, fill		increased moisture	-	-	-	-
							material, moderately		with depth				
4							consolidated,		↓	-	-	-	-

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): X

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage Area
PROJECT NUMBER: N0693
DRILLING COMPANY: TtNUS
DRILLING RIG: —

BORING No.: C03-UTIL-15-02
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel, crushed						
							limestone + shell, light		increased moisture	–	–	–	–
							brown to brown, poorly		with depth				
4	–		–	N/A	N/A.		sorted.			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): N/A

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: —

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: DRMO - Waste Storage
PROJECT NUMBER: N0693
DRILLING COMPANY: T+NUS
DRILLING RIG: —

BORING No.: CO3-UTIL-15-04
DATE: 6/28/05
GEOLOGIST: GB
DRILLER: GB + SV

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, gravel + crushed						
							limestone, light brown		Increased moisture	–	–	–	–
							unsorted fill material		with depth.				
4							↓			–	–	–	–

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): N/A

Converted to Well: Yes ____ No X Well I.D. #: —

Data for SDI PCB EnSys® 12T Soil Test

4:44PM

Operator: S. Sumpter Date: 28 Jun 95 Location: NAS Key West / Water Tower

Sample ID	ΔOD Standards #1	OD sample 0.02 ppm	Interpretation	OD sample #2 -0.04 ppm	Interpretation	Comments
UTIL-08-02	0.5ppm	0.42	deep yellow	0.46		
	10 ppm	-0.02	deep yellow	0.01		Sample > .01 = 10ppm PCB
	50 ppm	0.34	deep yellow	0.35		Sample < 50 ppm PCB
UTIL-08-04	0.5ppm	0.53	deep yellow	0.56		
	10 ppm	0.59	"	0.60		
	50 ppm	0.63	"	0.64		
UTIL-09-02	0.5 ppm	0.26	"	0.28		
	10 ppm	0.30	"	0.32		
	50ppm	0.48	"	0.51		
UTIL-09-04	0.5 ppm	0.64		0.65		
	10 ppm	0.41		0.44		
	50 ppm	0.31		0.34		
UTIL-10-02	0.5 ppm	0.68		0.70		
	10 ppm	0.42		0.43		
	50 ppm	0.63		0.64		

Data for SDI PCB EnSys® 12T Soil Test

11:11PM

Operator: _____ Date: 28 Jun 05 Location: NAS Key West / Water Tower

Sample ID	ΔOD Standards #1	OD sample 0.28 ppm	Interpretation yellow	OD sample #2 0.31 ppm	Interpretation yellow	Comments
UTIL-01-02	0.5 ppm	0.80	deep yellow	1.12		Sample < 0.5 ppm PCB
	10 ppm	0.47	deep yellow	0.75		
	50 ppm	0.71	deep yellow	1.02		
UTIL-01-04	0.5 ppm	0.35	deep yellow	0.66		
	10 ppm	0.59	deep yellow	0.88		
	50 ppm	0.13	deep yellow	0.43		
UTIL-02-02	0.5 ppm	0.54	deep yellow	0.84		
	10 ppm	0.43	deep yellow	0.72		
	50 ppm	0.47	deep yellow	0.76		
UTIL-02-04	0.5 ppm	0.37	deep yellow	0.66		
	10 ppm	0.23	deep yellow	0.52		
	50 ppm	0.09	deep yellow	0.39		

Data for SDI PCB EnSys® 12T Soil Test

8:15 AM

Operator: _____ Date: 29 Jun 05 Location: NAS Key West / Water Tower

Sample ID	ΔOD #1 Standards	OD sample 0.03 ppm	Interpretation yellow	OD sample #2 0.01 ppm	Interpretation yellow	Comments
UTIL-05-02	0.5 ppm	1.26	deep yellow	1.25		Sample < 0.5 ppm PCB
	10 ppm	1.03	"	1.00		
	50 ppm	1.37	"	1.35		
UTIL-05-04	0.5 ppm	0.65	"	0.63		
	10 ppm	1.13	"	1.10		
	50 ppm	0.79	"	0.77		
UTIL-11-02	0.5 ppm	1.17	"	1.164		
	10 ppm	1.17	"	1.16		
	50 ppm	1.09	"	1.09		
UTIL-11-04	0.5 ppm	0.91	"	0.890		
	10 ppm	1.53	"	1.51		
	50 ppm	1.11	"	1.09		

Data for SDI PCB EnSys® 12T Soil Test

12:37PM

Operator: S. Sumpter Date: 29 Jun 05 Location: NAS Key West / Water Tower

Sample ID	ΔOD #1 Standards	OD sample 0.03 ppm	Interpretation	OD sample #2 0.06 ppm	Interpretation	Comments
			yellow		yellow	
UTIL-12-02	0.5 ppm	1.02	deep yellow	1.06		
	10 ppm	0.70	deep yellow	0.74		
	50 ppm	0.74	"	0.78		
UTIL-12-04	0.5 ppm	0.54	"	0.59		
	10 ppm	0.78	"	0.82		
	50 ppm	0.56	"	0.60		
UTIL-13-02	0.5 ppm	0.77	"	0.80		
	10 ppm	0.72	"	0.75		
	50 ppm	0.66	"	0.70		
UTIL-13-04	0.5 ppm	0.55	"	0.61		
	10 ppm	0.85	"	0.89		
	50 ppm	0.64	"	0.67		

Data for SDI PCB EnSys® 12T Soil Test

2:21 PM

Operator: S. Sumpter Date 29 Jun 05 Location: NAS Key West / Water Tower

Sample ID	ΔOD Standards #1	OD sample 0.17 ppm	Interpretation	OD sample #2 0.20 ppm	Interpretation	Comments
			yellow		yellow	
UTIL-14-02	0.5 ppm	0.75	deep yellow	0.91		
	10 ppm	0.64	"	0.79		
	50 ppm	0.90	"	1.06		
UTIL-14-04	0.5 ppm	0.38	"	0.56		
	10 ppm	0.67	"	0.84		
	50 ppm	0.29	"	0.46		
UTIL-15-02	0.5 ppm	0.66	"	0.81		
	10 ppm	0.46	"	0.62		
	50 ppm	0.85	"	0.99		
UTIL-15-04	0.5 ppm	0.82	"	0.99		
	10 ppm	0.81	"	0.99		
	50 ppm	0.56	"	0.73		

Data for SDI PCB EnSys® 12T Soil Test

3:59PM

Operator: _____ Date: 29 Jun 05 Location: NAS Key West / Water Tower

Sample ID	ΔOD #1 Standards	OD sample 0.11 ppm	Interpretation yellow	OD sample #2 0.14 ppm	Interpretation yellow	Comments
UTIL-03-02	0.5ppm	0.71	deep yellow	0.83		
	10 ppm	-0.10	yellow	0.02		Sample > or = 10 ppm PCB
	50 ppm	1.58	deep yellow	1.83		
UTIL-03-04	0.5ppm	0.15	yellow	0.29		
	10 ppm	0.88	deep yellow	1.00		
	50 ppm	0.52	" "	0.64		
UTIL-04-02	0.5 ppm	1.04	" "	1.15		
	10 ppm	0.53	" "	0.66		
	50ppm	0.62	" "	0.73		
UTIL-04-04	0.5 ppm	0.83		0.93		
	10 ppm	0.70		0.81		
	50 ppm	0.71		0.83		

Data for SDI PCB EnSys® 12T Soil Test

2:03AM

Operator: S. Sumpter Date: 30 Jun 95 Location: NAS Key West / Water Tower

Sample ID	ΔOD #1 Standards	OD sample -0.08 ppm	Interpretation yellow	OD sample #2 0.05 ppm	Interpretation yellow	Comments
UTIL-06-02	0.5 ppm	1.29	deep yellow	1.23		
	10 ppm	0.68	"	0.64		
	50 ppm	1.10	"	1.05		
UTIL-06-04	0.5 ppm	0.69	"	0.62		
	10 ppm	0.54	"	0.49		
	50 ppm	0.61	"	0.55		
UTIL-07-02	0.5 ppm	0.95	"	0.91		
	10 ppm	0.72	"	0.68		
	50 ppm	0.66	"	0.60		
UTIL-07-04	0.5 ppm	0.65	"	0.60		
	10 ppm	0.63	"	0.56		
	50 ppm	0.83	"	0.77		
UTIL-10-04	0.5 ppm	1.21	"	1.15		
	10 ppm	0.99	"	0.91		
	50 ppm	1.34	"	1.27		

Data for SDI PCB EnSys® 12T Soil Test

5:24AM

Operator: S. Sampter Date: 29 Jun 05 Location: NAS Key West / Water Tower

Sample ID	ΔOD Standards #1	OD sample 0.51 ppm	Interpretation	OD sample #2 -0.53 ppm	Interpretation yellow	Comments
UTIL-03-02	0.5 ppm	0.30		0.74		
	10 ppm	-0.04		0.45		
	50 ppm	-0.11		0.41		
UTIL-03-04	0.5 ppm	0.05		0.57		
	10 ppm	0.03		0.53		
	50 ppm	-0.17		0.34		
UTIL-04-02	0.5 ppm	0.06		0.58		
	10 ppm	0.02		0.55		
	50 ppm	-0.04		0.49		
UTIL-04-04	0.5 ppm	-0.04		0.47		
	10 ppm	-0.06		0.41		
	50 ppm	0.07		0.56		

Both Standards were outside the QC limits, therefore a valid conclusion can not be determined.

Data for SDI PCB EnSys® 12T Soil Test

8:30PM

Operator: S. Sumpter Date: 28 Jun 05 Location: NAS Key West / Water Tower

Sample ID	ΔOD Standards #1	OD sample -0.57 ppm	Interpretation	OD sample #2 0.54 ppm	Interpretation	Comments
C03-UTIL-06-02-0605	0.5 ppm	1.15	deep yellow	0.61	deep yellow	
	10 ppm	0.66	deep yellow.	0.11		
	50 ppm	1.38	deep yellow	0.83		
C03-UTIL-06-04-0605	0.5 ppm	0.85	deey yellow	0.31		
	10 ppm	1.38	deep yellow	0.84		
	50 ppm	0.50	deep yellow	-0.04		
C03-UTIL-07-02-0605	0.5 ppm	1.19	deep yellow	0.64		
	10 ppm	0.77	deep yellow	0.20		
	50 ppm	1.12	deep yellow	0.58		
C03-UTIL-07-04-0605	0.5 ppm	0.63	deep yellow	0.10		
	10 ppm	1.77	deep yellow	1.24		
	50 ppm	1.21	deep yellow	0.67		
C03-UTIL-10-04-0605	0.5 ppm	1.32	deep yellow	0.79		
	10 ppm	1.02	deep yellow	0.50		
	50 ppm	1.23	deep yellow	0.66		

Both standards were outside the QC limits, therefore a valid conclusion can not be determined.

APPENDIX B

GPS SURVEY DATA

Utility Trench GPS data
Recorded June 29, 2005

ID	Rcvr_Type	GPS_Date	GPS_Time	GPS_Height	Northing	Easting
util 01 0605	Pro XRS	6/29/2005	09:42:29AM	6.962	79265.998989762	387616.681063051
util 02 0605	Pro XRS	6/29/2005	09:44:22AM	5.985	79255.667368512	387624.837635963
util 03 0605	Pro XRS	6/29/2005	09:45:34AM	6.589	79249.136747691	387628.372065639
util 04 0605	Pro XRS	6/29/2005	09:46:31AM	6.338	79240.345804429	387634.038800899
util 05 0605	Pro XRS	6/29/2005	09:47:16AM	6.310	79231.989900892	387638.296198715
util 06 0605	Pro XRS	6/29/2005	09:47:55AM	6.068	79223.789653480	387643.285755255
util 07 0605	Pro XRS	6/29/2005	09:48:37AM	5.549	79215.263539621	387648.773800729
util 08 0605	Pro XRS	6/29/2005	09:49:25AM	5.788	79206.579525287	387654.439646184
util 09 0605	Pro XRS	6/29/2005	09:50:13AM	5.981	79198.068903212	387659.252866392
util 10 0605	Pro XRS	6/29/2005	09:50:54AM	6.025	79190.329507349	387664.733929778
util 11 0605	Pro XRS	6/29/2005	09:51:36AM	6.436	79180.921598909	387669.708297782
util 12 0605	Pro XRS	6/29/2005	09:52:18AM	6.388	79172.476770446	387675.258445133
util 13 0605	Pro XRS	6/29/2005	09:53:11AM	6.631	79164.217901545	387679.825856602
util 14 0605	Pro XRS	6/29/2005	09:53:52AM	7.152	79155.373722602	387684.929451671
util 15 0605	Pro XRS	6/29/2005	09:54:36AM	7.426	79147.345897461	387689.042247601

APPENDIX C

VALIDATED ANALYTICAL REPORT

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**C. BRYAN**	**DATE:**	**AUGUST 8, 2005**
FROM:	**BERNARD F SPADA III**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION- PCB CTO 349, NAS KEY WEST SDG WV3185**		

SAMPLES: 1/Aqueous

KWRB062805

4/Soil

CO3-UTIL-03-02-0605 CO3-UTIL-08-02-0605 CO3-UTIL-12-04-0605
KWFD062805

OVERVIEW

The sample set for CTO 349, NAS Key West, SDG WV3185 consists of three (3) environmental soil samples, one (1) rinse blank, and one (1) field duplicate. All samples were analyzed for polychlorinated biphenyls (PCB). The field duplicate pair included in this SDG is KWFD062805 and CO3-UTIL-12-04-0605.

The samples were collected by TetraTech NUS on June 28, 2005 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Method 8082 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • Initial and continuing calibration
* • Surrogate recovery
* • Laboratory method and field quality control blank results
* • Field duplicate precision
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

PCB

No qualifications were assigned to this fraction.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the NFESC guidelines. 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 NFESC guidelines and the Quality Assurance Project Plan (QAPP)."

Bernard F. Spada III

Tetra Tech NUS
Bernard F. Spada III
Chemist/Data Validator

TetraTech NUS
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

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 0693

SDG: WV3185 MEDIA: WATER DATA FRACTION: PEST/PCB

nsample	KWRB062805
samp_date	6/28/2005
lab_id	WV3185-5
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	0.12	U	
AROCLOR-1221	0.25	U	
AROCLOR-1232	0.28	U	
AROCLOR-1242	0.21	U	
AROCLOR-1248	0.095	U	
AROCLOR-1254	0.24	U	
AROCLOR-1260	0.057	U	

PROJ_NO: 0693

SDG: WV3185 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	CO3-UTIL-03-02-0605	nsample	CO3-UTIL-08-02-0605	nsample	CO3-UTIL-12-04-0605
samp_date	6/28/2005	samp_date	6/28/2005	samp_date	6/28/2005
lab_id	WV3185-1	lab_id	WV3185-2	lab_id	WV3185-3
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.9	Pct_Solids	93.5	Pct_Solids	81.5
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	8.3	U	
AROCLOR-1221	9.9	U	
AROCLOR-1232	5.8	U	
AROCLOR-1242	7.4	U	
AROCLOR-1248	6.3	U	
AROCLOR-1254	14	U	
AROCLOR-1260	4.6	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	8	U	
AROCLOR-1221	9.6	U	
AROCLOR-1232	5.6	U	
AROCLOR-1242	7.2	U	
AROCLOR-1248	6.1	U	
AROCLOR-1254	14	U	
AROCLOR-1260	4.5	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	9.2	U	
AROCLOR-1221	11	U	
AROCLOR-1232	6.5	U	
AROCLOR-1242	8.2	U	
AROCLOR-1248	7	U	
AROCLOR-1254	16	U	
AROCLOR-1260	24	J	P

PROJ_NO: 0693

SDG: WV3185 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	KWFD062805
samp_date	6/28/2005
lab_id	WV3185-4
qc_type	NM
units	UG/KG
Pct_Solids	93.2
DUP_OF:	CO3-UTIL-12-04-0605

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	8.1	U	
AROCLOR-1221	9.6	U	
AROCLOR-1232	5.7	U	
AROCLOR-1242	7.2	U	
AROCLOR-1248	6.1	U	
AROCLOR-1254	14	U	
AROCLOR-1260	24	J	P

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date: 06/28/05
Received Date: 06/30/05
Extraction Date: 06/30/05
Analysis Date: 30-JUN-2005 19:47
Report Date: 07/01/2005
Matrix: WATER
% Solids: NA

Lab ID: WV3185-5
Client ID: KWRB062805
SDG: WV3185
Extracted by: BH
Extraction Method: SW846 3510
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18306
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
12674-11-2	Aroclor-1016	U	0.12	1.0	0.50	0.50	0.12
11104-28-2	Aroclor-1221	U	0.25	1.0	0.50	0.50	0.25
11141-16-5	Aroclor-1232	U	0.28	1.0	0.50	0.50	0.28
53469-21-9	Aroclor-1242	U	0.21	1.0	0.50	0.50	0.21
12672-29-6	Aroclor-1248	U	0.095	1.0	0.50	0.50	0.095
11097-69-1	Aroclor-1254	U	0.24	1.0	0.50	0.50	0.24
11096-82-5	Aroclor-1260	U	0.057	1.0	0.50	0.50	0.057
877-09-8	Tetrachloro-m-xylene		76%				
2051-24-3	Decachlorobiphenyl		86%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date: 06/28/05
Received Date: 06/30/05
Extraction Date: 06/30/05
Analysis Date: 30-JUN-2005 20:15
Report Date: 07/01/2005
Matrix: SOIL
% Solids: 90.9

Lab ID: WV3185-1
Client ID: CO3-UTIL-03-02-0605
SDG: WV3185
Extracted by: TR
Extraction Method: SW846 3550
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18304
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
12674-11-2	Aroclor-1016	U	8.3	1.0	17	19	8.3
11104-28-2	Aroclor-1221	U	9.9	1.0	17	19	9.9
11141-16-5	Aroclor-1232	U	5.8	1.0	17	19	5.8
53469-21-9	Aroclor-1242	U	7.4	1.0	17	19	7.4
12672-29-6	Aroclor-1248	U	6.3	1.0	17	19	6.3
11097-69-1	Aroclor-1254	U	14	1.0	17	19	14
11096-82-5	Aroclor-1260	U	4.6	1.0	17	19	4.6
877-09-8	Tetrachloro-m-xylene		78%				
2051-24-3	Decachlorobiphenyl		92%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date: 06/28/05
Received Date: 06/30/05
Extraction Date: 06/30/05
Analysis Date: 30-JUN-2005 20:44
Report Date: 07/01/2005
Matrix: SOIL
% Solids: 93.5

Lab ID: WV3185-2
Client ID: CO3-UTIL-08-02-0605
SDG: WV3185
Extracted by: TR
Extraction Method: SW846 3550
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18304
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
12674-11-2	Aroclor-1016	U	8.0	1.0	17	18	8.0
11104-28-2	Aroclor-1221	U	9.6	1.0	17	18	9.6
11141-16-5	Aroclor-1232	U	5.6	1.0	17	18	5.6
53469-21-9	Aroclor-1242	U	7.2	1.0	17	18	7.2
12672-29-6	Aroclor-1248	U	6.1	1.0	17	18	6.1
11097-69-1	Aroclor-1254	U	14	1.0	17	18	14
11096-82-5	Aroclor-1260	U	4.5	1.0	17	18	4.5
877-09-8	Tetrachloro-m-xylene		72%				
2051-24-3	Decachlorobiphenyl		89%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date: 06/28/05
Received Date: 06/30/05
Extraction Date: 06/30/05
Analysis Date: 30-JUN-2005 21:12
Report Date: 07/01/2005
Matrix: SOIL
% Solids: 81.5

Lab ID: WV3185-3
Client ID: CO3-UTIL-12-04-0605
SDG: WV3185
Extracted by: TR
Extraction Method: SW846 3550
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18304
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
12674-11-2	Aroclor-1016	U	9.2	1.0	17	21	9.2
11104-28-2	Aroclor-1221	U	11	1.0	17	21	11
11141-16-5	Aroclor-1232	U	6.5	1.0	17	21	6.5
53469-21-9	Aroclor-1242	U	8.2	1.0	17	21	8.2
12672-29-6	Aroclor-1248	U	7.0	1.0	17	21	7.0
11097-69-1	Aroclor-1254	U	16	1.0	17	21	16
11096-82-5	Aroclor-1260	J	24	1.0	17	21	5.1
877-09-8	Tetrachloro-m-xylene		76%				
2051-24-3	Decachlorobiphenyl		86%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date: 06/28/05
Received Date: 06/30/05
Extraction Date: 06/30/05
Analysis Date: 30-JUN-2005 21:40
Report Date: 07/01/2005
Matrix: SOIL
% Solids: 93.2

Lab ID: WV3185-4
Client ID: KWFD062805
SDG: WV3185
Extracted by: TR
Extraction Method: SW846 3550
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18304
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
12674-11-2	Aroclor-1016	U	8.1	1.0	17	18	8.1
11104-28-2	Aroclor-1221	U	9.6	1.0	17	18	9.6
11141-16-5	Aroclor-1232	U	5.7	1.0	17	18	5.7
53469-21-9	Aroclor-1242	U	7.2	1.0	17	18	7.2
12672-29-6	Aroclor-1248	U	6.1	1.0	17	18	6.1
11097-69-1	Aroclor-1254	U	14	1.0	17	18	14
11096-82-5	Aroclor-1260	J	24	1.0	17	18	4.5
877-09-8	Tetrachloro-m-xylene		83%				
2051-24-3	Decachlorobiphenyl		97%				

APPENDIX C

SUPPORT DOCUMENTATION

NAS KEY WEST
SOIL DATA
WV3185

FRACTION	CHEMICAL	CO3-UTIL-08-02-0605	UNITS	KWFD062805	RPD	D
PEST/PCB	AROCLOR-1260	ND	UG/KG	24 J	NC	NC

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.
ND = Compound not detected.
NC = Statistic not calculated

HOLDTIME

SDG WV3185

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	KWFD062805	WV3185-4	NM	6/28/2005	6/30/2005	7/1/2005	2	1	3
TS	%	CO3-UTIL-12-04-0605	WV3185-3	NM	6/28/2005	6/30/2005	7/1/2005	2	1	3
TS	%	CO3-UTIL-08-02-0605	WV3185-2	NM	6/28/2005	6/30/2005	7/1/2005	2	1	3
TS	%	CO3-UTIL-03-02-0605	WV3185-1	NM	6/28/2005	6/30/2005	7/1/2005	2	1	3
PCB	%	KWRB062805	WV3185-5	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	%	KWFD062805	WV3185-4	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	%	CO3-UTIL-12-04-0605	WV3185-3	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	%	CO3-UTIL-08-02-0605	WV3185-2	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	%	CO3-UTIL-03-02-0605	WV3185-1	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	UG/KG	KWFD062805	WV3185-4	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	UG/KG	CO3-UTIL-12-04-0605	WV3185-3	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	UG/KG	CO3-UTIL-08-02-0605	WV3185-2	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	UG/KG	CO3-UTIL-03-02-0605	WV3185-1	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2
PCB	UG/L	KWRB062805	WV3185-5	NM	6/28/2005	6/30/2005	6/30/2005	2	0	2

Katahdin
ANALYTICAL SERVICES

Cert. No. E87604

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 349 NAS KEY WEST
WV3185

Sample Receipt

The following samples were received on June 30, 2005 and were logged in under Katahdin Analytical Services work order number WV3185 for a hardcopy due date of July 13, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV3185-1	CO3-UTIL-03-02-0605
WV3185-2	CO3-UTIL-08-02-0605
WV3185-3	CO3-UTIL-12-04-0605
WV3185-4	KWFD062805
WV3185-5	KWRB062805

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of work order WV3185 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Sample WV3185-3 was used for a matrix spike (MS) and matrix spike duplicate (MSD), as per client's request. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8082 Analysis

The sample with the client ID CO3-UTIL-03-02-0605 (laboratory ID WV3185-3) exceeds the character limit of the Katahdin Analytical Services' organics forms processing system for an MS/MSD analysis.

Therefore, the first three characters ("CO3") in the client ID for these samples were omitted on some forms.

The method blank, WG18304-1, and the laboratory control sample, WG18304-2 had high recoveries for the extraction surrogates DCB on one or both channels, which were outside of the laboratory established acceptance limits. Since all recoveries for TCX were within in the acceptance limits, the samples were not reanalyzed.

The LCS, WG18304-2, had a high recovery for Aroclor 1260, which was outside of the laboratory established acceptance limits. Since the associated MS and MSD (WG18304-3 and WG18304-4) had recoveries for Aroclor 1260 within the acceptance limits, the associated samples were not reextracted.

The Form 7 for the CV's (files 6VF1224 and 6VF2224) are flagged for the surrogates TCX and/or DCB indicating that the %D is greater than the method acceptance limit of 15%. The %D's are actually within the method acceptance limits and should not be flagged, but due to software limitations the flagging could not be removed.

The CV (file 6VF1203) had a high response for DCB on channel A, which resulted in a %D that was outside of the method acceptance limit of 15%. Since the response on channel B was within the acceptance limits, the associated samples were not reanalyzed.

The CV (file 6VF2224) had high responses for Aroclor 1016 and Aroclor 1260 on channel B, which resulted in %D's that were outside of the method acceptance limit of 15%. Since all responses on channel A were within the acceptance limits, the associated samples were not reanalyzed.

The MSD, WG18304-4, had a high recovery for Aroclor 1016, which was outside of the laboratory established acceptance limits. Since the associated MS WG18304-3 had recoveries for Aroclor 1016 and Aroclor 1260 within the acceptance limits, the associated samples were not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Wet Chemistry Analysis

The samples of Work Order WV3185 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time, and all quality control criteria were met.

Katahdin
ANALYTICAL SERVICES

Cert. No. E87604

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond

07.13.05

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
340 County Road No. 5
P.O. Box 720
Westbrook, ME 04092
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: TETRA TECH NUS
Contact: CHUCK BRYAN
Phone #: (803) 649-7963
Fax #: ( )
Address: 900 TRAIL RIDGE RD
City: AIKEN
State: SC
Zip Code:
Purchase Order #:
Proj. Name / No.: N0693
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): GARY BRAGANZA / Gary Braganza
Copies To:

LAB USE ONLY
WORK ORDER #: WW3885
KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	TCL PCB (8081A/8082)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
C03-UTIL-03-02-0605	6/28 / 11:00	S	2	X										
C03-UTIL-08-02-0605	6/28 / 12:35	↓	↓	X										
C03-UTIL-12-04-0605	6/28 / 13:45	↓	↓	X										
KWFD062805	6/28 /	↓	↓	X										
KWRB062805	6/28 / 15:00	W	↓	X										
C03-UTIL-12-04-0605MS	/ 13:45	S	1	X										
C03-UTIL-12-04-0605MSD	/ 13:45	↓	1	X										
	/													
	/													
	/													
	/													
	/													
	/													
	/													
	/													
	/													

COMMENTS: 24-HOUR TURNAROUND REQUIRED

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Gary Braganza	6/29/05 17:20	[illegible signature]	6/30/05 1000		
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

GC Column: RTX-5 ID: 0.53 (mm) Init. Calib. Date(s): 05/06/05 05/07/05

Instrument ID: GC06

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 6.70 DCB: 20.03

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	ICAL	AR1660 1.0PP	05/06/05	1146	6.72	20.04
02	ICAL	AR1660 0.05P	05/06/05	1239	6.72	20.04
03	ICAL	AR1660 0.1PP	05/06/05	1307	6.71	20.04
04	ICAL	AR1660 0.25P	05/06/05	1335	6.71	20.04
05	ICAL	AR1660 2.5PP	05/06/05	1404	6.71	20.04
06	ICAL	AR1660 10PPM	05/06/05	1432	6.70	20.04
07	ICAL	AR1242 1.0PP	05/06/05	1557		
08	ICAL	AR1248 1.0PP	05/06/05	1848		
09	ICAL	AR1254 1.0PP	05/06/05	2138		
10	ICAL	AR1221 1.0PP	05/07/05	0028		
11	ICAL	AR1232 1.0PP	05/07/05	0057		
12	INDSOURCE	AR1016 1.0PP	05/07/05	0250		
13	INDSOURCE	AR1260 1.0PP	05/07/05	0319		
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

GC Column: RTX-5 ID: 0.53 (mm) Init. Calib. Date(s): 05/06/05 05/07/05

Instrument ID: GC06

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 6.48 DCB: 19.78

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	CV	AR1660 1.0PP	06/30/05	1121	6.48	19.78
02	WG18304-BLAN	WG18304-1	06/30/05	1725	6.50	19.79
03	WG18304-LCS	WG18304-2	06/30/05	1753	6.49	19.78
04	WG18306-BLAN	WG18306-1	06/30/05	1822	6.49	19.78
05	WG18306-LCS	WG18306-2	06/30/05	1850	6.48	19.78
06	WG18306-LCSD	WG18306-3	06/30/05	1919	6.48	19.78
07	KWRB062805	WV3185-5	06/30/05	1947	6.48	19.78
08	CO3-UTIL-03-	WV3185-1	06/30/05	2015	6.48	19.78
09	CO3-UTIL-08-	WV3185-2	06/30/05	2044	6.48	19.78
10	CO3-UTIL-12-	WV3185-3	06/30/05	2112	6.48	19.78
11	KWFD062805	WV3185-4	06/30/05	2140	6.48	19.78
12	-UTIL-12-04-	WG18304-4	06/30/05	2209	6.48	19.78
13	-UTIL-12-04-	WG18304-5	06/30/05	2237	6.48	19.78
14	CV	AR1660 0.25P	06/30/05	2334	6.48	19.78
15						
16						
17						
18						
19						
20						

QC LIMITS

TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

GC Column: RTX-35 ID: 0.53 (mm) Init. Calib. Date(s): 05/06/05 05/07/05

Instrument ID: GC06

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 5.55 DCB: 19.12

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	ICAL	AR1660 1.0PP	05/06/05	1146	5.55	19.12
02	ICAL	AR1660 0.05P	05/06/05	1239	5.56	19.12
03	ICAL	AR1660 0.1PP	05/06/05	1307	5.56	19.12
04	ICAL	AR1660 0.25P	05/06/05	1335	5.56	19.12
05	ICAL	AR1660 2.5PP	05/06/05	1404	5.56	19.12
06	ICAL	AR1660 10PPM	05/06/05	1432	5.56	19.12
07	ICAL	AR1242 1.0PP	05/06/05	1557		
08	ICAL	AR1248 1.0PP	05/06/05	1848		
09	ICAL	AR1254 1.0PP	05/06/05	2138		
10	ICAL	AR1221 1.0PP	05/07/05	0028		
11	ICAL	AR1232 1.0PP	05/07/05	0057		
12	INDSOURCE	AR1016 1.0PP	05/07/05	0250		
13	INDSOURCE	AR1260 1.0PP	05/07/05	0319		
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

GC Column: RTX-35 ID: 0.53 (mm) Init. Calib. Date(s): 05/06/05 05/07/05

Instrument ID: GC06

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 5.34 DCB: 18.86

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	CV	AR1660 1.0PP	06/30/05	1121	5.34	18.85
02	WG18304-BLAN	WG18304-1	06/30/05	1725	5.34	18.85
03	WG18304-LCS	WG18304-2	06/30/05	1753	5.35	18.85
04	WG18306-BLAN	WG18306-1	06/30/05	1822	5.34	18.85
05	WG18306-LCS	WG18306-2	06/30/05	1850	5.34	18.85
06	WG18306-LCSD	WG18306-3	06/30/05	1919	5.34	18.85
07	KWRB062805	WV3185-5	06/30/05	1947	5.34	18.85
08	CO3-UTIL-03-	WV3185-1	06/30/05	2015	5.34	18.85
09	CO3-UTIL-08-	WV3185-2	06/30/05	2044	5.34	18.85
10	CO3-UTIL-12-	WV3185-3	06/30/05	2112	5.35	18.85
11	KWFD062805	WV3185-4	06/30/05	2140	5.34	18.85
12	-UTIL-12-04-	WG18304-4	06/30/05	2209	5.33	18.84
13	-UTIL-12-04-	WG18304-5	06/30/05	2237	5.33	18.84
14	CV	AR1660 0.25P	06/30/05	2334	5.34	18.85
15						
16						
17						
18						
19						
20						

QC LIMITS
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date(s): 05/06/05 05/07/05

Column: RTX-5 ID: 0.53 (mm) Calibration Time(s): 1146 0154

LAB FILE ID: RF0.05: 6VE1088 RF0.1: 6VE1089 RF0.25: 6VE1090
RF1: 6VE1096 RF2.5: 6VE1091 RF10: 6VE1092

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Aroclor-1016	1101	2230	5154	18262	42674	137850	2ORDR	-1.2e-002	5.265e-005	1.45e-010	1.00000	0.99000	
(2)	2597	5189	12015	43091	99790	321070	2ORDR	-1.21e-002	2.24e-005	2.736e-011	1.00000	0.99000	
(3)	1395	2675	6231	22062	51422	166960	2ORDR	-1.37e-002	4.386e-005	9.653e-011	0.99999	0.99000	
(4)	774	1565	3752	14303	35023	117190	2ORDR	2.178e-003	6.58e-005	1.665e-010	0.99999	0.99000	
(5)	971	1900	4138	13525	30632	96133	2ORDR	-2.73e-002	7.187e-005	3.375e-010	0.99998	0.99000	
Aroclor-1221				452			2ORDR	0.00000000	2.212e-003	0.00000000	1.00000	0.99000	<
(2)				1047			2ORDR	0.00000000	9.551e-004	0.00000000	1.00000	0.99000	<
(3)				794			2ORDR	0.00000000	1.259e-003	0.00000000	1.00000	0.99000	<
(4)				2692			2ORDR	0.00000000	3.715e-004	0.00000000	1.00000	0.99000	<
Aroclor-1232				2205			2ORDR	0.00000000	4.535e-004	0.00000000	1.00000	0.99000	<
(2)				1080			2ORDR	0.00000000	9.259e-004	0.00000000	1.00000	0.99000	<
(3)				2428			2ORDR	0.00000000	4.119e-004	0.00000000	1.00000	0.99000	<
(4)				1281			2ORDR	0.00000000	7.806e-004	0.00000000	1.00000	0.99000	<
(5)				774			2ORDR	0.00000000	1.292e-003	0.00000000	1.00000	0.99000	<
Aroclor-1242	1235	2335	5214	17156	38488	121200	2ORDR	-2.81e-002	5.722e-005	2.106e-010	0.99998	0.99000	
(2)	954	1844	4266	14941	34876	114040	2ORDR	-1.55e-002	6.507e-005	1.995e-010	0.99999	0.99000	
(3)	2199	4211	9807	35027	80785	260620	2ORDR	-1.41e-002	2.773e-005	4.105e-011	0.99999	0.99000	
(4)	1132	2214	5172	18109	42088	136930	2ORDR	-1.52e-002	5.366e-005	1.423e-010	0.99999	0.99000	
(5)	678	1306	3073	11638	28617	96385	2ORDR	3.243e-004	8.102e-005	2.358e-010	0.99999	0.99000	
Aroclor-1248	2831	2823	7364	23462	50370	177010	2ORDR	-6.12e-002	4.71e-005	5.514e-011	0.99982	0.99000	
(2)	2605	2591	6923	23062	50052	179510	2ORDR	-5.3e-002	4.779e-005	4.581e-011	0.99984	0.99000	
(3)	3095	3080	8295	27335	58981	210600	2ORDR	-5.47e-002	4.044e-005	3.473e-011	0.99983	0.99000	
(4)	3303	3265	8878	29251	63953	228460	2ORDR	-5.17e-002	3.738e-005	2.9e-011	0.99986	0.99000	
(5)	2593	2588	6910	24186	53781	198680	2ORDR	-4.38e-002	4.513e-005	2.734e-011	0.99989	0.99000	
Aroclor-1254	2791	4829	10436	35825	79161	258170	2ORDR	-3.39e-002	2.851e-005	4.013e-011	0.99995	0.99000	
(2)	1572	2719	6069	22744	52516	177170	2ORDR	-1.71e-002	4.399e-005	7.085e-011	0.99999	0.99000	
(3)	2873	5044	11278	40471	92214	306150	2ORDR	-2.25e-002	2.48e-005	2.593e-011	0.99998	0.99000	
(4)	2372	4306	9633	35119	79632	263280	2ORDR	-2.06e-002	2.858e-005	3.604e-011	0.99998	0.99000	
(5)	1363	2305	4902	16842	38124	125260	2ORDR	-3.13e-002	5.982e-005	1.618e-010	0.99997	0.99000	
Aroclor-1260	1237	2646	5927	20316	47757	152370	2ORDR	-1.36e-002	4.675e-005	1.245e-010	0.99999	0.99000	
(2)	1047	2316	5556	19645	48853	160350	2ORDR	9.545e-004	4.68e-005	9.701e-011	0.99997	0.99000	
(3)	2789	5414	12534	44841	108370	358620	2ORDR	-7.63e-003	2.118e-005	1.874e-011	0.99999	0.99000	
(4)	1329	2562	6305	24128	58429	192890	2ORDR	2.105e-003	3.902e-005	6.64e-011	0.99999	0.99000	
(5)	702	1320	3116	11576	28577	95720	2ORDR	-5.03e-004	8.098e-005	2.454e-010	0.99998	0.99000	
Tetrachloro-m-xylene	735	1455	3626	15385	38482	132790	2ORDR	2.838e-004	1.216e-006	2.171e-012	0.99998	0.99000	
Decachlorobiphenyl	612	1191	2943	10719	24921	77993	2ORDR	-8.43e-005	1.751e-006	1.044e-011	1.00000	0.99000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date(s): 05/06/05 05/07/05

Column: RTX-35 ID: 0.53 (mm) Calibration Time(s): 1146 0154

LAB FILE ID: RF0.05: 6VE2088 RF0.1: 6VE2089 RF0.25: 6VE2090
RF1: 6VE2096 RF2.5: 6VE2091 RF10: 6VE2092

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Aroclor-1016	3999	7774	17066	55012	123760	388080	2ORDR	-2.99e-002	1.777e-005	2.082e-011	0.99997	0.99000	
(2)	1753	3275	7174	23530	54135	169690	2ORDR	-2.42e-002	4.074e-005	1.08e-010	0.99998	0.99000	
(3)	6443	12697	28347	93694	218630	693630	2ORDR	-2.e-002	1.019e-005	6.136e-012	0.99998	0.99000	
(4)	2655	5387	12004	39517	91737	292000	2ORDR	-2.14e-002	2.433e-005	3.422e-011	0.99998	0.99000	
(5)	1959	4003	8977	31030	73798	239540	2ORDR	-1.3e-002	3.07e-005	4.635e-011	0.99999	0.99000	
Aroclor-1221				2774			2ORDR	0.00000000	3.605e-004	0.00000000	1.00000	0.99000	<
(2)				1958			2ORDR	0.00000000	5.107e-004	0.00000000	1.00000	0.99000	<
(3)				6083			2ORDR	0.00000000	1.644e-004	0.00000000	1.00000	0.99000	<
(4)				1535			2ORDR	0.00000000	6.515e-004	0.00000000	1.00000	0.99000	<
Aroclor-1232				5035			2ORDR	0.00000000	1.986e-004	0.00000000	1.00000	0.99000	<
(2)				4274			2ORDR	0.00000000	2.34e-004	0.00000000	1.00000	0.99000	<
(3)				1768			2ORDR	0.00000000	5.656e-004	0.00000000	1.00000	0.99000	<
(4)				2841			2ORDR	0.00000000	3.52e-004	0.00000000	1.00000	0.99000	<
(5)				2282			2ORDR	0.00000000	4.382e-004	0.00000000	1.00000	0.99000	<
Aroclor-1242	3548	6649	14613	46572	104030	325880	2ORDR	-3.33e-002	2.112e-005	2.967e-011	0.99997	0.99000	
(2)	5739	10663	23842	78788	180370	576220	2ORDR	-2.57e-002	1.239e-005	8.688e-012	0.99998	0.99000	
(3)	2443	4581	10198	33615	75947	242000	2ORDR	-2.83e-002	2.932e-005	5.011e-011	0.99998	0.99000	
(4)	2172	3922	8209	25758	57783	180050	2ORDR	-3.73e-002	3.802e-005	9.846e-011	0.99996	0.99000	
(5)	2396	4418	9858	32322	73982	234320	2ORDR	-2.58e-002	3.003e-005	5.446e-011	0.99998	0.99000	
Aroclor-1248	6598	6477	16828	51481	109190	379730	2ORDR	-6.96e-002	2.163e-005	1.29e-011	0.99978	0.99000	
(2)	4247	4183	10734	33451	72031	252710	2ORDR	-6.53e-002	3.301e-005	2.703e-011	0.99982	0.99000	
(3)	7261	7239	18511	56850	121340	427710	2ORDR	-6.97e-002	1.964e-005	9.153e-012	0.99979	0.99000	
(4)	6575	6492	16737	52327	113250	399960	2ORDR	-6.39e-002	2.108e-005	1.023e-011	0.99983	0.99000	
(5)	6543	6526	16974	54281	116450	423200	2ORDR	-6.42e-002	2.072e-005	7.246e-012	0.99979	0.99000	
Aroclor-1254	1446	2613	5856	20247	45145	144610	2ORDR	-2.63e-002	4.927e-005	1.388e-010	0.99997	0.99000	
(2)	1457	2785	6469	22912	51091	167110	2ORDR	-2.3e-002	4.407e-005	9.527e-011	0.99996	0.99000	
(3)	2749	5192	11807	42993	98261	326110	2ORDR	-1.81e-002	2.322e-005	2.299e-011	0.99998	0.99000	
(4)	5548	10030	22250	78526	177250	588290	2ORDR	-2.6e-002	1.289e-005	7.057e-012	0.99997	0.99000	
(5)	5054	9036	20113	69479	155020	516370	2ORDR	-3.13e-002	1.477e-005	9.023e-012	0.99996	0.99000	
Aroclor-1260	3683	7244	16785	57637	137540	452660	2ORDR	-1.37e-002	1.664e-005	1.211e-011	0.99999	0.99000	
(2)	3224	5955	13514	46772	109910	360500	2ORDR	-1.76e-002	2.075e-005	1.952e-011	0.99999	0.99000	
(3)	5794	11118	25733	90234	216150	738250	2ORDR	-1.47e-002	1.084e-005	3.696e-012	0.99999	0.99000	
(4)	3392	6469	14899	53060	126300	421910	2ORDR	-1.25e-002	1.827e-005	1.295e-011	0.99999	0.99000	
(5)	1333	2659	6393	23078	55470	187400	2ORDR	-7.68e-003	4.183e-005	6.173e-011	1.00000	0.99000	
Tetrachloro-m-xylene	2217	4086	10047	38890	89256	291500	2ORDR	-1.25e-004	5.031e-007	6.296e-013	0.99999	0.99000	
Decachlorobiphenyl	1180	2352	5844	21058	45842	145060	2ORDR	-3.57e-004	9.492e-007	2.981e-012	0.99995	0.99000	

FORM VI SV

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 05/07/05 Time: 0250

Lab File ID: 6VE1098 Init. Calib. Date(s): 05/06/05 05/07/05

Init. Calib. Times: 1146 0154

GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1196000	1.0000000	20354.000	0.01	11.96	15.00	2RDR
(2)	1.1125000	1.0000000	47453.000	0.01	11.25	15.00	2RDR
(3)	1.1216000	1.0000000	24556.000	0.01	12.16	15.00	2RDR
(4)	1.1085000	1.0000000	16153.000	0.01	10.85	15.00	2RDR
(5)	1.0887000	1.0000000	14536.000	0.01	8.87	15.00	2RDR
Average %D: 11.020							

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 05/07/05 Time: 0250

Lab File ID: 6VE2098 Init. Calib. Date(s): 05/06/05 05/07/05

Init. Calib. Times: 1146 0154

GC Column: RTX-35 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1857000	1.0000000	63667.000	0.01	18.57	15.00	2RDR	<-
(2)	1.1859000	1.0000000	27671.000	0.01	18.59	15.00	2RDR	<-
(3)	1.1763000	1.0000000	110100.00	0.01	17.63	15.00	2RDR	<-
(4)	1.1960000	1.0000000	46944.000	0.01	19.60	15.00	2RDR	<-
(5)	1.1912000	1.0000000	37146.000	0.01	19.12	15.00	2RDR	<-
Average %D: 18.700								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 05/07/05 Time: 0319

Lab File ID: 6VE1099 Init. Calib. Date(s): 05/06/05 05/07/05

Init. Calib. Times: 1146 0154

GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	1.1004000	1.0000000	22483.000	0.01	10.04	15.00	2RDR
(2)	1.1036000	1.0000000	22512.000	0.01	10.36	15.00	2RDR
(3)	1.1041000	1.0000000	50249.000	0.01	10.41	15.00	2RDR
(4)	1.1061000	1.0000000	27047.000	0.01	10.61	15.00	2RDR
(5)	1.1434000	1.0000000	13568.000	0.01	14.34	15.00	2RDR
Average %D: 11.150							

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 05/07/05 Time: 0319

Lab File ID: 6VE2099 Init. Calib. Date(s): 05/06/05 05/07/05

Init. Calib. Times: 1146 0154

GC Column: RTX-35 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	1.1341000	1.0000000	65829.000	0.01	13.41	15.00	2RDR
(2)	1.1307000	1.0000000	52718.000	0.01	13.07	15.00	2RDR
(3)	1.1265000	1.0000000	101770.00	0.01	12.65	15.00	2RDR
(4)	1.1451000	1.0000000	60759.000	0.01	14.51	15.00	2RDR
(5)	1.1461000	1.0000000	26541.000	0.01	14.61	15.00	2RDR
Average %D: 13.650							

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 06/30/05 Time: 1121

Lab File ID: 6VF1203 Init. Calib. Date(s): 05/06/05 05/06/05

Init. Calib. Times: 1146 1432

GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0481000	1.0000000	19128.000	0.01	4.81	15.00	2RDR	
(2)	1.0505000	1.0000000	44965.000	0.01	5.05	15.00	2RDR	
(3)	1.0676000	1.0000000	23443.000	0.01	6.76	15.00	2RDR	
(4)	1.0375000	1.0000000	15153.000	0.01	3.75	15.00	2RDR	
(5)	1.0843000	1.0000000	14482.000	0.01	8.43	15.00	2RDR	
Average %D: 5.7600								
Aroclor-1260	1.1071000	1.0000000	22612.000	0.01	10.71	15.00	2RDR	
(2)	1.1371000	1.0000000	23167.000	0.01	13.71	15.00	2RDR	
(3)	1.0827000	1.0000000	49319.000	0.01	8.27	15.00	2RDR	
(4)	1.0860000	1.0000000	26575.000	0.01	8.60	15.00	2RDR	
(5)	1.0861000	1.0000000	12913.000	0.01	8.61	15.00	2RDR	
Average %D: 9.9800								
Tetrachloro-m-xylene	1.98e-002	2.e-002	781550.00	0.01	-1.00	15.00	2RDR	
Decachlorobiphenyl	2.33e-002	2.e-002	621250.00	0.01	16.50	15.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 06/30/05 Time: 1121

Lab File ID: 6VF2203 Init. Calib. Date(s): 05/06/05 05/06/05

Init. Calib. Times: 1146 1432

GC Column: RTX-35 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0672000	1.0000000	57832.000	0.01	6.72	15.00	2RDR
(2)	1.0955000	1.0000000	25727.000	0.01	9.55	15.00	2RDR
(3)	1.0695000	1.0000000	100800.00	0.01	6.95	15.00	2RDR
(4)	1.0869000	1.0000000	42961.000	0.01	8.69	15.00	2RDR
(5)	1.0825000	1.0000000	33946.000	0.01	8.25	15.00	2RDR
Average %D: 8.0300							
Aroclor-1260	1.1167000	1.0000000	64871.000	0.01	11.67	15.00	2RDR
(2)	1.1079000	1.0000000	51720.000	0.01	10.79	15.00	2RDR
(3)	1.0799000	1.0000000	97746.000	0.01	7.99	15.00	2RDR
(4)	1.0907000	1.0000000	58010.000	0.01	9.07	15.00	2RDR
(5)	1.1042000	1.0000000	25612.000	0.01	10.42	15.00	2RDR
Average %D: 9.9900							
Tetrachloro-m-xylene	2.01e-002	2.e-002	1918800.0	0.01	0.50	15.00	2RDR
Decachlorobiphenyl	2.24e-002	2.e-002	1119100.0	0.01	12.00	15.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 06/30/05 Time: 2334

Lab File ID: 6VF1224 Init. Calib. Date(s): 05/06/05 05/06/05

Init. Calib. Times: 1146 1432

GC Column: RTX-5 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2699000	0.2500000	21112.000	0.01	7.96	15.00	2RDR	
(2)	0.2646400	0.2500000	48696.000	0.01	5.86	15.00	2RDR	
(3)	0.2739800	0.2500000	25864.000	0.01	9.59	15.00	2RDR	
(4)	0.2591800	0.2500000	15472.000	0.01	3.67	15.00	2RDR	
(5)	0.2829100	0.2500000	16928.000	0.01	13.16	15.00	2RDR	
Average %D: 8.0400								
Aroclor-1260	0.2839700	0.2500000	25044.000	0.01	13.59	15.00	2RDR	
(2)	0.2904500	0.2500000	24436.000	0.01	16.18	15.00	2RDR	<-
(3)	0.2687200	0.2500000	51592.000	0.01	7.49	15.00	2RDR	
(4)	0.2696400	0.2500000	27112.000	0.01	7.86	15.00	2RDR	
(5)	0.2656000	0.2500000	13016.000	0.01	6.24	15.00	2RDR	
Average %D: 10.280								
Tetrachloro-m-xylene	4.7e-003	5.e-003	721600.00	0.01	-6.00	15.00	2RDR	<-
Decachlorobiphenyl	5.63e-003	5.e-003	641000.00	0.01	12.60	15.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

Instrument ID: GC06 Calibration Date: 06/30/05 Time: 2334

Lab File ID: 6VF2224 Init. Calib. Date(s): 05/06/05 05/06/05

Init. Calib. Times: 1146 1432

GC Column: RTX-35 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2976000	0.2500000	72200.000	0.01	19.04	15.00	2RDR	<-
(2)	0.2982300	0.2500000	31016.000	0.01	19.29	15.00	2RDR	<-
(3)	0.2933700	0.2500000	120800.00	0.01	17.35	15.00	2RDR	<-
(4)	0.2965200	0.2500000	51352.000	0.01	18.61	15.00	2RDR	<-
(5)	0.2879700	0.2500000	38656.000	0.01	15.19	15.00	2RDR	<-
Average %D: 17.880								
Aroclor-1260	0.2959100	0.2500000	73440.000	0.01	18.36	15.00	2RDR	<-
(2)	0.2944800	0.2500000	59320.000	0.01	17.79	15.00	2RDR	<-
(3)	0.2895300	0.2500000	111240.00	0.01	15.81	15.00	2RDR	<- 15.8
(4)	0.2849700	0.2500000	64412.000	0.01	13.99	15.00	2RDR	
(5)	0.2825800	0.2500000	27476.000	0.01	13.03	15.00	2RDR	
Average %D: 15.800								
Tetrachloro-m-xylene	4.86e-003	5.e-003	1959200.0	0.01	-2.80	15.00	2RDR	<-
Decachlorobiphenyl	5.53e-003	5.e-003	1217000.0	0.01	10.60	15.00	2RDR	<-

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date:
Received Date:
Extraction Date: 06/30/05
Analysis Date: 30-JUN-2005 18:22
Report Date: 07/01/2005
Matrix: WATER
% Solids: NA

Lab ID: WG18306-1
Client ID: WG18306-Blank
SDG: WV3185
Extracted by: BH
Extraction Method: SW846 3510
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18306
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
12674-11-2	Aroclor-1016	U	0.13	1.0	0.50	0.50	0.13
11104-28-2	Aroclor-1221	U	0.26	1.0	0.50	0.50	0.26
11141-16-5	Aroclor-1232	U	0.29	1.0	0.50	0.50	0.29
53469-21-9	Aroclor-1242	U	0.22	1.0	0.50	0.50	0.22
12672-29-6	Aroclor-1248	U	0.100	1.0	0.50	0.50	0.100
11097-69-1	Aroclor-1254	U	0.25	1.0	0.50	0.50	0.25
11096-82-5	Aroclor-1260	U	0.060	1.0	0.50	0.50	0.060
877-09-8	Tetrachloro-m-xylene		72%				
2051-24-3	Decachlorobiphenyl		80%				

FORM 2
WATER SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code:

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

GC Column(1): RTX-5 ID: 0.53 (mm) GC Column(2): RTX-35 ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG18306-BLANK	WG18306-1	72	72	80	76			0
02	WG18306-LCS	WG18306-2	71	71	80	76			0
03	WG18306-LCSD	WG18306-3	77	77	77	74			0
04	KWRB062805	WV3185-5	74	76	86	81			0
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (46-100)
S2 (DCB) = Decachlorobiphenyl (54-114)

Column to be used to flag recovery values
J Values outside of QC limits
D Surrogate diluted out

FORM II PEST-1

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date:
Received Date:
Extraction Date: 06/30/05
Analysis Date: 06/30/05
Report Date: 07/01/2005
Matrix: WATER

Lab ID: WG18306-2 & WG18306-3
Client ID: WG18306-LCS & WG18306-LCSD
SDG: WV3185
Extracted by: BH
Extraction Method: SW846 3510
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18306
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Aroclor-1016	5.0	5.0	NA	4.8	5.0	96	101	4	30	51-146
Aroclor-1260	5.0	5.0	NA	4.9	5.1	99	102	3	30	63-132

FORM III PEST-1

6VF1214.d & 6VF1215.d

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date:
Received Date:
Extraction Date: 06/30/05
Analysis Date: 30-JUN-2005 17:25
Report Date: 07/01/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG18304-1
Client ID: WG18304-Blank
SDG: WV3185
Extracted by: TR
Extraction Method: SW846 3550
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18304
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
12674-11-2	Aroclor-1016	U	7.5	1.0	17	17	7.5
11104-28-2	Aroclor-1221	U	9.0	1.0	17	17	9.0
11141-16-5	Aroclor-1232	U	5.3	1.0	17	17	5.3
53469-21-9	Aroclor-1242	U	6.7	1.0	17	17	6.7
12672-29-6	Aroclor-1248	U	5.7	1.0	17	17	5.7
11097-69-1	Aroclor-1254	U	13	1.0	17	17	13
11096-82-5	Aroclor-1260	U	4.2	1.0	17	17	4.2
877-09-8	Tetrachloro-m-xylene		91%				
2051-24-3	Decachlorobiphenyl		J109%				

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code:

Project: CTO 349 NAS KEY WEST SDG No.: WV3185

GC Column(1): RTX-5 ID: 0.53 (mm) GC Column(2): RTX-35 ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG18304-BLANK	WG18304-1	87	91	109J	103			1
02	WG18304-LCS	WG18304-2	92	90	120J	112J			2
03	CO3-UTIL-03-02-0605	WV3185-1	78	77	92	88			0
04	CO3-UTIL-08-02-0605	WV3185-2	72	71	89	85			0
05	-UTIL-12-04-0605	WV3185-3	76	71	86	84			0
06	KWFD062805	WV3185-4	83	82	97	92			0
07	-UTIL-12-04-0605MS	WG18304-4	86	81	91	92			0
08	-UTIL-12-04-0605MSD	WG18304-5	86	82	92	89			0
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (44-103)
S2 (DCB) = Decachlorobiphenyl (56-107)

Column to be used to flag recovery values
J Values outside of QC limits
D Surrogate diluted out

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date:
Received Date:
Extraction Date: 06/30/05
Analysis Date: 06/30/05
Report Date: 07/01/2005
Matrix: SOIL

Lab ID: WG18304-2
Client ID: WG18304-LCS
SDG: WV3185
Extracted by: TR
Extraction Method: SW846 3550
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18304
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Aroclor-1016	167	NA	181	109	56-116
Aroclor-1260	167	NA	217	* 130	59-118

FORM III PEST-2

6VF1212.d

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 349 NAS KEY WEST
PO No:
Sample Date: 06/28/05
Received Date: 06/30/05
Extraction Date: 06/30/05
Analysis Date: 06/30/05
Report Date: 07/01/2005
Matrix: SOIL

Lab ID: WG18304-4 & WG18304-5
Client ID: -UTIL-12-04-0605MS & -UTIL-12-04-0605MSD
SDG: WV3185
Extracted by: TR
Extraction Method: SW846 3550
Analyst: SAW
Analysis Method: SW846 8082
Lab Prep Batch: WG18304
Units: ug/Kg

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Aroclor-1016	204	204	0.00	226	240	110	117	6	50	56-116
Aroclor-1260	204	204	20	248	242	112	109	2	50	59-118

FORM III PEST-2

6VF1221.d & 6VF1222.d

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

CO3-UTIL-
12-04-0605

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO 349 NAS KE

Lab Code: PO No.: SDG No.: WV3185

Lab Sample ID: WV3185-3 Date(s) Analyzed: 06/30/05 06/30/05

Instrument ID (1): GC06 Instrument ID (2): GC06

GC Column(1): RTX-5 ID: 0.53(mm) GC Column(2): RTX-35 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	%D
	1	15.22	15.16	15.30	20.6		
Aroclor-1260	2	15.75	15.68	15.82	15.6		
	3	16.34	16.27	16.41	18.6		
COLUMN 1	4	17.00	16.93	17.07	18.2		
	5					18.2	
	1	14.12	14.04	14.18	19.2		
	2	14.99	14.92	15.06	38.3		
	3	15.41	15.34	15.48	14.4		
COLUMN 2	4	16.32	16.26	16.40	19.1		
	5	17.45	17.39	17.53	29.5	24.1	24.5
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

KWFD062805

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO 349 NAS KE

Lab Code: PO No.: SDG No.: WV3185

Lab Sample ID: WV3185-4 Date(s) Analyzed: 06/30/05 06/30/05

Instrument ID (1): GC06 Instrument ID (2): GC06

GC Column(1): RTX-5 ID: 0.53(mm) GC Column(2): RTX-35 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	%D
Aroclor-1260 COLUMN 1	1	15.23	15.16	15.30	17.7		
	2	15.75	15.68	15.82	15.8		
	3	16.34	16.27	16.41	19.2		
	4	17.00	16.93	17.07	22.3		
	5					18.7	
COLUMN 2	1	14.99	14.92	15.06	30.1		
	2	15.41	15.34	15.48	16.8		
	3	16.32	16.26	16.40	20.1		
	4	17.48	17.39	17.53	29.6		
	5					24.2	22.7
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2