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CNC CHARLESTON
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INITIAL GROUNDWATER ASSESSMENT REPORT FOR SITE 20 BUILDING 240 ZONE F

CNC CHARLESTON SC

3/1/2000

TETRA TECH

Rev.1
01/24/00

Initial Ground-Water Assessment Report For Site 20, Building 240

Zone F
Charleston Naval Complex
North Charleston, South Carolina

Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0097

January 2000

Rev.1
03/06/00

INITIAL GROUND-WATER ASSESSMENT REPORT
FOR
SITE 20, BUILDING 240

ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

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 0097

MARCH 2000

PREPARED UNDER THE SUPERVISION OF:

Paul E. Calligan

PAUL CALLIGAN, P.G.
TASK ORDER MANAGER
TETRA TECH NUS, INC.
TALLAHASSEE, FLORIDA

APPROVED FOR SUBMITTAL BY:

Debra Mikoblewski

DEBBIE WROBLEWSKI
PROGRAM MANAGER
TETRA TECH NUS, INC.
PITTSBURGH, PENNSYLVANIA

EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has completed a Rapid Assessment for Site 20 which includes one underground storage tank (UST) system for Building 240 at Charleston Naval Complex (CNC) Zone F, in North Charleston, South Carolina. The UST was used as a waste oil collection tank at Building 240. The 5,000-gallon steel UST was removed in August 1996. The Rapid Assessment was performed under the direction of the South Carolina Department of Health and Environmental Control Rapid Assessment guidance dated June 20, 1997, and approval letter dated May 5, 1999. After determining all laboratory analytical results were below the risk-based screening levels (RBSLs), the reporting format was reduced from a Rapid Assessment Report to an Initial Ground-Water Assessment (IGWA) report format.

TtNUS performed the following actions during the Rapid Assessment:

- Reviewed available Navy documents to identify potential sources and receptors for petroleum hydrocarbons in the vicinity, to evaluate public and private potable wells, to locate utility line areas, to locate nearby surface water bodies, and to determine surface hydrology and drainage.
- Reviewed the previously prepared Underground Storage Tank Assessment Report for UST 240 to determine boring locations and monitoring well placement.
- Conducted site survey to identify utilities and to construct a site plan.
- Installed five shallow soil borings (8 to 12 feet below land surface[bls]) using direct push technology (DPT).
- Collected soil samples for field screening using an organic vapor analyzer.
- Installed three temporary piezometers inside selected soil borings.
- Collected soil and groundwater samples from DPT borings for on-site mobile laboratory screening analysis for benzene, toluene, ethylbenzene, and total xylenes (BTEX); naphthalene; and diesel range organics.
- Collected and analyzed four soil samples from DPT borings at a fixed-base analytical laboratory for BTEX and naphthalene using Environmental Protection Agency (USEPA) Method 8260 and polynuclear aromatic hydrocarbons (PAHs) using USEPA Method 8270.
- Collected soil sample from one DPT boring for grain size analysis, total organic carbon analysis using USEPA Method 415.1, and total recoverable petroleum hydrocarbon using USEPA Method 9071.
- Installed one shallow permanent monitoring well to 12.5 feet bls using hollow stem auger.

- Collected groundwater samples from newly installed permanent monitoring well for laboratory analysis at a fixed-base analytical laboratory.
- Analyzed groundwater samples for BTEX, methyl tert-butyl ether, and naphthalene using USEPA Method 8260 and PAHs using USEPA Method 8270.
- Surveyed monitoring well and top of casing elevation and collected depth to groundwater measurement (to evaluate regional groundwater flow direction).

Conclusions

On-site mobile laboratory screening results of soil and groundwater samples collected during the DPT investigation did not reveal the need for a full Rapid Assessment. Therefore, additional soil borings and monitoring wells were not installed. However, soil samples were collected from four confirmation soil borings on June 18, 1999, and analyzed for BTEX and PAHs by a fixed-base laboratory. No chemicals of concern (CoCs) were detected in any soil boring sampled.

A groundwater sample was collected from the newly installed monitoring well on July 21, 1999. No dissolved CoCs were detected in the well.

Recommendation

No further action is requested for Site 20, UST 240, Building 240, of Zone F, CNC because no CoCs were detected in any of the fixed-base soil or groundwater samples collected during the Rapid Assessment performed in 1999 and reported in the following IGWA.

REV. 1
01/24/00

INITIAL GROUND-WATER ASSESSMENT REPORT

Facility Name: Charleston Naval Base, Zone F, Site 20, UST 240, Building 240

Site ID Number: 14689

UST Owner or Operator's Name: U.S. Navy Southern Division (SouthDiv) Naval Facilities Engineering Command (NAVFAC)

Address: 2155 Eagle Drive, North Charleston, South Carolina 29406

Phone Number: 843-820-7307

Contractor: Tetra Tech NUS, Inc., Gregory D. Swanson, P.E. Cert. # 24

Address: 800 Oak Ridge Turnpike, Oak Ridge, TN 37830

Phone Number: (423) 483-9900

Well Driller: Rod Fuller, Custom Drilling - Hollow Stem Auger. Cert. # 1240
Randolph Brand, Columbia Technologies - Direct Push. 1485

Receptor and Site Data
Please place a check in the appropriate answer block for each question:

Receptor Survey Questions	No	Yes*
Is there a drinking water supply well (public or private) or surface water supply intake within 1,000 feet of the UST?	X	
Are irrigation or other non-drinking water wells located within 1,000 feet of the UST?		X
Are there other potential receptors (i.e., utilities, surface waters, wetlands) less than 500 feet from the UST?		X

* If "yes" provide additional information:

There are monitoring wells at additional sites within 1,000 feet of the former UST locations

Underground utilities within 500 feet of the site can be seen on the Site Vicinity Map provided in Appendix D. Water, natural gas, and storm and sanitary sewers appear to be the only utilities adjacent to the site. The compressed air and electric lines are aboveground.

The Cooper River is approximately 700 feet north-northeast from the site.

Were any water wells within 250 feet radius sampled? _____ Yes __X__ No

Is the current use of the site and surrounding properties commercial, residential, agricultural, or industrial?

Site: Commercial & Industrial Adjacent Properties: Commercial & Industrial

Soil and Monitoring Well Data

Primary Soil Type: Silty sand, sandy clay, silty clay; coarse sand; organic material below 10 feet.

Well Installation Method and Date: Hollow-stem auger June 30, 1999

Development Method: Surge and purge using centrifugal pump

Soil Samples Obtained at 1-2, 2-3, 3-4, and 6-7 feet

NOTE: ***Five soil samples were collected from four soil borings. A duplicate sample was collected from one of the borings. The laboratory report for the borings is provided in Appendix B.***

SOIL ANALYTICAL DATA

Sample	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl-benzene (ug/kg)	Xylenes (ug/kg)	Naphthalene (ug/kg)
CNC20-B02/ 20SLB020203	<6	<6	<6	<6	<6
CNC20-B03/ 20SLB030102	<6	<6	<6	<6	<6
CNC20-B04/ 20SLB040304	<10	<10	<10	<10	<10
CNC20-B05/ 20SLB050607	<12	<12	<12	<12	<12
CNC20-B05/ 20SLB050607D	<14	<14	<14	<14	<14

Sample	Benzo(a)-anthracene (ug/kg)	Benzo(b)-fluoranthene (ug/kg)	Benzo(k)-fluoranthene (ug/kg)	Chrysene (ug/kg)	Dibenz(a,h)-anthracene (ug/kg)
CNC20-B02/ 20SLB020203	<400	<400	<400	<400	<400
CNC20-B03/ 20SLB030102	<400	<400	<400	<400	<400
CNC20-B04/ 20SLB040304	<560	<560	<560	<560	<560
CNC20-B05/ 20SLB050607	<630	<630	<630	<630	<630
CNC20-B05/ 20SLB050607D	<590	<590	<590	<590	<590

Ground-Water Data

Depth to Ground Water: 2.52 feet

Well Purging/Sampling Method: Low flow using peristaltic pump

Date Sampled: 7/21/99

Free Product Thickness: None

Soil/Water Disposal Method: All soil cuttings and purge water were containerized, the containers labeled, and the containers moved to a staging area for final disposal by Charleston Naval Complex.

GROUND-WATER ANALYTICAL DATA

Sample	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Naphthalene (ug/L)
CNC20M-01/ 20GLM0101	<5	<5	<5	<5	<5

Sample	Benzo(a)-anthracene (ug/L)	Benzo(b)-fluoranthene (ug/L)	Benzo(k)-fluoranthene (ug/L)	Chrysene (ug/L)	Dibenz(a,h)-anthracene (ug/L)
CNC20M-01/ 20GLM0101	<10	<10	<10	<10	<10

Sample	Arsenic (ug/L)	Barium (ug/L)	Cadmium (ug/L)	Total Chromium (ug/L)	Mercury (ug/L)
CNC20M-01/ 20GLM0101	4.9	36.8	0.26	1.2	0.04

Sample	Selenium (ug/L)	Silver (ug/L)	Lead (ug/L)	EDB (ug/L)	
CNC20M-01/ 20GLM0101	2.57	0.69	2	<5	

Appendices

The appendices required for this report are as follows:

Appendix A. Well Construction and Soil Boring Logs

Appendix B. Laboratory Data

Appendix C. Topographic Map With Site Location

Appendix D. Site Base Map

NOTE: ***Because they are not needed, Appendices E, F, and G are not included.***

Report Completed By: Gregory D. Swanson Cert. # 24
(signature)

Date: 1/24/00

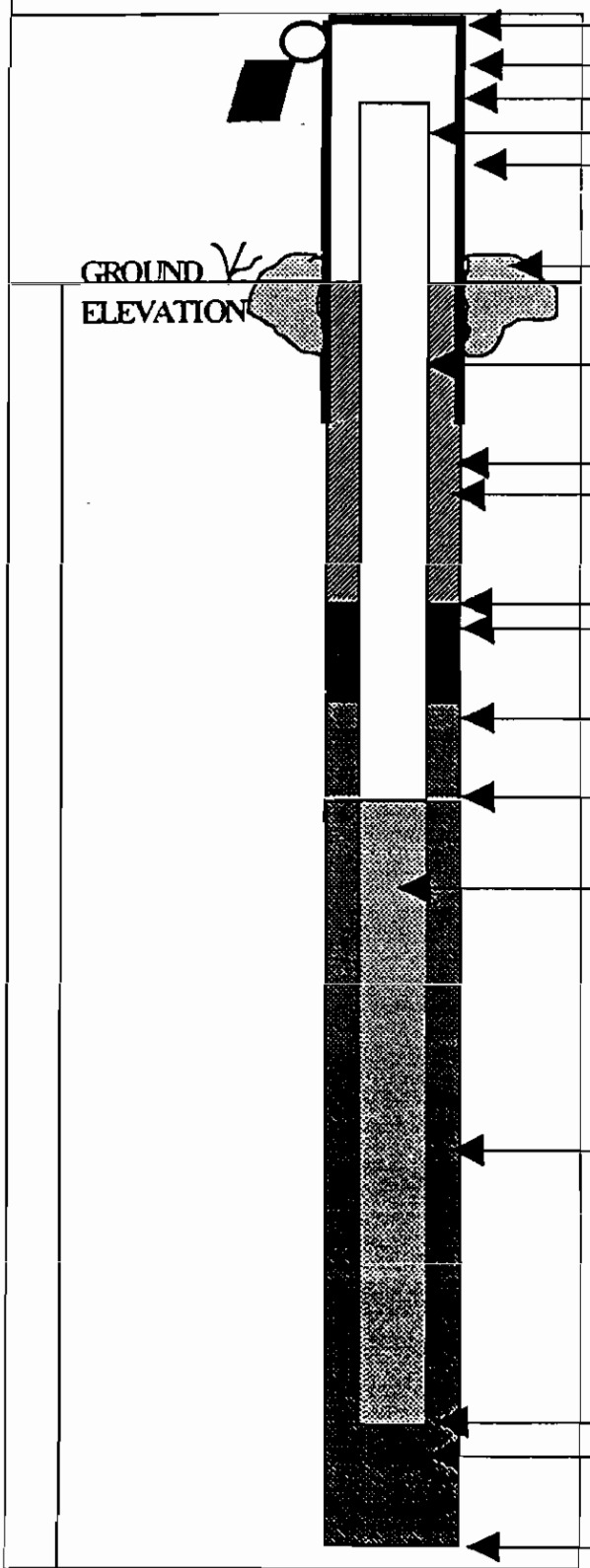
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 17132 GREGORY D. SWANSON

APPENDIX A.
WELL CONSTRUCTION AND SOIL BORING LOGS

BORING NO.: CNC20-MW01

OVERBURDEN MONITORING WELL SHEET

PROJECT	CNC	LOCATION:	CNC20-MW01	DRILLER	Custom Drilling
PROJECT NO.	CNC20	BORING	CNC20-MW01	METHOD:	~~DPT~~
ELEVATION		DATE	6/30/95	DRILLING	HSA
FIELD GEOLOGIST	Marty Ray			DEVELOPMENT: NA	



ELEVATION OF TOP OF SURFACE CASING: Flush

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING:

STICK-UP RISER PIPE:

I.D. OF SURFACE CASING: 8"

TYPE OF SURFACE CASING: steel man-hole with cover

TYPE OF SURFACE SEAL: concrete pad 2'x2'x6"

RISER PIPE I.D.: 2"

TYPE OF RISER PIPE: Sch 40 PVC

BOREHOLE DIAMETER: 4.25"

TYPE OF SEAL: grout to 6" b/s

ELEVATION / DEPTH OF SEAL: 1'10"

TYPE OS SEAL: 30/65 Finesand

DEPTH TOP OF SAND PACK: 1'8"

ELEVATION / DEPTH TOP OF SCREEN: 2'10"

TYPE OF SCREEN: Sch 40 PVC

SLOT SIZE X LENGTH: 10 slot x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: 20/30 sand

ELEVATION / DEPTHBOTTOM OF SCREEN: 12'10"

ELEVATION / DEPTH BOTTOM OF SAND PACK: 12'16"

TYPE OF BACKFILL BELOW OBSERVATION WELL: 20/30 sand

ELEVATION / DEPTH OF HOLE: 12'16"

BORING LOG

PROJECT NAME: CNC Site 20
PROJECT NUMBER: N0219 Building 240
DRILLING COMPANY: Columbia
DRILLING RIG: Geoprobe

BORING NUMBER: 20 B01
DATE: 6/3/99
GEOLOGIST:
DRILLER:

	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**
		1						Asphalt/Base		Dry				
		2						Fill						
1424		3						Dark brown			60			
		4		2.3/4				Silty sand						
		5						Silty Sand						
X		6						Olive Silty			570			
		7						Clay		Moist				
1433		8		2.5/4										
		9						Olive Silty		Saturated				
		10						Clay w/ wood chips			480			
		11												
1442		12		2.3/4										
		13												
		14												
		15												

* When rock coring, enter rock brokeness

** Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes Temp No Well I.D. #:

BORING LOG

PROJECT NAME: CNC Site 20
PROJECT NUMBER: N0219 Building 240
DRILLING COMPANY: Columbia
DRILLING RIG: Geoprobe

BORING NUMBER: Z013D2
DATE: 6/3/99
GEOLOGIST:
DRILLER:

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	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS	Remarks	PID/FID Reading (ppm) Sample	Sampler B.Z.	Breathing*	Driller B.Z.*
	1						Asphalt / base		Dry				
	2						Brown Silty Sand						
	3						↓			20	0	.	0
1440	4						Grey Coarse Sand		Moist				
	5												
	6						Grey Coarse Sand		Saturated	40	0		0
	7												
	8												
1445	9												
	10												
	11												
1455	12						↓						

*In rock coring, enter rock brokenness
*Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes Temp No ✓ Well I.D. #:

BORING LOG

PROJECT NAME: CNC Site 20
PROJECT NUMBER: ND219 Building 240
DRILLING COMPANY: Columbia
DRILLING RIG: Geoprobe

BORING NUMBER: 20B04
DATE: 6/3/99
GEOLOGIST:
DRILLER:

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**	Drilling BZ**
	1						Asphalt w/base		Dry				
	2						Sand & Gravel		↓				
	3						Olive Silty Clay		Moist	160	0	.	0
1511	4		4/4				↓						
	5					Bl.	Clay w/Sand						
	6					Dl.	Silty Clay		Moist	110	0		0
	7						↓						
	8		4/4										
1515	9								Saturated				
	10									320	0		0
	11					Bl.	Clay w/Sand						
	12		3.5/4			Dl.	Clay w/ wood chip						
1519													

* When rock coring, enter rock hardness

** Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes Temp No ✗ Well I.D. #:

BORING LOG

PROJECT NAME: CNC Site 20
PROJECT NUMBER: N0219 Building 240
DRILLING COMPANY: Columbia
DRILLING RIG: Geoprobe
BORING NUMBER: 20B03
DATE: 6/3/99
GEOLOGIST:
DRILLER:

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*
	1						Asphalt w/base		Dry				
	2					Br.	Silty Sand			2	0	0	0
	3						↓		Moist				
1502	4		3'/4			Gr.	Coarse Sand		Saturated				
	5						↓		↓				
	6												
	7												
1506	8						↓		↓				

*In rock coring, enter rock brokenness

*Hude monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes Temp No ⊗ Well I.D. #:

BORING LOG

PROJECT NAME: CNC Site 20 BORING NUMBER: B20B05
PROJECT NUMBER: ND219 Building 240 DATE: 6/3/99
DRILLING COMPANY: Columbia GEOLOGIST:
DRILLING RIG: Geoprobe DRILLER:

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**
	1					Bl	Asphalt w/base		Dry				
	2					wh	Sand, rock						
	3					Bl.	Sandy Clay			70	0		0
	4		3/4			wh	Sand, rock						
1529	5					wh	Sand & Clay						
	6					Or.	Silty Clay						
	7								Moist	190	0		0
0535	8		4/4						Saturated				
	9												
	10									430	0		0
	11												
1543	12		3/4				w/wood						

* 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 Temp No Well I.D. #:

APPENDIX B.
LABORATORY DATA

Katahdin
ANALYTICAL SERVICES

August 25, 1999

Mr. Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

RE: Katahdin Lab Number: WP-3350
Project ID: CNC Charleston
Project Manager: Ms. Andrea J. Colby
Sample Receipt Date: July 22, 1999

Dear Mr. Calligan:

Please find enclosed the following information:

* Report of Analysis
* Confirmation
* Chain of Custody

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. This cover letter is an integral part of the ROA.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Sincerely,

KATAHDIN ANALYTICAL SERVICES

Deborah J. Nadeau 8·26·99
Authorized Signature Date

340 County Road No. 5
P.O. Box 720, Westbrook, ME 04098
Tel: (207) 874-2400 Fax: (207) 775-4029

http://katahdinlab.com

210 West Road No. 5, Portsmouth, NH 03801
Tel: (603) 431-5777 Fax: (603) 436-3356

Katahdin
ANALYTICAL SERVICES

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CNC CHARLESTON

Sample Receipt

The following samples were received on July 22, 1999 and were logged in under Katahdin Analytical Services work order number WP3350 for a hardcopy due date of August 21, 1999.

KATAHDIN Sample No.	TTNUS Sample Identification	GEL Sample No.
WP3350-1	17GLM0101	
WP3350-2	17GLM0201	
WP3350-3	17GLM0301	
WP3350-4	17GLM6D01	
WP3350-5	17GLM6D01D	
WP3350-6	16GLM0201	
WP3350-7	16GLM0201D	
WP3350-8	16GLM0401	
WP3350-9	16GLM0501	
WP3350-10	20GLM0101	9907724-01
WP3350-11	17TL00501	

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.

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

Volatile Organic Analysis

Eight aqueous samples were received by the Katahdin Analytical Services, Inc. GC/MS laboratory on July 22, 1999 and were specified to be analyzed by USEPA method 8260B for the analytes benzene, toluene, ethylbenzene, xylenes, MTBE, naphthalene, and EDB.

Analyses for this workorder were performed on the 5973-U and 5972-M instruments. A VSTD050 (50 ppb standard) was used for the continuing calibration standard. Internal standard and surrogate compounds were also spiked at 50 ug/l.

Batch QC (VBLK, and LCS) was performed in each twelve-hour window. Results are included in this data package. The LCS QC samples were spiked with the entire list of compounds quantitated for at 50 ppb. A matrix spike/matrix spike duplicate was performed on sample WP3350-4.

Method 8000B, section 7.5.1.2.1 (Revision 2, 12/96) states, "in those instances where the RSD for one or more analytes exceeds 20%, the initial calibration curve may still be acceptable if the mean of the RSD values for all analytes in the calibration is less than or equal to 20%." Method 8260B narrows this 20% maximum to 15%.

In the calibration curves analyzed in this SDG, the average %RSD for all analytes was 13.7% and 10.4%, making the curves acceptable.

Several manual integrations were performed due to split peaks; all have been flagged with a "M" (software-generated) on the pertinent quantitation reports. All "M" flags have been dated and initialed by the analyst performing the integration. In addition, all "M" flags have been reviewed and approved by the GC/MS supervisor. Copies of each manual integration are included in the pertinent quantitation reports.

No other protocol deviations were noted by the volatile organics staff.

Semivolatile Organic Analysis

The method blank associated with the original extraction for WP3350-4 was lost during the concentration proceedure. All samples in the batch were reextracted within hold time. There was not enough volume to reextract an MS/MSD for WP3350-4.

Semivolatile Organics Extraction and Analysis

Seven aqueous samples were received by Katahdin Analytical Services laboratory on July 22, 1999 for analysis in accordance with 8270C for a client specified PAH list of analytes.

Extraction of the samples occurred following USEPA method 3510 on July 26, 1999. A laboratory control spike/laboratory control spike duplicate pair, consisting of all PAH analytes spiked into organic free water, was extracted in the batch.

The initial calibration curve analyzed in this SDG had some of the target analyte %RSD values exceeding 15 %.

Method 8000B, section 7.5.1.2.1 (Revision 2, 12/96) states, "in those instances where the RSD for one or more analytes exceeds 20%, the initial calibration curve may still be acceptable if the mean of the RSD values for all analytes in the calibration is less than or equal to 20%." Section 7.3.7.1 of method 8270C (revision 3, 12/96) narrows this 20% maximum to 15%.

In the calibration curve analyzed in this SDG, the average %RSD for all analytes was 10.1%, making the curve acceptable.

Several manual integrations were performed due to split peaks; all have been flagged with a "M" by the data system. All manual integrations have been dated and initialed by the responsible analyst. Copies of each manual integration are included in the data package. All manual integrations have been reviewed and approved by the GC/MS supervisor.

No other protocol deviations were noted by the semivolatiles organics staff.

Metals Analysis

The samples of Katahdin Work Order WP3350 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma (ICP) Atomic Emission Spectroscopic Analysis

Aqueous-matrix Katahdin Sample No. WP3350-10 was digested for ICP analysis on 07/27/99 (QC Batch PG27ICW1) in accordance with USEPA Method 3010A. Katahdin Sample No. WP3350-10 was prepared with duplicate matrix-spiked aliquots. The measured calcium concentration (72.5 ug/L) of the preparation blank that is associated with this QC batch is greater than the laboratory's practical quantitation levels. The measured concentration of this element in all Katahdin Sample No. WP3250-10 is more than ten times that of the preparation blank, so no corrective action was required.

ICP analyses of Katahdin Work Order WP3350 sample digestates were performed in accordance with USEPA Method 6010B, using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA 61 ICP spectrometer. All samples were analyzed within holding times and all QC criteria were met with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Analysis of Mercury by Cold Vapor Atomic Absorption (CVAA) Spectrophotometry

Aqueous-matrix Katahdin Sample No. WP3350-10 was digested for mercury analysis on 07/23/99 (QC Batch PG23HGW0) in accordance with USEPA Method 7470A. Katahdin Sample No. WP3350-10 was prepared with duplicate matrix-spiked aliquots.

Mercury analyses of Katahdin Work Order WP3350 sample digestates were performed using a Leeman Labs PS200 automated mercury analyzer. All samples were analyzed within holding times and all run QC criteria were met.

Wet Chemistry Analysis

Due to IC instrument failure, alternate methods were approved by Kelly Johnson-Carper for the analysis of nitrate and sulfate. Samples for work order WP3350 were analyzed for nitrate and sulfate in accordance with "Methods for Chemical Analysis of Water and Wastes", EPA 600/4-79-020, 1979, Revised 1983. No deviations were noted by the Wet Chemistry group.

Katahdin
340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE PRINT IN PEN

Page ____ of ____

Client: Tetra Tech NUS Inc.
Contact: Bryn Howze
Phone #: (843)814-9080
Fax #: ( )
Address: NH 21 Ave H
City: N. Charleston
State: S.C.
Zip Code: 29405
Purchase Order #:
Proj. Name / No.:
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): James R. Hill / James R. Hill / J Alexander
Copies To:

LAB USE ONLY
WORK ORDER #: WP3350
KATAHDIN PROJECT MANAGER:
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.	BTEX, Naph-MTBE, EDB (Filt. O Y O N)	PAH (Filt. O Y O N)	Dissolved Methane (Filt. O Y O N)	Anions (Nitrate, Sulfate) (Filt. O Y O N)	TAL Metals (Filt. O Y O N)	(Filt. O Y O N)	(Filt. O Y O N)	(Filt. O Y O N)	(Filt. O Y O N)	(Filt. O Y O N)
	17GLM01 01	7/21/99/0850	G.W	4			3	1						
	17GLM02 01	/0910		4			3	1						
	17GLM03 01	/0935		4			3	1						
	17GLM6D 01	/1115		5	3	2								
	17GLM6D 01D	/1115		5	3	2								
	17GLM6D 01M	/1115		5	3	2					← MS/MSD			
	20GLM01 01	/0950		5	3	2			1					
	16GLM02 01	/1606		5	3	2								
	16GLM02 01D	/1606		5	3	2								
	16GLM04 01	/1634		5	3	2								
	16GLM05 01	/1637		5	3	2								
	17TL005 01	/0730		2	2									
		/												
		/												
		/												
		/												

COMMENTS
Sample No. 17GLM6D01M is an MS/MSD

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
James R. Hill	7/21/99 1830	Fed X 813402904587		7-22-99 0845	Shelby Wilson
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3350-10
SDG: WP3350
Report Date: 8/25/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 7/30/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20GLM0101	AQ	7/21/99	7/22/99	7/30/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	J3	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	93	%	1.0		
1,2-DICHLOROETHANE-D4	98	%	1.0		
TOLUENE-D8	100	%	1.0		
P-BROMOFLUOROBENZENE	99	%	1.0		

Report Notes: J

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3350-10
SDG: WP3350
Report Date: 8/25/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: EPA 8270
Date Analyzed: 8/5/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20GLM0101	AQ	7/21/99	7/22/99	7/28/99	DAS	EPA 3510	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<10	ug/L	1.0	10	10
2-METHYLNAPHTHALENE	<10	ug/L	1.0	10	10
ACENAPHTHYLENE	<10	ug/L	1.0	10	10
ACENAPHTHENE	<10	ug/L	1.0	10	10
FLUORENE	<10	ug/L	1.0	10	10
PHENANTHRENE	<10	ug/L	1.0	10	10
ANTHRACENE	<10	ug/L	1.0	10	10
FLUORANTHENE	<10	ug/L	1.0	10	10
PYRENE	<10	ug/L	1.0	10	10
NZO[A]ANTHRACENE	<10	ug/L	1.0	10	10
RYSENE	<10	ug/L	1.0	10	10
BENZO[B]FLUORANTHENE	<10	ug/L	1.0	10	10
BENZO[K]FLUORANTHENE	<10	ug/L	1.0	10	10
BENZO[A]PYRENE	<10	ug/L	1.0	10	10
INDENO[1,2,3-CD]PYRENE	<10	ug/L	1.0	10	10
DIBENZ[A,H]ANTHRACENE	<10	ug/L	1.0	10	10
BENZO[G,H,I]PERYLENE	<10	ug/L	1.0	10	10
NITROBENZENE-D5	45	%	1.0		
2-FLUOROBIPHENYL	47	%	1.0		
TERPHENYL-D14	65	%	1.0		

ort Notes:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | **Client Field ID:** 20GLM0101

Matrix: WATER | **SDG Name:** WP3350

Percent Solids: 0.00 | **Lab Sample ID:** WP3350-010

Concentration Units (ug/L or mg/Kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF
7429-90-5	ALUMINUM	20.93	U		P	1
7440-36-0	ANTIMONY	1.81	U		P	1
7440-38-2	ARSENIC	4.9	B		P	1
7440-39-3	BARIUM	36.8			P	1
7440-41-7	BERYLLIUM	0.21	U		P	1
7440-43-9	CADMIUM	0.26	U		P	1
7440-70-2	CALCIUM	116000			P	1
7440-47-3	CHROMIUM	1.2	B		P	1
7440-48-4	COBALT	0.64	U		P	1
7440-50-8	COPPER	2.3	B		P	1
7439-89-6	IRON	3930			P	1
7439-92-1	LEAD	2.0	B		P	1
7439-95-4	MAGNESIUM	5080			P	1
7439-96-5	MANGANESE	595			P	1
7439-97-6	MERCURY	0.04	B		CV	1
7440-02-0	NICKEL	2.0	B		P	1
7440-09-7	POTASSIUM	8780			P	1
7782-49-2	SELENIUM	2.57	U		P	1
7440-22-4	SILVER	0.69	U		P	1
7440-23-5	SODIUM	25200			P	1
7440-28-0	THALLIUM	4.49	U		P	1
7440-62-2	VANADIUM	2.8	B		P	1
7440-66-6	ZINC	2.9	B		P	1

Color Before: YELLOW | Clarity Before: CLEAR

Color After: YELLOW | Clarity After: CLEAR

Comments:

KATAHDIN ANALYTICAL SERVICES, INC.
SAMPLE RECEIPT CONDITION REPORT
Tel. (207) 874-2400
Fax (207) 775-4029

LAB (WORK ORDER) # WP 3350

PAGE: 1 OF 1

COOLER: 1 OF 1

COC# —
SDG# —
DATE / TIME RECEIVED: 7-22-99 0845
DELIVERED BY: Fed Ex
RECEIVED BY: Sa
LIMS ENTRY BY: AJC
LIMS REVIEW BY / PM: AJC

CLIENT: Tetra Tech

PROJECT: Charleston

	YES	NO	EXCEPTIONS	COMMENTS	RESOLUTION
1. CUSTODY SEALS PRESENT / INTACT?	☑	☐	☐		
2. CHAIN OF CUSTODY PRESENT IN THIS COOLER?	☑	☐	☐		
3. CHAIN OF CUSTODY SIGNED BY CLIENT?	☑	☐	☐		
4. CHAIN OF CUSTODY MATCHES SAMPLES?	☑	☐	☐		
5. TEMPERATURE BLANKS PRESENT?	☑	☐	☐	TEMP BLANK TEMP (°C)= 8.3	AJC notified Paul Calligan by phone 7/22/99 & was told to proceed.
6. SAMPLES RECEIVED AT 4°C +/- 2? (CE) ICE PACKS PRESENT (Y) or N?	☐	☑	☐	COOLER TEMP (°C)= NA (RECORD COOLER TEMP ONLY IF TEMP BLANK IS NOT PRESENT)	
7. VOLATILES FREE OF HEADSPACE?	☑	☐	☐		
8. TRIP BLANK PRESENT IN THIS COOLER	☑	☐	☐		
9. PROPER SAMPLE CONTAINERS AND VOLUME?	☑	☐	☐		
10. SAMPLES WITHIN HOLD TIME UPON RECEIPT?	☑	☐	☐		
11. SAMPLES PROPERLY PRESERVED[1]?	☐	☑	☐		
12. CORRECTIVE ACTION REPORT FILED?	☐	☑	N/A		

13. ANALYTICAL PROGRAMS (CIRCLE ONE) COMMERCIAL CLP HAZWRAP (NFESC) ACOE AFCEE OTHER (STATE OF ORIGIN):

LOG - IN NOTES[1]: Added HNO_3 to Metals bottle, sample 20G2M0104 to ↓ pH to <2

[1] Use this space (and additional sheets if necessary) to document samples that are received broken or compromised, C-O-C discrepancies, radiation checks, residual chlorine check, results of pH check if required. If samples required pH adjustment, record volume and type of preservative added.

New England-ME Laboratory (207) 874-2400

CONFIRMATION

ORDER NO WP-3350

Project Manager: Andrea J. Colby
ORDER DATE: 07/22/99
PHONE: 850/385-[illegible]9
FAX: 850/385-[illegible]0
DUE: 21 AUG
FAC.ID: CNC CHARLESTON

REPORT TO: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

INVOICE: ACCOUNTS PAYABLE
TETRA TECH NUS, INC.
FOSTER PLAZA 7, 661 ANDERSEN DR.
PITTSBURGH, PA 15220

PHONE: 412/921-7090
PO: N7912-P99264

PROJECT: CTO #68

SAMPLED BY: CLIENT DELIVERED BY: FEDEX DISPOSE: AFTER 20 SEP

ITEM	LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATRIX
1	WP3350-1	17GLM0101	21 JUL 0850	22 JUL	AQ
	WP3350-2	17GLM0201	21 JUL 0910		
	WP3350-3	17GLM0301	21 JUL 0935		

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
GC Subcontract		3	95.00	285.00
Nitrate as N	353.2	3	30.00	90.00
Sulfate	375.4	3	0.00	0.00
TOTALS		3	125.00	375.00

	LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATRIX
2	WP3350-4	17GLM6D01	21 JUL 1115	22 JUL	[illegible]
	WP3350-5	17GLM6D01D	21 JUL 1115		
	WP3350-6	16GLM0201	21 JUL 1606		
	WP3350-7	16GLM0201D	21 JUL 1606		
	WP3350-8	16GLM0401	21 JUL 1634		
	WP3350-9	16GLM0501	21 JUL 1637		

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
Volatile Organics by 8260B	SW8260	6	75.00	450.00
Polynuclear Aromatic Hydrocarbons	EPA 8270	6	125.00	750.00
TOTALS		6	200.00	1200.00

LABORATORY ORDER CONTINUED ON PAGE 2

ORDER NO WP-3350

Project Manager: Andrea J. Colby
ORDER DATE: 07/22/99
PHONE: 850/385-9899
FAX: 850/385-9860
DUE: 21 AUG
FAC.ID: CNC CHARLESTON

REPORT TO: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

INVOICE: ACCOUNTS PAYABLE
TETRA TECH NUS, INC.
FOSTER PLAZA 7, 661 ANDERSEN DR.
PITTSBURGH, PA 15220

PHONE: 412/921-7090
PO: N7912-P99264

PROJECT: CTO #68

SAMPLED BY: CLIENT DELIVERED BY: FEDEX DISPOSE: AFTER 20 SEP

	LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATRIX
3	WP3350-10	20GLM0101	21 JUL 0950	22 JUL	AQ

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
Volatile Organics by 8260B	SW8260	1	75.00	75.00
Polynuclear Aromatic Hydrocarbons	EPA 8270	1	125.00	125.00
Target Analyte List Metals, Total		1	100.00	100.00
Wet Lab Subcontract		1	55.00	55.00
TOTALS		1	355.00	355.00

	LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATRIX
4	WP3350-11	17TL00501	21 JUL 0730	22 JUL	AQ

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
Volatile Organics by 8260B	SW8260	1	75.00	75.00

ORDER NOTE: QC-IV NFESC
DD(KAS007QC-DB3)
CNC CHARLESTON

REPORT COPY: MS. LEE LECK
TETRA TECH NUS
FOSTER PALZA 7
661 ANDERSEN DR.
PITTSBURGH,PA 15220

FINAL PAGE!

INVOICE: With Report

TOTAL ORDER AMOUNT $2,005.00
This is NOT an Invoice

A 'WEST.AJC(dw)
07-23Please contact KATAHDIN ANALYTICAL SERVICES promptly if you have any questi

KATAHDIN ANALYTICAL SERVICES

Summary of Report Notes

Report Note	Note Text
A-1	Insufficient sample was provided to enable laboratory to achieve the laboratory's standard Practical Quantitation Level.
J	'J' flag denotes an estimated value less than the Laboratory's Practical Quantitation Level.

4A

VOLATILE ORGANICS METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKU30A

Lab Name: Katahdin Analytical Services SDG No.: WP3350

Lab File ID: U0253 Lab Sample ID: VBLKU30A

Date Analyzed: 07/30/99 Time Analyzed: 8:52

GC Column: RTX-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: 5973-U

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS'S, MS AND MSD'S

Client Sample ID	Lab Sample ID	Lab Data File	Date Injected	Time Injected
LCSU30A	LCSU30A	U0252	7/30/99	8:15:00 AM
17GLM6D01	WP3350-4	U0260	7/30/99	1:09:00 PM
17GLM6D01D	WP3350-5	U0261	7/30/99	1:44:00 PM
16GLM0201	WP3350-6	U0262	7/30/99	2:19:00 PM
16GLM0201D	WP3350-7	U0263	7/30/99	2:54:00 PM
20GLM0101	WP3350-10	U0264	7/30/99	3:30:00 PM
17TL00501	WP3350-11	U0265	7/30/99	4:05:00 PM
17GLM6D01MS	WP3350-4MS	U0266	7/30/99	4:41:00 PM

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKU30A
SDG: WP3350
Report Date: 8/25/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 7/30/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKU30A	AQ	-	-	7/30/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	95	%	1.0		
1,2-DICHLOROETHANE-D4	105	%	1.0		
TOLUENE-D8	103	%	1.0		
P-BROMOFLUOROBENZENE	104	%	1.0		

Report Notes:

Katahdin Analytical Services
8260 LCS Recovery Sheet

Lab File: U0252 **Sample ID:** LCSU30A **Date Run:** 7/30/99

Analyst: JSS **Time Injected** 8:15:00 AM **Matrix:** AQ

Compound Name	Spike Amt (ug/L)	Result (ug/L)	Rec (%)	Limits (%)
1,2-DIBROMOETHANE	50	49.4	99	60-140
BENZENE	50	50.6	101	60-140
ETHYLBENZENE	50	53.5	107	60-140
MTBE	50	47.0	94	60-140
NAPHTHALENE	50	40.4	81	60-140
TOLUENE	50	52.2	104	60-140
TOTAL XYLENES	150	151	100	60-140

* Out of Limits *1*

4A

VOLATILE ORGANICS METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKU31A

Lab Name: Katahdin Analytical Services SDG No.: WP3350

Lab File ID: U0270 Lab Sample ID: VBLKU31A

Date Analyzed: 07/31/99 Time Analyzed: 9:57

GC Column: RTX-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: 5973-U

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS'S, MS AND MSD'S

Client Sample ID	Lab Sample ID	Lab Data File	Date Injected	Time Injected
LCSU31A	LCSU31A	U0269	7/31/99	9:21:00 AM
17GLM6D01MSD	WP3350-4MSD	U0271	7/31/99	10:45:00 AM

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKU31A
SDG: WP3350
Report Date: 8/25/99
PO No.: N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 7/31/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKU31A	AQ	-	-	7/31/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	98	%	1.0		
1,2-DICHLOROETHANE-D4	100	%	1.0		
TOLUENE-D8	101	%	1.0		
BROMOFLUOROBENZENE	99	%	1.0		

Report Notes:

Katahdin Analytical Services
8260 LCS Recovery Sheet

Lab File: U0269 **Sample ID:** LCSU31A **Date Run:** 7/31/99

Analyst: JSS **Time Injected** 9:21:00 AM **Matrix:** AQ

Compound Name	Spike Amt (ug/L)	Result (ug/L)	Rec (%)	Limits (%)
1,2-DIBROMOETHANE	50	47.1	94	60-140
BENZENE	50	50.1	100	60-140
ETHYLBENZENE	50	50.6	101	60-140
MTBE	50	45.5	91	60-140
NAPHTHALENE	50	40.3	80	60-140
TOLUENE	50	48.8	98	60-140
TOTAL XYLENES	150	143	95	60-140

* Out of Limits

Katahdin Analytical Services

MS/MSD Report

Sample	File Name	Date Acquired	Time inj	Analyst	Matrix	Method
WP3350-4	U0260	7/30/99	1:09:00 PM	JSS	AQ	8260_99
WP3350-4MS	U0266	7/30/99	4:41:00 PM	JSS	AQ	8260_99
WP3350-4MSD	U0271	7/31/99	10:45:00 AM	JSS	AQ	8260_99

Compound Name	Native (ug/L)	MS Spk Amount (ug/L)	MSD Spk Amount (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	MS REC (%)	MSD REC (%)	Recovery Limits (%)	RPD (%)	RPD Limit (%)
TOTAL XYLENES	0	150	150	125	123	83	82	60-140	1.6	20
TOLUENE	0	50	50	42.8	41.4	86	83	60-140	3.3	20
NAPHTHALENE	0	50	50	38.2	37.1	76	74	60-140	2.9	20
MTBE	0	50	50	43.7	42.2	87	84	60-140	3.5	20
ETHYLBENZENE	0	50	50	44.0	42.6	88	85	60-140	3.2	20
BENZENE	0	50	50	43.9	43.0	88	86	60-140	2.1	20
1,2-DIBROMOETHANE	0	50	50	45.6	44.3	91	88	60-140	2.9	20

RPD =[(ms res - msd res) / (ms res + msd res)/2] * 100

* Out of Limits

4B

SEMIVOLATILE ORGANICS METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK;072699

Lab Name: Katahdin Analytical Services SDG No.: WP3350

Lab File ID: Z1625 Lab Sample ID: SBLK;072699

Instrument ID: 5972-Z Date Extracted: 7/26/99

GC Column: RTX-624 ID: 0.18 (mm) Date Analyzed: 08/04/99

Matrix: (soil/water) WATER Time Analyzed: 10:55

Level: (low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS'S, MS AND MSD'S :

Client Sample ID	Lab Sample ID	Lab Data File	Date Injected	Time Injected
LCS;072699	LCS;072699	Z1626	8/4/99	11:41:00 AM
LCSD;072699	LCSD;072699	Z1627	8/4/99	12:27:00 PM
17GLM6D01	WP3350-4	Z1635	8/4/99	6:38:00 PM
17GLM6D01D	WP3350-5	Z1636	8/4/99	7:23:00 PM
16GLM0201	WP3350-6	Z1640	8/5/99	9:34:00 AM
16GLM0201D	WP3350-7	Z1641	8/5/99	10:20:00 AM
20GLM0101	WP3350-10	Z1644	8/5/99	12:41:00 PM
16GLM0401	WP3350-8	Z1673	8/9/99	11:37:00 AM
16GLM0501	WP3350-9	Z1674	8/9/99	12:23:00 PM

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: SBLK;072699
SDG: WP3350
Report Date: 8/25/99
PO No.: N7912-P99264
Project: CTO #68
% Solids: N/A
Method: EPA 8270
Date Analyzed: 8/4/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
SBLK;072699	AQ	-	-	7/28/99	DAS	EPA 3510	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<10	ug/L	1.0	10	10
2-METHYLNAPHTHALENE	<10	ug/L	1.0	10	10
ACENAPHTHYLENE	<10	ug/L	1.0	10	10
ACENAPHTHENE	<10	ug/L	1.0	10	10
FLUORENE	<10	ug/L	1.0	10	10
PHENANTHRENE	<10	ug/L	1.0	10	10
ANTHRACENE	<10	ug/L	1.0	10	10
FLUORANTHENE	<10	ug/L	1.0	10	10
PYRENE	<10	ug/L	1.0	10	10
BENZO[A]ANTHRACENE	<10	ug/L	1.0	10	10
CHRYSENE	<10	ug/L	1.0	10	10
BENZO[B]FLUORANTHENE	<10	ug/L	1.0	10	10
BENZO[K]FLUORANTHENE	<10	ug/L	1.0	10	10
BENZO[A]PYRENE	<10	ug/L	1.0	10	10
INDENO[1,2,3-CD]PYRENE	<10	ug/L	1.0	10	10
DIBENZ[A,H]ANTHRACENE	<10	ug/L	1.0	10	10
BENZO[G,H,I]PERYLENE	<10	ug/L	1.0	10	10
NITROBENZENE-D5	61	%	1.0		
2-FLUOROBIPHENYL	61	%	1.0		
TERPHENYL-D14	92	%	1.0		

port Notes:

0000038

Katahdin Analytical Services

LCS/LCSD Report

Sample	File Name	Date Acquired	Time inj	Analyst	Matrix	Method
LCS;072699	Z1626	8/4/99	11:41	KRT	AQ	8270
LCSD;072699	Z1627	8/4/99	12:27	KRT	AQ	8270

Compound Name	Spk Amt ug/L	LCS Result ug/L	LCSD Result ug/L	LCS Rec (%)	LCSD Rec (%)	Rec. Limits (%)	RPD (%)	RPD Limit (%)
2-METHYLNAPHTHALENE	50	27.6	35.1	*55	70	70-130	24	30
ACENAPHTHENE	50	32.2	35.9	*64	72	70-130	12	30
ACENAPHTHYLENE	50	32.3	35.9	*65	72	70-130	10	30
ANTHRACENE	50	41.5	42.0	83	84	70-130	1.2	30
BENZO[A]ANTHRACENE	50	37.7	37.4	75	75	70-130	0	30
BENZO[A]PYRENE	50	36.5	36.5	73	73	70-130	0	30
BENZO[B]FLUORANTHENE	50	34.3	34.1	*69	*68	70-130	1.4	30
BENZO[G,H,I]PERYLENE	50	37.7	36.9	75	74	70-130	1.3	30
BENZO[K]FLUORANTHENE	50	42.1	42.5	84	85	70-130	1.2	30
CHRYSENE	50	39.2	39.5	78	79	70-130	1.3	30
DIBENZ[A,H]ANTHRACENE	50	34.3	34.6	*69	*69	70-130	0	30
FLUORANTHENE	50	37.0	39.7	74	79	70-130	6.5	30
FLUORENE	50	33.6	35.2	*67	70	70-130	4.4	30
INDENO[1,2,3-CD]PYRENE	50	31.9	34.4	*64	*69	70-130	7.5	30
NAPHTHALENE	50	27.0	34.7	*54	*69	70-130	24	30
PHENANTHRENE	50	39.0	38.8	78	78	70-130	0	30
PYRENE	50	43.4	38.7	87	77	70-130	12	30

RPD = (lcs rec - lcsd rec) /[(lcsd rec +lcsd rec)/2] * 100

* Out of Limits

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWPG23HGW0

Matrix: WATER **SDG Name:** WP3350

QC Batch ID: PG23HGW0

Concentration Units (ug/L or mg/Kg dry weight): ug/L

Analyte	RESULT	C
MERCURY	-0.026	B

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWPG27ICW1

Matrix: WATER **SDG Name:** WP3350

QC Batch ID: PG27ICW1

Concentration Units (ug/L or mg/Kg dry weight): ug/L

Analyte	RESULT	C
ALUMINUM	-34.550	B
ANTIMONY	3.210	B
ARSENIC	-5.170	B
BARIUM	-0.280	B
BERYLLIUM	0.210	U
CADMIUM	0.260	U
CALCIUM	72.530	
CHROMIUM	-0.650	B
COBALT	-1.320	B
COPPER	0.550	U
IRON	12.300	U
LEAD	1.090	U
MAGNESIUM	5.750	U
MANGANESE	4.850	B
NICKEL	-1.890	B
POTASSIUM	449.540	U
SELENIUM	2.570	U
SILVER	0.690	U
SODIUM	47.800	B
THALLIUM	4.490	U
VANADIUM	0.620	U
ZINC	3.750	B

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWPG23HGW0

Matrix: WATER **SDG Name:** WP3350

QC Batch ID: PG23HGW0

Concentration Units (ug/L or mg/Kg dry weight): ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	5.0	4.34	86.8	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWPG27ICW1

Matrix: WATER **SDG Name:** WP3350

QC Batch ID: PG27ICW1

Concentration Units (ug/L or mg/Kg dry weight): ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ALUMINUM	2000.0	1937.89	96.9	80	120
ANTIMONY	500.0	493.01	98.6	80	120
ARSENIC	2000.0	1962.43	98.1	80	120
BARIUM	2000.0	2114.49	105.7	80	120
BERYLLIUM	50.0	50.92	101.8	80	120
CADMIUM	50.0	53.07	106.1	80	120
CALCIUM	2500.0	2492.48	99.7	80	120
CHROMIUM	200.0	208.97	104.5	80	120
COBALT	500.0	521.92	104.4	80	120
COPPER	250.0	253.24	101.3	80	120
IRON	1000.0	991.60	99.2	80	120
LEAD	500.0	533.73	106.7	80	120
MAGNESIUM	5000.0	4893.72	97.9	80	120
MANGANESE	500.0	508.99	101.8	80	120
NICKEL	500.0	518.04	103.6	80	120
POTASSIUM	25000.0	25761.92	103.0	80	120
SELENIUM	2000.0	1872.49	93.6	80	120
SILVER	50.0	47.70	95.4	80	120
SODIUM	7500.0	8110.92	108.1	80	120
THALLIUM	2000.0	2126.81	106.3	80	120
VANADIUM	500.0	510.95	102.2	80	120
ZINC	500.0	499.91	100.0	80	120

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: WATER

Percent Solids: 0.00

Client Field ID: 20GLM0101S

SDG Name: WP3350

Lab Sample ID: WP3350-010S

Concentration Units (ug/L or mg/Kg dry weight): ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM	1931.0900		20.2200	U	2000	96.6		75	125	P
ANTIMONY	480.6900		-0.6200	U	500	96.1		75	125	P
ARSENIC	1926.9200		4.8900	B	2000	96.1		75	125	P
BARIUM	2020.1600		36.8500		2000	99.2		75	125	P
BERYLLIUM	50.1100		-0.1100	U	50	100.2		75	125	P
CADMIUM	50.1800		0.1800	U	50	100.4		75	125	P
CALCIUM	115729.7500		116537.4400		2500	-32.3		75	125	P
CHROMIUM	203.1400		1.1700	B	200	101.0		75	125	P
COBALT	498.4600		-0.0300	U	500	99.7		75	125	P
COPPER	248.0900		2.2800	B	250	98.3		75	125	P
IRON	4775.1800		3932.4000		1000	84.3		75	125	P
LEAD	503.0100		2.0000	B	500	100.2		75	125	P
MAGNESIUM	9518.5900		5080.6200		5000	88.8		75	125	P
MANGANESE	1061.8700		595.1400		500	93.3		75	125	P
MERCURY	0.8380		0.0400	B	1	79.8		75	125	CV
NICKEL	492.6300		1.9800	B	500	98.1		75	125	P
POTASSIUM	32854.7600		8783.1900		25000	96.3		75	125	P
SELENIUM	1818.0800		-3.6100	U	2000	90.9		75	125	P
SILVER	46.5300		0.0300	U	50	93.1		75	125	P
SODIUM	32190.1400		25174.2800		7500	93.5		75	125	P
THALLIUM	2039.5900		-1.9400	U	2000	102.0		75	125	P
VANADIUM	503.3200		2.8500	B	500	100.1		75	125	P
ZINC	477.8000		2.9100	B	500	95.0		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID: 20GLM0101S**

Matrix: WATER | **SDG Name:** WP3350

Percent Solids: 0.00 | **Lab Sample ID:** WP3350-010P

Concentration Units (ug/L or mg/Kg dry weight): ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM	1980.9800		20.2200	U	2000	99.0		75	125	P
ANTIMONY	484.6700		-0.6200	U	500	96.9		75	125	P
ARSENIC	1940.1300		4.8900	B	2000	96.8		75	125	P
BARIUM	2046.9600		36.8500		2000	100.5		75	125	P
BERYLLIUM	50.8700		-0.1100	U	50	101.7		75	125	P
CADMIUM	50.2200		0.1800	U	50	100.4		75	125	P
CALCIUM	118317.4200		116537.4400		2500	71.2		75	125	P
CHROMIUM	206.5800		1.1700	B	200	102.7		75	125	P
COBALT	505.2400		-0.0300	U	500	101.0		75	125	P
COPPER	251.3800		2.2800	B	250	99.6		75	125	P
IRON	4888.5800		3932.4000		1000	95.6		75	125	P
LEAD	504.7300		2.0000	B	500	100.5		75	125	P
MAGNESIUM	9663.8800		5080.6200		5000	91.7		75	125	P
MANGANESE	1081.4700		595.1400		500	97.3		75	125	P
MERCURY	1.0300		0.0400	B	1	99.0		75	125	CV
NICKEL	497.5000		1.9800	B	500	99.1		75	125	P
POTASSIUM	33923.5400		8783.1900		25000	100.6		75	125	P
SELENIUM	1819.0400		-3.6100	U	2000	91.0		75	125	P
SILVER	46.3800		0.0300	U	50	92.8		75	125	P
SODIUM	33083.2900		25174.2800		7500	105.5		75	125	P
THALLIUM	2074.5400		-1.9400	U	2000	103.7		75	125	P
VANADIUM	511.2900		2.8500	B	500	101.7		75	125	P
ZINC	487.0100		2.9100	B	500	96.8		75	125	P

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID: 20GLM0101**

Matrix: WATER **SDG Name: WP3350**

Percent Solids: 0.00 **Lab Sample ID: WP3350-010**

Concentration Units (ug/L or mg/Kg dry weight): ug/L

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ALUMINUM		1931.0900		1980.9800		2.6		P
ANTIMONY		480.6900		484.6700		0.8		P
ARSENIC		1926.9200		1940.1300		0.7		P
BARIUM		2020.1600		2046.9600		1.3		P
BERYLLIUM		50.1100		50.8700		1.5		P
CADMIUM		50.1800		50.2200		0.1		P
CALCIUM		115729.7500		118317.4200		2.2		P
CHROMIUM		203.1400		206.5800		1.7		P
COBALT		498.4600		505.2400		1.4		P
COPPER		248.0900		251.3800		1.3		P
IRON		4775.1800		4888.5800		2.3		P
LEAD		503.0100		504.7300		0.3		P
MAGNESIUM		9518.5900		9663.8800		1.5		P
MANGANESE		1061.8700		1081.4700		1.8		P
MERCURY	0.2	0.8380		1.0300		20.6		CV
NICKEL		492.6300		497.5000		1.0		P
POTASSIUM		32854.7600		33923.5400		3.2		P
SELENIUM		1818.0800		1819.0400		0.1		P
SILVER	15	46.5300		46.3800		0.3		P
SODIUM		32190.1400		33083.2900		2.7		P
THALLIUM		2039.5900		2074.5400		1.7		P
VANADIUM		503.3200		511.2900		1.6		P
ZINC		477.8000		487.0100		1.9		P

Comments:

CASE NARRATIVE
for
Katahdin Analytical
Westbrook, ME
Former Charleston Naval Complex Site
SDG# 97724W

August 12, 1999

Laboratory Identification:

General Engineering Laboratories, Inc. (GEL)

Mailing Address:

P.O. Box 30712
Charleston, SC 29417

Express Mail Delivery and Shipping Address:

2040 Savage Rd
Charleston, SC 29414

Telephone Number:

(843) 556-8171

Summary:

Sample Receipt

The samples from the former Charleston Naval Complex site arrived at General Engineering Laboratories, Inc., Charleston, SC on July 22, 1999, for environmental analyses. All sample containers arrived without any visible signs of tampering or breakage. The samples were delivered with chain of custody documentation and signatures.

The following samples were received by the laboratory:

Laboratory Identification	Sample Description
9907724-01	20GLM0101

Case Narrative

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Internal Chain of Custody:

Custody was maintained for all samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, and General Chemistry.

The following are definitions of reporting limits used at General Engineering Laboratories:

DL — Detection Limit: The minimum level of an analyte that can be determined (identified not quantified) with 99% confidence. The values are normally achieved by preparing and analyzing seven aliquots of laboratory water spiked 1 to 5 times the estimated MDL, taking the standard deviation and multiplying it against the one-tailed t-statistic at 99%. This computed value is then verified for reasonableness by repeating the study using the concentration found in the initial study, calculating an F-ratio, and computing the final limit. Sample specific preparation and dilution factors are applied to these limits when they are reported.

The detection limit is the minimum concentration of a substance that can be identified, measured, and reported with 99% confidence that the analyte concentration is above zero. It answers the question "Is It Present."

QL — Quantitation Limit: The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The QL is generally 5 to 10 times the MDL. However, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes the QL analyte concentration is selected as the lowest non-zero standard in the calibration curve.

Sample QL's are highly matrix-dependent. Sample specific preparation and dilution factors are applied to these limits when they are reported.

The QL is always $\geq$ DL.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

GENERAL ENGINEERING LABORATORIES

P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407

(843) 556-8171 • Fax (843) 766-1178

Printed on recycled paper.

Valerie S. Davis
Project Manager

fc:saic99077 24%

GENERAL ENGINEERING LABORATORIES
P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407
(843) 556-8171 • Fax (843) 766-1178
Printed on recycled paper.

General Engineering Laboratories, Inc.

DATA QUALIFIERS FOR INORGANIC ANALYSES

Data Qualifiers used on Form 1s or Certificates of Analysis (C Of A) follow the specifications set forth in the technical specifications of the most current CLP Statement of Work and are defined as follows.

Section	Explanation	Location
E	The qualifier that is used when the percent difference between the parent sample and its serial dilution's concentrations exceeds 10%. The sample's concentration must be greater than 50 times the IDL/MDL for ICP (6010B/ILMO 3.0) or 100 times the absolute value of the preparation blank's concentration (6020). However, if analyzing ILMO 4.0 (ICP-MS), the parent sample's concentration must be 20 times the CRDL before the "E" flag is applied.	Form 1, and EDD
*	The qualifier that is used to indicate that the duplicate sample analysis for an analyte is out of control.	Form 1, and EDD
÷	Correlation coefficient the Method of Standard Addition (MSA) is less than 0.095.	Form 2, and EDD
B	The qualifier is used to indicate that the reported result fell above the IDL/MDL but below the CRDL.	Form 1, and EDD
M	The qualifier is used to indicate that the replicate injection readings of the GFAA sample analysis do not agree within 20% relative standard deviation (RSD) or coefficient of variation (CV).	Form 1, and EDD
N	This qualifier is used to indicate that the matrix or pre-digested spike sample recovery for an analyte is not within the specified control limit.	Form 1, and EDD
S	The reported value was determined by the Method of Standard Addition (MSA).	Form 1, and EDD
U	The analyte's result was less than the IDL/MDL.	C of A, Form 1, and EDD
W	Post-digestion spike for GFAA analysis is out of control limits (85%-115%), while sample results are less than 50% of the spike absorbance.	EDD, and Form 5, part 2
X	Other reporting flag as defined in report narrative.	Form 1, and EDD
**	This qualifier is used to indicate that the Laboratory Control Sample (LCS) recovery for an analyte is outside of the specified limits.	QC Summary Report

All surrogate recoveries and acceptance ranges are reported at the bottom of Form 2 or C of A.
Any recoveries falling outside the acceptance range will be flagged with a **.
All flags do not apply to QC Summary and Certificate of Analysis packages.

SEP 24 '99 11:42AM TETRA TECH NUS/FALMOUTH P.2

Katahdin
340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400
Fax: (207) 775-4029

9907724 / **CHAIN of CUSTODY**

PLEASE PRINT IN PEN — Page ___ of ___

Client: Katahdin / Tetra Tech NUS | Contact: Bryan Howe | Phone #: (843) 814 9080 | Fax #: ( )

Address: NH 21 Ave H | City: N. Charleston | State: SC | Zip Code: 2944

Purchase Order #: | Proj. Name / No.: | Katahdin Quote #:

Bill (if different than above): | Address:

Sampler (Print / Sign): Jeff Hamilton / Jeff Ayc | Copies To:

LAB USE ONLY — WORK ORDER #: | KATAHDIN PROJECT MANAGER:

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP °C: ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd.	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: 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
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COMMENTS:

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	7/21/99 18:20				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	7/21/99 18:20				

INSOURCE INC. ☎ (207) 782-3311
IN 6 CHN-OF-CSTDY

FILE COPY

FEDERAL SAMPLE RECEIPT REVIEW

Client KATA Received by PAD Date 7/22/99

GEL COOLER ___ GEL POLY COOLER ___ CLIENT COOLER ✓ OTHER ___

SAMPLE REVIEW CRITERIA	YES	NO	COMMENTS/QUALIFIERS
1. Were shipping containers received intact and sealed? If no, notify Project Manager	✓		
2. Was the Shipment screened following the radiochemistry survey procedure (EPI SOP S-0071)?	✓		
Were the survey results negative? If no, notify Project Manager	✓		
Are any of the samples identified by the client as radioactive? If yes, did client provide RAD activity?		✓	
3. Were chain of custody documents included?	✓		
4. Were chain of custody documents completed correctly? (Ink, signed, match containers)	✓		
5. Were all sample containers properly labeled?	✓		
6. Were proper sample containers received?	✓		
7. Preserved samples checked for pH?	✓		
8. Were samples preserved correctly? If no, list samples & tests	✓		
9. Shipping container temperature checked?	✓		
10. Was shipping container temperature within specifications (4°± 2° C) If no, notify Project Manager	✓		4°C
11. Is temperature documented on the Chain of Custody?	—	—	
12. Were samples received within holding time? If No, notify Project Manager	✓		
13. Were VOA vials free of headspace?	—	—	
14. ARCOC# IF REQUIRED	—	—	
15. SDG# IF REQUIRED			

REVIEW P. Power DATE 7/22/99 (SA - SEALS ATTACHED) NSA - NO SEALS ATTACHED

Case Narrative for
KATA
SDG# 97724W

TOTAL PETROLEUM HYDROCARBONS

Analytical Batch Number: 155508

Analytical Method: SW846 9070

Laboratory Number	Sample Description
9907724-01	20GLM0101
QC636718	Blank
QC636719	Laboratory Control Sample
QC636720	Laboratory Control Sample Duplicate

Instrument Calibration:

The balance was properly calibrated.

Holding Time:

All samples were analyzed within the required holding time.

Blanks:

No target analytes were detected in the method blank above the required acceptance limit.

Laboratory Control Samples:

All analyte recoveries in the laboratory control sample were within the required acceptance limits. All analytes in the laboratory control sample duplicate were within the required acceptance limits for relative percent difference.

Dilutions:

None of the samples were diluted.

Non Conformance Reports:

There were no Nonconformance Reports associated with this batch.

The preceding narrative has been reviewed by:_____ Date:_____

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: August 09, 1999

Sample ID	: 20GLM0101
Lab ID	: 9907724-01
Matrix	: Water
Date Collected	: 07/21/99
Date Received	: 07/22/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	J	2.73	1.22	5.00	mg/l	1.0	AAT	08/09/99	1137	155508	1

M = Method	Method-Description
M 1	SW846 9070

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

QC Summary Report

Project Description: Former Naval Complex

cc: KATA00199 Lab. Sample ID: 9907724-01 Report Date: August 09, 1999 Page 1 of 1

Sample/Parameter	Type	Batch	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Analyst	Date	Time
General Chemistry													
QC636718	BLANK	155508											
Total Rec. Petro. Hydrocarbons						0.00	mg/l				AAT	08/09/99	1137
QC636719	LCS	155508											
Total Rec. Petro. Hydrocarbons			211			169	mg/l		80.2	(64.3 - 121.)			
QC636720	LCS DUP	155508											
Total Rec. Petro. Hydrocarbons			205			167	mg/l	1.46	81.4	(0.00 - 30.0)			

Notes:
The qualifiers in this report are defined as follows:
J indicates presence of analyte < RL (Report Limit)
U indicates presence of analyte < DL (Detect Limit)

n/a indicates that spike recovery limits do not apply when
sample concentration exceeds spike conc by a factor of 4 or more

Rev. 11/13/98

ANALYST: AAT

DATE: 8/9/99

TIME: 11:37

BATCH: 155508

METHOD: 9070

MATRIX: Mixed

ID	Sample	Client	pH	Sample (mL)	Initial Wt.	Final Wt.	Conc. ppm	Description
Sample	9907724-01	KATA	<2	980.00 ml	99.1696 g	99.1759 g	2.73	
Sample	9908060-01	AFBC	<2	770.00 ml	106.2537 g	106.2603 g	3.90	
BLANK	QC636718	QC	<2	1000.00 ml	92.0272 g	92.0308 g	0.00	blank
LCS	QC636719	QC	<2	1000.00 ml	106.1293 g	106.3022 g	169.30	std
LCS DUP	QC636720	QC	<2	1000.00 ml	92.7823 g	92.9528 g	166.90	QC636719

Run Information

Water Bath Temperature (C)

Initial: 70 Final: 72

Desalcator Time:

In: 13:30 Out: 14:30

Freon Lot#: 990709-01

MS Std ID: NA

LCS Std ID: UDG980812-01

Comments:

R%D 1=

MS 1 %R= NC=

R%D 2=

MS 2 %R= NC=

LCS %R= 80%

LCS D %R= 81%

LCS N.C.= 211

LCS D N.C.= 205

1.46 %

AAT 8-9-99

08/09/99

TPH/OG Logbook
GC-O-417

General Engineering Laboratories

Page 404

19

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CNC CHARLESTON

Sample Receipt

The following samples were received on June 19, 1999 and were logged in under Katahdin Analytical Services work order number WP2989 for a hardcopy due date of July 19, 1999.

KATAHDIN Sample No.	TTNUS Sample Identification	GEL Sample No.
WP2989-1	20SLB050607	9906694-01
WP2989-2	20SLB050607D	9906694-02
WP2989-3	20SLB040304	9906694-03
WP2989-4	20SLB020203	9906694-04
WP2989-5	20SLB030102	9906694-05
WP2989-6	20TL00101	

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.

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

Volatile Organic Analysis

One aqueous and five soil samples were received by the Katahdin Analytical Services, Inc. GC/MS laboratory on June 15, 1999 and were specified to be analyzed by USEPA method 8260B for the analytes benzene, toluene, ethylbenzene, xylenes, MTBE, naphthalene, and EDB.

Analyses for this workorder were performed on the 5972-S and 5972-F instruments. A VSTD050 (50 ppb standard) was used for the continuing calibration standard. Internal standard and surrogate compounds were also spiked at 50 ug/l.

Batch QC (VBLK, and LCS) was performed in each twelve-hour window. Results are included in this data package. The LCS QC samples were spiked with the entire list of compounds quantitated for at 50 ppb. No matrix spike/matrix spike duplicate was performed on any sample in this workorder.

Method 8000B, section 7.5.1.2.1 (Revision 2, 12/96) states, "in those instances where the RSD

340 County Road No. 5
P.O. Box 720, Westbrook, ME 04098
Tel: (207) 874-2400 Fax: (207) 775-4029

http://katahdinlab.com

210 West Road No. 5, Portsmouth, NH 03801
Tel: (603) 431-5777 Fax: (603) 436-3356

for one or more analytes exceeds 20%, the initial calibration curve may still be acceptable if the mean of the RSD values for all analytes in the calibration is less than or equal to 20%." Method 8260B narrows this 20% maximum to 15%.

Two initial calibration curves are reported in this workorder. Both calibrations had several analytes exceeding the maximum allowable 15% RSD. Since the average %RSD values were 8.5% and 11.2%, respectively, the curves were acceptable.

Initial analysis of sample WP2989-4 yielded a surrogate recovery deviation. Reanalysis yielded both internal standard area and surrogate recovery deviations, confirming matrix interference. Both sets of data are included in the data package for this sample.

Several manual integrations were performed due to split peaks; all have been flagged with a "M" (software-generated) on the pertinent quantitation reports. All "M" flags have been dated and initialed by the analyst performing the integration. In addition, all "M" flags have been reviewed and approved by the GC/MS supervisor. Copies of each manual integration are included in the pertinent quantitation reports.

No other protocol deviations were noted by the volatile organics staff.

Semivolatile Organic Analysis

Five soil/sediment samples were received by Katahdin Analytical Services laboratory on June 18, 1999 for analysis in accordance with 8270C for a client specified PAH list of analytes.

Extraction of the soil samples occurred following USEPA method 3550 on June 24, 1999. A laboratory control spike consisting of all TCL analytes spiked into organic free sand, was extracted in the batch, along with a site specific MS/MSD pair on sample WP2989-5.

The initial calibration curves analyzed in this SDG each had some of the target analyte %RSD values exceeding 15 %.

Method 8000B, section 7.5.1.2.1 (Revision 2, 12/96) states, "in those instances where the RSD for one or more analytes exceeds 20%, the initial calibration curve may still be acceptable if the mean of the RSD values for all analytes in the calibration is less than or equal to 20%." Section 7.3.7.1 of method 8270C (revision 3, 12/96) narrows this 20% maximum to 15%.

In the calibration curves analyzed in this SDG, the average %RSD for all analytes was 9.6% making the curve acceptable.

Several manual integrations were performed due to split peaks; all have been flagged with a "M" by the data system. All manual integrations have been dated and initialed by the responsible analyst. Copies of each manual integration are included in the data package. All manual integrations have been reviewed and approved by the GC/MS supervisor.

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Tel: (603) 431-5777 Fax: (603) 436-3356

No other protocol deviations were noted by the semivolatiles organics staff.

Wet Chemistry Analysis

For work order WP2989 the analyses for Total Combustible Organics (TCO) have been performed in accordance with the "Annual Book of ASTM Standards", 1987. Analyses for Solids-Total Residue (TS) for work order WP2989 samples have been performed in accordance with "Contract Laboratory Program Statement of Work for Inorganic Analysis".

All analyses were performed within analytical hold time. No protocol deviations were noted by the Wet Chemistry laboratory staff.

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 Laboratory Manager and/or his designee, as verified by the following signature.

Yania Crouch
Authorized Signature
08/13/99

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P.O. Box 720, Westbrook, ME 04098
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210 West Road No. 5, Portsmouth, NH 03801
Tel: (603) 431-5777 Fax: (603) 436-3356

KATAHDIN ANALYTICAL SERVICES, INC.
SAMPLE RECEIPT CONDITION REPORT
Tel. (207) 874-2400
Fax (207) 775-4029

LAB (WORK ORDER) # WP 2989

PAGE: 1 OF 1

COOLER: 1 OF 1

CLIENT: Tetratech SC

PROJECT: CNC Charleston

COC# —
SDG# —
DATE / TIME RECEIVED: 06-19-99 ~ 1030
DELIVERED BY: KATAHDIN
RECEIVED BY: BKR
LIMS ENTRY BY: BKR
LIMS REVIEW BY / PM: AC

	YES	NO	EXCEPTIONS	COMMENTS	RESOLUTION
1. CUSTODY SEALS PRESENT / INTACT?	✓				
2. CHAIN OF CUSTODY PRESENT IN THIS COOLER?	✓				
3. CHAIN OF CUSTODY SIGNED BY CLIENT?	✓				
4. CHAIN OF CUSTODY MATCHES SAMPLES?	✓				
5. TEMPERATURE BLANKS PRESENT?	✓			TEMP BLANK TEMP (°C)= 0.5	AC notified Dave Calligan by fax 6/21/99
6. SAMPLES RECEIVED AT 4°C +/- 2? ICE / ICE PACKS PRESENT (Y) or N?		✓		COOLER TEMP (°C)= NA (RECORD COOLER TEMP ONLY IF TEMP BLANK IS NOT PRESENT)	
7. VOLATILES FREE OF HEADSPACE?			✓		
8. TRIP BLANK PRESENT IN THIS COOLER	✓				
9. PROPER SAMPLE CONTAINERS AND VOLUME?	✓				
10. SAMPLES WITHIN HOLD TIME UPON RECEIPT?	✓				
11. SAMPLES PROPERLY PRESERVED[1]?	✓				
12. CORRECTIVE ACTION REPORT FILED?		✓	N/A		

13. ANALYTICAL PROGRAMS (CIRCLE ONE) COMMERCIAL CLP HAZWRAP (NFESC) ACOE AFCEE OTHER (STATE OF ORIGIN):

LOG - IN NOTES[1]:

(1) Use this ...e (and additional sheets if necessary) to document samples that are received bro... r compromised, C-O-C discrepancies, radiation checks, residual chlorine check, ... of pH check if ...ed. If samples required pH adjustment, record volume and type of preservative a...

Katahdin
ANALYTICAL SERVICES
340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE PRINT IN PEN

Client: Tetra Tech NUS
Contact: Bryn Howze
Phone #: (843) 554-4925 ( )
Fax #:
Address: NH-21 Ave. H
City: N. Charleston
State: SC
Zip Code: 29405
Purchase Order #:
Proj. Name / No.:
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Roger Franklin / [signature]
Copies To:

LAB USE ONLY
WORK ORDER #: WP2989
KATAHDIN PROJECT MANAGER:
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 (1999)	Matrix	No. of Cntrs.	BTEX	PAH	Metals	Grain Size	FOC					FID Readings
	2ØSLBØ5Ø6Ø7	6/18 / 1510	S	6	X	X	X		X					900
	2ØSLBØ5Ø6Ø7D	6/18 / 1510	S	6	X	X	X		X					900
	2ØSLBØ4Ø3Ø4	6/18 / 1410	S	7	X	X	X	X						0
	2ØSLBØ2Ø2Ø3	6/18 / 1500	S	6	X	X	X							0
	ØSLBØ3Ø1Ø2	6/18 / 1420	S	6	X	X	X							0
	2ØTLØØ1Ø1	6/18 / —	H_2O	2	X									
		/												
		/												
		/												
		/												
		/												
		/												
		/												
		/												
		/												
		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	6/18/99 1800	[signature]		6-19-99 1030	[signature]
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORDER NO WP-2989

Project Manager: Andrea J. Colby
ORDER DATE: 06/19/99
PHONE: 850/385-98[illegible]
FAX: 850/385-98
DUE: 19 JUL
FAC.ID: CNC CHARLESTON

REPORT TO: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

INVOICE: ACCOUNTS PAYABLE
TETRA TECH NUS, INC.
FOSTER PLAZA 7, 661 ANDERSEN DR.
PITTSBURGH, PA 15220

PHONE: 412/921-7090
PO: N7912-P99264

PROJECT: CTO#68

SAMPLED BY: CLIENT DELIVERED BY: FEDEX DISPOSE: AFTER 18 AUG

ITEM	LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATRIX
1	WP2989-1	20SLB050607	18 JUN 1510	19 JUN	SL
	WP2989-2	20SLB050607D	18 JUN 1510		

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
Volatile Organics by 8260B	SW8260	2	85.00	170.00
Solids-Total Residue (TS)	CLP/CIP SO	2	0.00	0.00
Polynuclear Aromatic Hydrocarbons	EPA 8270	2	135.00	270.00
Target Analyte List Metals, Total		2	100.00	200.00
Total Combustible Organics	ASTM D2974	2	30.00	60.00
Wet Lab Subcontract		2	135.00	270.00
TOTALS		2	485.00	970.00

	LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATR[illegible]
2	WP2989-3	20SLB040304	18 JUN 1410	19 JUN	SL

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
Volatile Organics by 8260B	SW8260	1	85.00	85.00
Polynuclear Aromatic Hydrocarbons	EPA 8270	1	135.00	135.00
Target Analyte List Metals, Total		1	100.00	100.00
Wet Lab Subcontract		1	185.00	185.00
Solids-Total Residue (TS)	CLP/CIP SO	1	0.00	0.00
TOTALS		1	505.00	505.00

LABORATORY ORDER CONTINUED ON PAGE 2

0000007
N/6/23/99

ORDER NO WP-2989

Project Manager: Andrea J. Colby
ORDER DATE: 06/19/99
PHONE: 850/385-9899
FAX: 850/385-9860
DUE: 19 JUL
FAC.ID: CNC CHARLESTON

REPORT TO: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

INVOICE: ACCOUNTS PAYABLE
TETRA TECH NUS, INC.
FOSTER PLAZA 7, 661 ANDERSEN DR.
PITTSBURGH, PA 15220

PHONE: 412/921-7090
PO: N7912-P99264

PROJECT: CTO#68

SAMPLED BY: CLIENT DELIVERED BY: FEDEX DISPOSE: AFTER 18 AUG

	LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATRIX
3	WP2989-4	20SLB020203	18 JUN 1500	19 JUN	SL
	WP2989-5	20SLB030102	18 JUN 1420		

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
Volatile Organics by 8260B	SW8260	2	85.00	170.00
Polynuclear Aromatic Hydrocarbons	EPA 8270	2	135.00	270.00
Solids-Total Residue (TS)	CLP/CIP SO	2	0.00	0.00
Target Analyte List Metals, Total		2	100.00	200.00
Wet Lab Subcontract		2	75.00	150.00
TOTALS		2	395.00	790.00

LOG NUMBER	SAMPLE DESCRIPTION	SAMPLED DATE/TIME	RECEIVED	MATRIX
WP2989-6	20TL00101	18 JUN	19 JUN	SL

DETERMINATION	METHOD	QTY	PRICE	AMOUNT
Volatile Organics by 8260B	SW8260	1	85.00	85.00

ORDER NOTE: QC-IV NFESC-D
DD(KAS007QC-DB3)
CNC CHARLESTON

REPORT COPY: MS. LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.
PITTSBURGH,PA 15220
REPORT & DISK

INVOICE: With Report

TOTAL ORDER AMOUNT $2,350.00
This is NOT an Invoice

A... BKR/WEST.AJC(dw)
06-23Please contact KATAHDIN ANALYTICAL SERVICES promptly if you have any questi

0000008
AR 6/23/99

CASE NARRATIVE
for
Katahdin Analytical
Westbrook, ME
Former Charleston Naval Complex Site
SDG #96694

July 13, 1999

Laboratory Identification:

General Engineering Laboratories, Inc. (GEL)

Mailing Address:

P.O. Box 30712
Charleston, SC 29417

Express Mail Delivery and Shipping Address:

2040 Savage Rd
Charleston, SC 29414

Telephone Number:

(843) 556-8171

Summary:

Sample receipt

The samples from the former Charleston Naval Complex site arrived at General Engineering Laboratories, Inc., Charleston, SC on June 18, 1999, for environmental analyses. All sample containers arrived without any visible signs of tampering or breakage. The samples were delivered with chain of custody documentation and signatures.

The following samples were received by the laboratory:

Laboratory Identification	Sample Description
9906694-01	20SLB050607
9906694-02	20SLB050607D
9906694-03	20SLB040304
9906694-04	20SLB020203
9906694-05	20SLB030102

Case Narrative

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Internal Chain of Custody:

Custody was maintained for all samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, and General Chemistry.

The following are definitions of reporting limits used at General Engineering Laboratories:

DL — Detection Limit: The minimum level of an analyte that can be determined (identified not quantified) with 99% confidence. The values are normally achieved by preparing and analyzing seven aliquots of laboratory water spiked 1 to 5 times the estimated MDL, taking the standard deviation and multiplying it against the one-tailed t-statistic at 99%. This computed value is then verified for reasonableness by repeating the study using the concentration found in the initial study, calculating an F-ratio, and computing the final limit. Sample specific preparation and dilution factors are applied to these limits when they are reported.

The detection limit is the minimum concentration of a substance that can be identified, measured, and reported with 99% confidence that the analyte concentration is above zero. It answers the question "Is It Present."

QL — Quantitation Limit: The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The QL is generally 5 to 10 times the MDL. However, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes the QL analyte concentration is selected as the lowest non-zero standard in the calibration curve.

Sample QL's are highly matrix-dependent. Sample specific preparation and dilution factors are applied to these limits when they are reported.

The QL is always $\geq$ DL.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Valerie S. Davis
Project Manager

fc:saic9906694%

Case Narrative for
KATA
SDG# 96694

TOTAL ORGANIC CARBON

Analytical Batch Number: 152551

Analytical Method: SW846 9060 Modified

Laboratory Number	Sample Description
9906694-01	20SLB050607
9906694-02	20SLB050607D
QC624957	Blank
QC624958	Duplicate of 9906925-03
QC624959	Post Spike of 9906925-03
QC624960	Laboratory Control Sample

Sample Preparation:

All samples were prepared in accordance with accepted procedures. The method quoted is only for liquid samples. It is modified to handle soils analysis.

Instrument Calibration:

The instrument used was a Dohrmann DC-190 high temperature combustion TOC analyzer with a Dohrmann solids boat sampler. The instrument was properly calibrated on the day of the analysis.

Holding Time:

All samples were analyzed within the required holding time.

Blanks:

No target analytes were detected in the method blank above the required acceptance limit.

Spike Analyses:

The post spike was run on the following Sample Number from another SDG.

9906925-03

All analyte recoveries in the post spike was within the required acceptance limits.

Laboratory Control Samples:

All analyte recoveries in the laboratory control sample were within the required acceptance limits.

Sample Duplicates:

All sample duplicate results were within the required acceptance limits.

Dilutions:

None of the samples were diluted.

Non Conformance Reports:

There were no Nonconformance Reports associated with this batch.

Additional Comments:

TOC solid samples are tested to determine if inorganic carbon such as carbonates and bicarbonates are present in the sample. If so, the sample is acidified to remove the inorganic carbon, then dried in a low temperature oven. Because the sample portion is dried before analysis, the percent moisture correction is not applied to the TOC solid result.

TOTAL PETROLEUM HYDROCARBONS

Analytical Batch Number: 151905

Analytical Method: SW846 9071A

Laboratory Number	Sample Description
9906694-01	20SLB050607
9906694-02	20SLB050607D
9906694-03	20SLB040304
9906694-04	20SLB020203
9906694-05	20SLB030102
QC622438	Blank
QC622439	Laboratory Control Sample
QC622440	Matrix Spike of 9906485-01
QC622441	Duplicate of 9906485-01
QC622442	Matrix Spike of 9906694-01
QC622443	Duplicate of 9906694-01

Instrument Calibration:

Because there is no EPA method for TPH-IR analysis of solid samples, the aqueous method was modified. The samples were prepped by sonication in accordance with SW846 3550.

Holding Time:

All samples were analyzed within the required holding time.

Blanks:

No target analytes were detected in the method blank above the required acceptance limit.

Spike Analyses:

The matrix spikes were run on the following Sample Numbers.

9906694-01 and 9906485-01

All analyte recoveries in the matrix spikes were within the required acceptance limits.

Laboratory Control Samples:

All analyte recoveries in the laboratory control sample were within the required acceptance limits.

Sample Duplicates:

All sample duplicate results were within the required acceptance limits.

Dilutions:

None of the samples were diluted.

Non Conformance Reports:

There were no Nonconformance Reports associated with this batch.

The preceding narratives have been reviewed by: Date: 07/11/99

General Engineering Laboratories, Inc.
2040 Savage Road
Charleston, South Carolina 29407
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

CHAIN OF CUSTODY RECORD

Page 1 of 1

9906694 1.

Client Name/Facility Name: Katahdin

Collected by/Company: Tetra tech NUS

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	TPH		Remarks	
01	2ΦSLBΦ5Φ6Φ7	6/18/99	1510		X		X	2		X														X			.1
02	2ΦSLBΦ5Φ6Φ7D	6/18/99	1510		X		X	2		X														X			.1
03	2ΦSLBΦ4Φ3Φ4	6/18/99	1410		X		X	1																X			.2
04	2ΦSLBΦ2Φ2Φ3	6/18/99	1500		X		X	1																X			.2
05	2ΦSLBΦ3Φ1Φ2	6/18/99	1420		X		X	1																X			.2

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[illegible]	6/18/99	1755					

Relinquished by:	Date:	Time:	Received by lab by:	Date:	Time:	Remarks:
			[illegible]	6/18/99	1755	

White = sample collector Yellow = file Pink = with report

5

FEDERAL SAMPLE RECEIPT REVIEW

Client KATA Received by [illegible] Date 6/18/99

GEL COOLER ✓ GEL POLY COOLER___ CLIENT COOLER___ OTHER___

SAMPLE REVIEW CRITERIA	YES	NO	COMMENTS/QUALIFIERS
1. Were shipping containers received intact and sealed? If no, notify Project Manager	✓		
2. Was the Shipment screened following the radiochemistry survey procedure (EPI SOP S-007)?	✓		
Were the survey results negative? If no, notify Project Manager	✓		
Are any of the samples identified by the client as radioactive? If yes, did client provide RAD activity?		✓	
3. Were chain of custody documents included?	✓		
4. Were chain of custody documents completed correctly? (Ink, signed, match containers)	✓		
5. Were all sample containers properly labeled?	✓		
6. Were proper sample containers received?	✓		
7. Preserved samples checked for pH?	—	—	Soil
8. Were samples preserved correctly? If no, list samples & tests	—	—	
9. Shipping container temperature checked?	✓		
10. Was shipping container temperature within specifications (4°± 2° C) If no, notify Project Manager	✓		
11. Is temperature documented on the Chain of Custody?	—	—	
12. Were samples received within holding time? if No, notify Project Manger	✓		
13. Were VOA vials free of headspace?	—	—	
14. ARCOC# IF REQUIRED	—	—	
15. SDG# IF REQUIRED	✓		

REVIEW [illegible] DATE 6/18/99 SA - SEALS ATTACHED NSA - NO SEALS ATTACHED

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-1
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 53
Method: SW8260
Date Analyzed: 6/22/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB050607	SL	6/18/99	6/19/99	6/22/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<12	ug/Kg	2.4	12	5
TOLUENE	<12	ug/Kg	2.4	12	5
1,2-DIBROMOETHANE	<12	ug/Kg	2.4	12	5
ETHYLBENZENE	<12	ug/Kg	2.4	12	5
NAPHTHALENE	<12	ug/Kg	2.4	12	5
MTBE	<12	ug/Kg	2.4	12	5
TOTAL XYLENES	<12	ug/Kg	2.4	12	5
DIBROMOFLUOROMETHANE	98	%	2.4		
1,2-DICHLOROETHANE-D4	95	%	2.4		
TOLUENE-D8	96	%	2.4		
BROMOFLUOROBENZENE	85	%	2.4		

ort Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-2
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 54
Method: SW8260
Date Analyzed: 6/22/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB050607D	SL	6/18/99	6/19/99	6/22/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<14	ug/Kg	2.8	14	5
TOLUENE	<14	ug/Kg	2.8	14	5
1,2-DIBROMOETHANE	<14	ug/Kg	2.8	14	5
ETHYLBENZENE	<14	ug/Kg	2.8	14	5
NAPHTHALENE	<14	ug/Kg	2.8	14	5
MTBE	<14	ug/Kg	2.8	14	5
TOTAL XYLENES	<14	ug/Kg	2.8	14	5
DIBROMOFLUOROMETHANE	90	%	2.8		
1,2-DICHLOROETHANE-D4	82	%	2.8		
TOLUENE-D8	89	%	2.8		
P-BROMOFLUOROBENZENE	68	%	2.8		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-3
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 58
Method: SW8260
Date Analyzed: 6/22/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB040304	SL	6/18/99	6/19/99	6/22/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<10	ug/Kg	2.0	10	5
TOLUENE	<10	ug/Kg	2.0	10	5
1,2-DIBROMOETHANE	<10	ug/Kg	2.0	10	5
ETHYLBENZENE	<10	ug/Kg	2.0	10	5
NAPHTHALENE	<10	ug/Kg	2.0	10	5
MTBE	<10	ug/Kg	2.0	10	5
TOTAL XYLENES	<10	ug/Kg	2.0	10	5
DIBROMOFLUOROMETHANE	96	%	2.0		
1,2-DICHLOROETHANE-D4	91	%	2.0		
TOLUENE-D8	94	%	2.0		
BROMOFLUOROBENZENE	82	%	2.0		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-4
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 85
Method: SW8260
Date Analyzed: 6/22/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB020203	SL	6/18/99	6/19/99	6/22/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.2	6	5
TOLUENE	<6	ug/Kg	1.2	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.2	6	5
ETHYLBENZENE	<6	ug/Kg	1.2	6	5
NAPHTHALENE	<6	ug/Kg	1.2	6	5
MTBE	<6	ug/Kg	1.2	6	5
TOTAL XYLENES	<6	ug/Kg	1.2	6	5
DIBROMOFLUOROMETHANE	77	%	1.2		
1,2-DICHLOROETHANE-D4	73	%	1.2		
TOLUENE-D8	72	%	1.2		
BROMOFLUOROBENZENE	$48	%	1.2		

Report Notes: $

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-4RE
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 85
Method: SW8260
Date Analyzed: 6/23/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB020203	SL	6/18/99	6/19/99	6/23/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.1	6	5
TOLUENE	<6	ug/Kg	1.1	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.1	6	5
ETHYLBENZENE	<6	ug/Kg	1.1	6	5
NAPHTHALENE	<6	ug/Kg	1.1	6	5
MTBE	<6	ug/Kg	1.1	6	5
TOTAL XYLENES	<6	ug/Kg	1.1	6	5
DIBROMOFLUOROMETHANE	80	%	1.1		
1,2-DICHLOROETHANE-D4	92	%	1.1		
TOLUENE-D8	$66	%	1.1		
BROMOFLUOROBENZENE	66	%	1.1		

ort Notes: $, O-13

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-5
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 85
Method: SW8260
Date Analyzed: 6/22/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB030102	SL	6/18/99	6/19/99	6/22/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.3	6	5
TOLUENE	<6	ug/Kg	1.3	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.3	6	5
ETHYLBENZENE	<6	ug/Kg	1.3	6	5
NAPHTHALENE	<6	ug/Kg	1.3	6	5
MTBE	<6	ug/Kg	1.3	6	5
TOTAL XYLENES	<6	ug/Kg	1.3	6	5
DIBROMOFLUOROMETHANE	95	%	1.3		
1,2-DICHLOROETHANE-D4	90	%	1.3		
OLUENE-D8	114	%	1.3		
BROMOFLUOROBENZENE	99	%	1.3		

ort Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-6
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: -
Method: SW8260
Date Analyzed: 6/21/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20TL00101	SL	6/18/99	6/19/99	6/21/99	KMC	5035	KMC

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/Kgdrywt	1.0	5	5
TOLUENE	<5	ug/Kgdrywt	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/Kgdrywt	1.0	5	5
ETHYLBENZENE	<5	ug/Kgdrywt	1.0	5	5
NAPHTHALENE	<5	ug/Kgdrywt	1.0	5	5
MTBE	<5	ug/Kgdrywt	1.0	5	5
TOTAL XYLENES	<5	ug/Kgdrywt	1.0	5	5
DIBROMOFLUOROMETHANE	119	%	1.0		
1,2-DICHLOROETHANE-D4	124	%	1.0		
OLUENE-D8	110	%	1.0		
BROMOFLUOROBENZENE	107	%	1.0		

ort Notes:

KATAHDIN ANALYTICAL SERVICES

Summary of Report Notes

Report Note	Note Text
$	'$' flag denotes surrogate compound recovery is out of criteria. Re-extraction or re-analysis confirmed matrix interference.
O-13	Internal standard area(s) are out of criteria. Reanalysis confirmedmatrix interference.

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Katahdin Analytical Services

SDG No.: WP2989

Matrix: WATER

Client Sample ID	Lab Sample ID	SMC1 (DFM) #	SMC2 (DCA) #	SMC3 (TOL) #	SMC4 (BFB) #	Total Out
LCSS21A	LCSS21A	110	114	114	121	0
VBLKS21A	VBLKS21A	109	116	102	106	0

QC LIMITS

SMC1	(DFM)	=	DIBROMOFLUOROMETHANE	(75-129)
SMC2	(DCA)	=	1,2-DICHLOROETHANE-D4	(65-135)
SMC3	(TOL)	=	TOLUENE-D8	(82-120)
SMC4	(BFB)	=	P-BROMOFLUOROBENZENE	(69-125)

Column to be used to flag recovery value

* Values are outside of QC limits

2A

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Katahdin Analytical Services

SDG No.: WP2989

Matrix: SOIL

Client Sample ID	Lab Sample ID	SMC1 (DFM) #	SMC2 (DCA) #	SMC3 (TOL) #	SMC4 (BFB) #	Total Out
LCSF22A	LCSF22A	104	96	96	97	0
VBLKF22A	VBLKF22A	106	101	102	96	0
20SLB050607	WP2989-1	98	95	96	85	0
20SLB050607D	WP2989-2	90	82	89	68	0
20SLB040304	WP2989-3	96	91	94	82	0
20SLB020203	WP2989-4	77	73	72	48 *	1
20SLB030102	WP2989-5	95	90	114	99	0
LCSF23A	LCSF23A	98	91	99	100	0
VBLKF23A	VBLKF23A	100	94	99	93	0
20SLB020203RE	WP2989-4RE	80	92	66 *	66	1
20TL00101	WP2989-6	119	124	110	107	0

QC LIMITS

SMC1	(DFM)	=	DIBROMOFLUOROMETHANE	(69-148)
SMC2	(DCA)	=	1,2-DICHLOROETHANE-D4	(66-149)
SMC3	(TOL)	=	TOLUENE-D8	(68-147)
SMC4	(BFB)	=	P-BROMOFLUOROBENZENE	(64-152)

Column to be used to flag recovery value

* Values are outside of QC limits

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKS21A
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: N/A
Method: SW8260
Date Analyzed: 6/21/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKS21A	AQ	-	-	6/21/99	KMC	5030	KMC

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	109	%	1.0		
1,2-DICHLOROETHANE-D4	116	%	1.0		
OLUENE-D8	102	%	1.0		
-BROMOFLUOROBENZENE	106	%	1.0		

port Notes:

1000184

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKF22A
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 100
Method: SW8260
Date Analyzed: 6/22/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKF22A	SL	-	-	6/22/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/Kg	1.0	5	5
TOLUENE	<5	ug/Kg	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/Kg	1.0	5	5
ETHYLBENZENE	<5	ug/Kg	1.0	5	5
NAPHTHALENE	<5	ug/Kg	1.0	5	5
MTBE	<5	ug/Kg	1.0	5	5
TOTAL XYLENES	<5	ug/Kg	1.0	5	5
DIBROMOFLUOROMETHANE	106	%	1.0		
1,2-DICHLOROETHANE-D4	101	%	1.0		
TOLUENE-D8	102	%	1.0		
4-BROMOFLUOROBENZENE	96	%	1.0		

Report Notes:

1000191

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKF23A
SDG: WP2989
Report Date: 8/5/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 100
Method: SW8260
Date Analyzed: 6/23/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKF23A	SL	-	-	6/23/99	KRT	5030	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/Kg	1.0	5	5
TOLUENE	<5	ug/Kg	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/Kg	1.0	5	5
ETHYLBENZENE	<5	ug/Kg	1.0	5	5
NAPHTHALENE	<5	ug/Kg	1.0	5	5
MTBE	<5	ug/Kg	1.0	5	5
TOTAL XYLENES	<5	ug/Kg	1.0	5	5
DIBROMOFLUOROMETHANE	100	%	1.0		
1,2-DICHLOROETHANE-D4	94	%	1.0		
OLUENE-D8	99	%	1.0		
ROMOFLUOROBENZENE	93	%	1.0		

rt Notes:

1000197

Katahdin Analytical Services
8260 LCS Recovery Sheet

Lab File: S5137 **Sample ID: LCSS21A** **Date Run: 6/21/99**

Analyst: KMC **Time Injected 8:38:00 AM** **Matrix: AQ**

Compound Name	Spike Amt (ug/L)	Result (ug/L)	Rec (%)	Limits (%)
1,2-DIBROMOETHANE	50	53.6	107	60-140
BENZENE	50	51.2	102	60-140
ETHYLBENZENE	50	56.1	112	60-140
MTBE	50	51.1	102	60-140
NAPHTHALENE	50	54.0	108	60-140
TOLUENE	50	54.0	108	60-140
TOTAL XYLENES	150	168	112	60-140

*** Out of Limits**

Katahdin Analytical Services
8260 LCS Recovery Sheet

Lab File: F1059 **Sample ID: LCSF22A** **Date Run: 6/22/99**

Analyst: KRT **Time Injected 1:17:00 PM** **Matrix: SL**

Compound Name	Spike Amt (ug/Kg)	Result (ug/Kg)	Rec (%)	Limits (%)
1,2-DIBROMOETHANE	50	48.3	96	60-140
BENZENE	50	47.7	95	60-140
ETHYLBENZENE	50	48.0	96	60-140
MTBE	50	52.4	105	60-140
NAPHTHALENE	50	52.3	104	60-140
TOLUENE	50	46.7	93	60-140
TOTAL XYLENES	150	142	94	60-140

*** Out of Limits** *1*

Katahdin Analytical Services
8260 LCS Recovery Sheet

Lab File: F1067 **Sample ID: LCSF23A** **Date Run: 6/23/99**

Analyst: KRT **Time Injected 8:17:00 AM** **Matrix: SL**

Compound Name	Spike Amt (ug/Kg)	Result (ug/Kg)	Rec (%)	Limits (%)
1,2-DIBROMOETHANE	50	51.5	103	60-140
BENZENE	50	50.8	102	60-140
ETHYLBENZENE	50	53.2	106	60-140
MTBE	50	51.7	103	60-140
NAPHTHALENE	50	52.4	105	60-140
TOLUENE	50	50.6	101	60-140
TOTAL XYLENES	150	159	106	60-140

*** Out of Limits**

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-1
SDG: WP2989
Report Date: 8/6/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 53
Method: EPA 8270
Date Analyzed: 7/26/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB050607	SL	6/18/99	6/19/99	6/24/99	PMM	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<630	ug/Kg	1.9	630	330
2-METHYLNAPHTHALENE	<630	ug/Kg	1.9	630	330
ACENAPHTHYLENE	<630	ug/Kg	1.9	630	330
ACENAPHTHENE	<630	ug/Kg	1.9	630	330
FLUORENE	<630	ug/Kg	1.9	630	330
PHENANTHRENE	<630	ug/Kg	1.9	630	330
ANTHRACENE	<630	ug/Kg	1.9	630	330
FLUORANTHENE	<630	ug/Kg	1.9	630	330
PYRENE	<630	ug/Kg	1.9	630	330
ENZO[A]ANTHRACENE	<630	ug/Kg	1.9	630	330
HRYSENE	<630	ug/Kg	1.9	630	330
BENZO[B]FLUORANTHENE	<630	ug/Kg	1.9	630	330
BENZO[K]FLUORANTHENE	<630	ug/Kg	1.9	630	330
BENZO[A]PYRENE	<630	ug/Kg	1.9	630	330
INDENO[1,2,3-CD]PYRENE	<630	ug/Kg	1.9	630	330
DIBENZ[A,H]ANTHRACENE	<630	ug/Kg	1.9	630	330
BENZO[G,H,I]PERYLENE	<630	ug/Kg	1.9	630	330
NITROBENZENE-D5	39	%	1.9		
2-FLUOROBIPHENYL	56	%	1.9		
TERPHENYL-D14	70	%	1.9		

port Notes:

0000009

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-2
SDG: WP2989
Report Date: 8/6/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 54
Method: EPA 8270
Date Analyzed: 7/26/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB050607D	SL	6/18/99	6/19/99	6/24/99	PMM	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<590	ug/Kg	1.8	590	330
2-METHYLNAPHTHALENE	<590	ug/Kg	1.8	590	330
ACENAPHTHYLENE	<590	ug/Kg	1.8	590	330
ACENAPHTHENE	<590	ug/Kg	1.8	590	330
FLUORENE	<590	ug/Kg	1.8	590	330
PHENANTHRENE	<590	ug/Kg	1.8	590	330
ANTHRACENE	<590	ug/Kg	1.8	590	330
FLUORANTHENE	<590	ug/Kg	1.8	590	330
PYRENE	<590	ug/Kg	1.8	590	330
BENZO[A]ANTHRACENE	<590	ug/Kg	1.8	590	330
CHRYSENE	<590	ug/Kg	1.8	590	330
BENZO[B]FLUORANTHENE	<590	ug/Kg	1.8	590	330
BENZO[K]FLUORANTHENE	<590	ug/Kg	1.8	590	330
BENZO[A]PYRENE	<590	ug/Kg	1.8	590	330
INDENO[1,2,3-CD]PYRENE	<590	ug/Kg	1.8	590	330
DIBENZ[A,H]ANTHRACENE	<590	ug/Kg	1.8	590	330
BENZO[G,H,I]PERYLENE	<590	ug/Kg	1.8	590	330
NITROBENZENE-D5	47	%	1.8		
2-FLUOROBIPHENYL	57	%	1.8		
TERPHENYL-D14	85	%	1.8		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-3
SDG: WP2989
Report Date: 8/6/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 58
Method: EPA 8270
Date Analyzed: 7/26/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB040304	SL	6/18/99	6/19/99	6/24/99	PMM	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<560	ug/Kg	1.7	560	330
2-METHYLNAPHTHALENE	<560	ug/Kg	1.7	560	330
ACENAPHTHYLENE	<560	ug/Kg	1.7	560	330
ACENAPHTHENE	<560	ug/Kg	1.7	560	330
FLUORENE	<560	ug/Kg	1.7	560	330
PHENANTHRENE	<560	ug/Kg	1.7	560	330
ANTHRACENE	<560	ug/Kg	1.7	560	330
FLUORANTHENE	<560	ug/Kg	1.7	560	330
PYRENE	<560	ug/Kg	1.7	560	330
BENZO[A]ANTHRACENE	<560	ug/Kg	1.7	560	330
CHRYSENE	<560	ug/Kg	1.7	560	330
BENZO[B]FLUORANTHENE	<560	ug/Kg	1.7	560	330
BENZO[K]FLUORANTHENE	<560	ug/Kg	1.7	560	330
BENZO[A]PYRENE	<560	ug/Kg	1.7	560	330
INDENO[1,2,3-CD]PYRENE	<560	ug/Kg	1.7	560	330
DIBENZ[A,H]ANTHRACENE	<560	ug/Kg	1.7	560	330
BENZO[G,H,I]PERYLENE	<560	ug/Kg	1.7	560	330
NITROBENZENE-D5	42	%	1.7		
2-FLUOROBIPHENYL	57	%	1.7		
TERPHENYL-D14	84	%	1.7		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-4
SDG: WP2989
Report Date: 8/6/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 85
Method: EPA 8270
Date Analyzed: 7/27/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB020203	SL	6/18/99	6/19/99	6/24/99	PMM	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<400	ug/Kg	1.2	400	330
2-METHYLNAPHTHALENE	<400	ug/Kg	1.2	400	330
ACENAPHTHYLENE	<400	ug/Kg	1.2	400	330
ACENAPHTHENE	<400	ug/Kg	1.2	400	330
FLUORENE	<400	ug/Kg	1.2	400	330
PHENANTHRENE	<400	ug/Kg	1.2	400	330
ANTHRACENE	<400	ug/Kg	1.2	400	330
FLUORANTHENE	<400	ug/Kg	1.2	400	330
PYRENE	<400	ug/Kg	1.2	400	330
BENZO[A]ANTHRACENE	<400	ug/Kg	1.2	400	330
CHRYSENE	<400	ug/Kg	1.2	400	330
BENZO[B]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[K]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[A]PYRENE	<400	ug/Kg	1.2	400	330
INDENO[1,2,3-CD]PYRENE	<400	ug/Kg	1.2	400	330
DIBENZ[A,H]ANTHRACENE	<400	ug/Kg	1.2	400	330
BENZO[G,H,I]PERYLENE	<400	ug/Kg	1.2	400	330
NITROBENZENE-D5	58	%	1.2		
2-FLUOROBIPHENYL	66	%	1.2		
TERPHENYL-D14	85	%	1.2		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP2989-5
SDG: WP2989
Report Date: 8/6/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 85
Method: EPA 8270
Date Analyzed: 7/26/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
20SLB030102	SL	6/18/99	6/19/99	6/24/99	PMM	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<400	ug/Kg	1.2	400	330
2-METHYLNAPHTHALENE	<400	ug/Kg	1.2	400	330
ACENAPHTHYLENE	<400	ug/Kg	1.2	400	330
ACENAPHTHENE	<400	ug/Kg	1.2	400	330
FLUORENE	<400	ug/Kg	1.2	400	330
PHENANTHRENE	<400	ug/Kg	1.2	400	330
ANTHRACENE	<400	ug/Kg	1.2	400	330
FLUORANTHENE	<400	ug/Kg	1.2	400	330
PYRENE	<400	ug/Kg	1.2	400	330
NZO[A]ANTHRACENE	<400	ug/Kg	1.2	400	330
RYSENE	<400	ug/Kg	1.2	400	330
BENZO[B]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[K]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[A]PYRENE	<400	ug/Kg	1.2	400	330
INDENO[1,2,3-CD]PYRENE	<400	ug/Kg	1.2	400	330
DIBENZ[A,H]ANTHRACENE	<400	ug/Kg	1.2	400	330
BENZO[G,H,I]PERYLENE	<400	ug/Kg	1.2	400	330
NITROBENZENE-D5	54	%	1.2		
2-FLUOROBIPHENYL	60	%	1.2		
TERPHENYL-D14	80	%	1.2		

ort Notes:

0000013

2A

SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Katahdin Analytical Services

SDG No.: WP2989

Matrix: SOIL

Client Sample ID	Lab Sample ID	SMC1 (NBZ) #	SMC2 (FBP) #	SMC3 (TPH) #	Total Out
SBLK;062499	SBLK;062499	65	73	70	0
LCS;062499	LCS;062499	69	73	84	0
20SLB050607	WP2989-1	39	56	70	0
20SLB050607D	WP2989-2	47	57	85	0
20SLB040304	WP2989-3	42	57	84	0
20SLB030102	WP2989-5	54	60	80	0
20SLB030102MS	WP2989-5MS	72	79	94	0
20SLB030102MSD	WP2989-5MSD	72	73	87	0
20SLB020203	WP2989-4	58	66	85	0

QC LIMITS

SMC1	(NBZ)	=	NITROBENZENE-D5	(14-107)
SMC2	(FBP)	=	2-FLUOROBIPHENYL	(32-109)
SMC3	(TPH)	=	TERPHENYL-D14	(26-116)

Column to be used to flag recovery value

* Values are outside of QC limits

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: SBLK;062499
SDG: WP2989
Report Date: 8/6/99
PO No. : N7912-P99264
Project: CTO#68
% Solids: 100
Method: EPA 8270
Date Analyzed: 7/24/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
SBLK;062499	SL	-	-	6/24/99	PMM	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<330	ug/Kg	1.0	330	330
2-METHYLNAPHTHALENE	<330	ug/Kg	1.0	330	330
ACENAPHTHYLENE	<330	ug/Kg	1.0	330	330
ACENAPHTHENE	<330	ug/Kg	1.0	330	330
FLUORENE	<330	ug/Kg	1.0	330	330
PHENANTHRENE	<330	ug/Kg	1.0	330	330
ANTHRACENE	<330	ug/Kg	1.0	330	330
FLUORANTHENE	<330	ug/Kg	1.0	330	330
PYRENE	<330	ug/Kg	1.0	330	330
BENZO[A]ANTHRACENE	<330	ug/Kg	1.0	330	330
CHRYSENE	<330	ug/Kg	1.0	330	330
BENZO[B]FLUORANTHENE	<330	ug/Kg	1.0	330	330
BENZO[K]FLUORANTHENE	<330	ug/Kg	1.0	330	330
BENZO[A]PYRENE	<330	ug/Kg	1.0	330	330
INDENO[1,2,3-CD]PYRENE	<330	ug/Kg	1.0	330	330
DIBENZ[A,H]ANTHRACENE	<330	ug/Kg	1.0	330	330
BENZO[G,H,I]PERYLENE	<330	ug/Kg	1.0	330	330
NITROBENZENE-D5	65	%	1.0		
2-FLUOROBIPHENYL	73	%	1.0		
TERPHENYL-D14	70	%	1.0		

Report Notes:

2000184

Katahdin Analytical Services
8270 LCS Recovery Sheet

Lab File: X2365 **Sample ID: LCS;062499** **Date Run: 7/24/99**

Analyst: KRT **Time Injected 12:15:00 PM** **Matrix: SL**

Compound Name	Spike Amt (ug/Kg)	Result (ug/Kg)	Rec (%)	Limits (%)
2-METHYLNAPHTHALENE	1667	1240	74	60-140
ACENAPHTHENE	1667	1200	72	60-140
ACENAPHTHYLENE	1667	1190	71	60-140
ANTHRACENE	1667	1360	81	60-140
BENZO[A]ANTHRACENE	1667	1270	76	60-140
BENZO[A]PYRENE	1667	1140	69	60-140
BENZO[B]FLUORANTHENE	1667	1290	77	60-140
BENZO[G,H,I]PERYLENE	1667	1060	64	60-140
BENZO[K]FLUORANTHENE	1667	1220	74	60-140
CHRYSENE	1667	1260	76	60-140
DIBENZ[A,H]ANTHRACENE	1667	1090	66	60-140
FLUORANTHENE	1667	1540	92	60-140
FLUORENE	1667	1270	76	60-140
INDENO[1,2,3-CD]PYRENE	1667	1080	65	60-140
NAPHTHALENE	1667	1150	69	60-140
PHENANTHRENE	1667	1360	81	60-140
PYRENE	1667	1290	78	60-140

*** Out of Limits**

Katahdin Analytical Services

MS/MSD Report

Sample	File Name	Date Acquired	Time inj	Analyst	Matrix	Method
WP2989-5	X2388	7/26/99	5:22:00 PM	KRT	SL	8270_99
WP2989-5MS	X2389	7/26/99	6:06:00 PM	KRT	SL	8270_99
WP2989-5MSD	X2390	7/26/99	6:50:00 PM	KRT	SL	8270_99

Compound Name	Native (ug/Kg)	MS Spk Amount (ug/Kg)	MSD Spk Amount (ug/Kg)	MS Result (ug/Kg)	MSD Result (ug/Kg)	MS REC (%)	MSD REC (%)	Recovery Limits (%)	RPD (%)	RPD Limit (%)
CHRYSENE	0	1960	1960	1650	1460	84	74	60-140	12	50
ACENAPHTHENE	0	1960	1960	1580	1460	80	74	60-140	7.9	50
ACENAPHTHYLENE	0	1960	1960	1530	1400	78	71	60-140	8.9	50
ANTHRACENE	0	1960	1960	1650	1590	84	81	60-140	3.7	50
BENZO[A]ANTHRACENE	0	1960	1960	1530	1430	78	73	60-140	6.8	50
BENZO[A]PYRENE	0	1960	1960	1460	1410	74	72	60-140	3.5	50
BENZO[B]FLUORANTHENE	0	1960	1960	1690	1550	86	79	60-140	8.6	50
2-METHYLNAPHTHALENE	0	1960	1960	1470	1380	75	70	60-140	6.3	50
BENZO[K]FLUORANTHENE	0	1960	1960	1570	1620	80	82	60-140	3.1	50
PYRENE	0	1960	1960	1840	1700	94	87	60-140	7.9	50
DIBENZ[A,H]ANTHRACENE	0	1960	1960	1280	1190	65	61	60-140	7.3	50
FLUORANTHENE	0	1960	1960	1540	1500	78	77	60-140	2.6	50
FLUORENE	0	1960	1960	1580	1450	81	74	60-140	8.6	50
INDENO[1,2,3-CD]PYRENE	0	1960	1960	1120	948	*57	*48	60-140	17	50
NAPHTHALENE	0	1960	1960	1450	1320	74	67	60-140	9.4	50
[illegible]NTHRENE	0	1960	1960	1680	1580	86	81	60-140	6.1	50
[illegible][G,H,I]PERYLENE	0	1960	1960	1290	1200	66	61	60-140	7.2	50

RPD =[(ms res - msd res) / (ms res + msd res)/2] * 100

*** Out of Limits**

2000194

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: WP2989 **SOW No.** SW846

Client Field ID	Lab Sample ID
20SLB020203	WP2989-004
20SLB030102	WP2989-005
20SLB040304	WP2989-003
20SLB050607	WP2989-001
20SLB050607	WP2989-001P
20SLB050607	WP2989-001S
20SLB050607D	WP2989-002

Were ICP interelement corrections applied ?	Yes
Were ICP backround corrections applied ?	Yes
If yes - were raw data generated before application of backround corrections ?	No

Comments:

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 and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: George Brewer Name: George Brewer

Date: 08/03/99 Title: Metals Section Supv.

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | **Client Field ID: 20SLB050607**

Matrix: SOIL | **SDG Name:** WP2989

Percent Solids: 53.3 | **Lab Sample ID:** WP2989-001

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF
7429-90-5	ALUMINUM	24300		*	P	1
7440-36-0	ANTIMONY	0.21	U	N*	P	1
7440-38-2	ARSENIC	22.5		*	P	1
7440-39-3	BARIUM	35.1		*	P	1
7440-41-7	BERYLLIUM	1.4		*	P	1
7440-43-9	CADMIUM	0.23	U	*	P	1
7440-70-2	CALCIUM	9320		*	P	1
7440-47-3	CHROMIUM	43.6		*	P	1
7440-48-4	COBALT	9.0		*	P	1
7440-50-8	COPPER	31.8			P	1
7439-89-6	IRON	36000			P	5
7439-92-1	LEAD	49.1			P	1
7439-95-4	MAGNESIUM	5570			P	1
7439-96-5	MANGANESE	562		*	P	1
7439-97-6	MERCURY	0.29		N	CV	1
7440-02-0	NICKEL	14.4		*	P	1
7440-09-7	POTASSIUM	2880			P	1
7782-49-2	SELENIUM	0.51	B	*	P	1
7440-22-4	SILVER	0.59	B	*	P	1
7440-23-5	SODIUM	3300			P	1
7440-28-0	THALLIUM	1.0	B	*	P	1
7440-62-2	VANADIUM	77.1			P	1
7440-66-6	ZINC	122		E	P	1

Color Before: BROWN | Texture: FINE

Color After: YELLOW | Clarity After: CLEAR

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | **Client Field ID: 20SLB050607D**

Matrix: SOIL | **SDG Name: WP2989**

Percent Solids: 54.0 | **Lab Sample ID: WP2989-002**

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF
7429-90-5	ALUMINUM	30200		*	P	1
7440-36-0	ANTIMONY	0.28	U	N*	P	1
7440-38-2	ARSENIC	24.7		*	P	1
7440-39-3	BARIUM	37.2		*	P	1
7440-41-7	BERYLLIUM	1.4		*	P	1
7440-43-9	CADMIUM	0.32	B	*	P	1
7440-70-2	CALCIUM	11000		*	P	1
7440-47-3	CHROMIUM	47.7		*	P	1
7440-48-4	COBALT	10.2		*	P	1
7440-50-8	COPPER	29.8			P	1
7439-89-6	IRON	41400			P	5
7439-92-1	LEAD	54.5			P	1
7439-95-4	MAGNESIUM	5630			P	1
7439-96-5	MANGANESE	614		*	P	1
7439-97-6	MERCURY	0.35		N	CV	1
7440-02-0	NICKEL	16.4		*	P	1
7440-09-7	POTASSIUM	2920			P	1
7782-49-2	SELENIUM	1.1	B	*	P	1
7440-22-4	SILVER	0.75	B	*	P	1
7440-23-5	SODIUM	3320			P	1
7440-28-0	THALLIUM	1.7	B	*	P	1
7440-62-2	VANADIUM	86.0			P	1
7440-66-6	ZINC	112		E	P	1

Color Before: BROWN | Texture: FINE

Color After: YELLOW | Clarity After: CLEAR

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | **Client Field ID:** 20SLB040304

Matrix: SOIL | **SDG Name:** WP2989

Percent Solids: 58.2 | **Lab Sample ID:** WP2989-003

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF
7429-90-5	ALUMINUM	24400		*	P	1
7440-36-0	ANTIMONY	0.22	U	N*	P	1
7440-38-2	ARSENIC	44.2		*	P	1
7440-39-3	BARIUM	33.1		*	P	1
7440-41-7	BERYLLIUM	1.2		*	P	1
7440-43-9	CADMIUM	0.24	U	*	P	1
7440-70-2	CALCIUM	11400		*	P	1
7440-47-3	CHROMIUM	39.5		*	P	1
7440-48-4	COBALT	8.4		*	P	1
7440-50-8	COPPER	25.1			P	1
7439-89-6	IRON	35400			P	5
7439-92-1	LEAD	46.5			P	1
7439-95-4	MAGNESIUM	4190			P	1
7439-96-5	MANGANESE	665		*	P	1
7439-97-6	MERCURY	0.26		N	CV	1
7440-02-0	NICKEL	13.2		*	P	1
7440-09-7	POTASSIUM	2050			P	1
7782-49-2	SELENIUM	1.1	B	*	P	1
7440-22-4	SILVER	0.60	B	*	P	1
7440-23-5	SODIUM	1350			P	1
7440-28-0	THALLIUM	0.91	B	*	P	1
7440-62-2	VANADIUM	76.5			P	1
7440-66-6	ZINC	95.5		E	P	1

Color Before: BROWN | Texture: FINE

Color After: YELLOW | Clarity After: CLEAR

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID: 20SLB020203**

Matrix: SOIL **SDG Name:** WP2989

Percent Solids: 85.0 **Lab Sample ID:** WP2989-004

Concentration Units (ug/L or mg/Kg dry weigbt): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF
7429-90-5	ALUMINUM	3270		*	P	1
7440-36-0	ANTIMONY	0.15	U	N*	P	1
7440-38-2	ARSENIC	0.39	B	*	P	1
7440-39-3	BARIUM	4.5		*	P	1
7440-41-7	BERYLLIUM	0.05	B	*	P	1
7440-43-9	CADMIUM	0.16	U	*	P	1
7440-70-2	CALCIUM	876		*	P	1
7440-47-3	CHROMIUM	3.4		*	P	1
7440-48-4	COBALT	0.39	B	*	P	1
7440-50-8	COPPER	1.7	B		P	1
7439-89-6	IRON	682			P	1
7439-92-1	LEAD	2.6			P	1
7439-95-4	MAGNESIUM	68.5			P	1
7439-96-5	MANGANESE	6.2		*	P	1
7439-97-6	MERCURY	0.01	B	N	CV	1
7440-02-0	NICKEL	1.11	U	*	P	1
7440-09-7	POTASSIUM	85.3			P	1
7782-49-2	SELENIUM	0.30	B	*	P	1
7440-22-4	SILVER	0.21	U	*	P	1
7440-23-5	SODIUM	26.0			P	1
7440-28-0	THALLIUM	0.38	U	*	P	1
7440-62-2	VANADIUM	3.0			P	1
7440-66-6	ZINC	6.6		E	P	1

Color Before: BROWN Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | **Client Field ID:** 20SLB030102

Matrix: SOIL | **SDG Name:** WP2989

Percent Solids: 84.8 | **Lab Sample ID:** WP2989-005

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF
7429-90-5	ALUMINUM	3450		*	P	1
7440-36-0	ANTIMONY	0.12	U	N*	P	1
7440-38-2	ARSENIC	0.13	U	*	P	1
7440-39-3	BARIUM	3.2		*	P	1
7440-41-7	BERYLLIUM	0.04	B	*	P	1
7440-43-9	CADMIUM	0.13	U	*	P	1
7440-70-2	CALCIUM	66.8			P	1
7440-47-3	CHROMIUM	3.3		*	P	1
7440-48-4	COBALT	0.44	B	*	P	1
7440-50-8	COPPER	0.44	B		P	1
7439-89-6	IRON	295			P	1
7439-92-1	LEAD	2.0			P	1
7439-95-4	MAGNESIUM	54.7			P	1
7439-96-5	MANGANESE	1.4		*	P	1
7439-97-6	MERCURY	0.01	B	N	CV	1
7440-02-0	NICKEL	0.86	U	*	P	1
7440-09-7	POTASSIUM	65.1			P	1
7782-49-2	SELENIUM	0.43	B	*	P	1
7440-22-4	SILVER	0.16	U	*	P	1
7440-23-5	SODIUM	13.7			P	1
7440-28-0	THALLIUM	0.29	U	*	P	1
7440-62-2	VANADIUM	2.6			P	1
7440-66-6	ZINC	1.6		E	P	1

Color Before: BROWN | Texture: MEDIUM

Color After: YELLOW | Clarity After: CLEAR

Comments:

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: ICB

File: APG09A Jul 09, 1999 11:47 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	21.30	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.34	B
BERYLLIUM	0.21	U
CADMIUM	0.26	U
CALCIUM	8.69	U
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	0.55	U
IRON	18.59	B
LEAD	1.09	U
MAGNESIUM	5.75	U
MANGANESE	0.10	U
NICKEL	1.45	B
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG09A Jul 09, 1999 12:35 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	27.84	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.12	U
BERYLLIUM	0.21	U
CADMIUM	0.31	B
CALCIUM	16.77	B
CHROMIUM	-0.62	B
COBALT	0.64	U
COPPER	0.55	U
IRON	22.65	B
LEAD	1.09	U
MAGNESIUM	17.75	B
MANGANESE	0.11	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG09A Jul 09, 1999 13:58 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	29.33	B
ANTIMONY	-2.80	B
ARSENIC	2.07	U
BARIUM	0.12	U
BERYLLIUM	0.21	U
CADMIUM	0.37	B
CALCIUM	11.67	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	0.55	U
IRON	12.30	U
LEAD	1.09	U
MAGNESIUM	8.81	B
MANGANESE	0.13	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG09A Jul 09, 1999 15:20 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	23.05	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.12	U
BERYLLIUM	0.21	U
CADMIUM	0.36	B
CALCIUM	18.22	B
CHROMIUM	-0.95	B
COBALT	0.64	U
COPPER	-0.62	B
IRON	27.57	B
LEAD	1.09	U
MAGNESIUM	11.40	B
MANGANESE	0.20	B
NICKEL	-1.36	B
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG09A Jul 09, 1999 16:43 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	39.83	B
ANTIMONY	1.81	U
ARSENIC	-3.32	B
BARIUM	0.12	B
BERYLLIUM	0.21	U
CADMIUM	0.33	B
CALCIUM	24.37	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	0.55	U
IRON	27.92	B
LEAD	1.09	U
MAGNESIUM	25.14	B
MANGANESE	0.20	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	6.23	B
VANADIUM	0.62	U
ZINC	0.54	B

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name: WP2989**

SAMPLE: CCB

File: APG09A Jul 09, 1999 18:06 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	29.39	B
ANTIMONY	-1.84	B
ARSENIC	2.07	U
BARIUM	0.15	B
BERYLLIUM	0.21	U
CADMIUM	0.26	U
CALCIUM	23.31	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	0.55	U
IRON	17.88	B
LEAD	1.46	B
MAGNESIUM	19.49	B
MANGANESE	0.25	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	1.04	B

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name: WP2989**

SAMPLE: CCB

File: APG09A Jul 09, 1999 19:28 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	21.20	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.20	B
BERYLLIUM	0.21	U
CADMIUM	0.43	B
CALCIUM	15.28	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	0.55	U
IRON	23.26	B
LEAD	1.09	U
MAGNESIUM	17.73	B
MANGANESE	0.30	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	6.36	B
VANADIUM	0.71	B
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG09A Jul 09, 1999 20:51 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	22.83	B
ANTIMONY	-2.79	B
ARSENIC	2.07	U
BARIUM	0.14	B
BERYLLIUM	0.21	U
CADMIUM	0.26	U
CALCIUM	8.69	U
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	0.55	U
IRON	18.39	B
LEAD	1.09	U
MAGNESIUM	8.31	B
MANGANESE	0.21	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.72	B
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name: WP2989**

SAMPLE: CCB

File: APG09A Jul 09, 1999 22:05 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	44.70	B
ANTIMONY	1.81	U
ARSENIC	-2.49	B
BARIUM	0.12	U
BERYLLIUM	0.21	U
CADMIUM	0.40	B
CALCIUM	12.09	B
CHROMIUM	0.59	U
COBALT	0.92	B
COPPER	0.55	U
IRON	18.18	B
LEAD	8.05	
MAGNESIUM	22.96	B
MANGANESE	0.21	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	1.39	B
THALLIUM	6.80	B
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: ICB

File: APG12A Jul 12, 1999 16:18 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	26.64	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.21	B
BERYLLIUM	0.21	U
CADMIUM	0.42	B
CALCIUM	8.69	U
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-1.69	B
IRON	12.71	B
LEAD	-1.87	B
MAGNESIUM	9.90	B
MANGANESE	0.18	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.70	B
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 12, 1999 17:06 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.30	B
BERYLLIUM	0.21	U
CADMIUM	0.28	B
CALCIUM	20.57	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	0.55	U
IRON	12.30	U
LEAD	-2.13	B
MAGNESIUM	24.47	B
MANGANESE	0.27	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 12, 1999 18:29 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	66.97	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.27	B
BERYLLIUM	0.26	B
CADMIUM	0.26	U
CALCIUM	13.42	B
CHROMIUM	0.60	B
COBALT	0.64	U
COPPER	-2.09	B
IRON	14.31	B
LEAD	-2.12	B
MAGNESIUM	28.16	B
MANGANESE	0.39	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	-0.72	B
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 12, 1999 19:51 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	45.50	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.34	B
BERYLLIUM	0.53	B
CADMIUM	0.26	U
CALCIUM	13.83	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-2.10	B
IRON	22.13	B
LEAD	1.09	U
MAGNESIUM	26.42	B
MANGANESE	0.36	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 12, 1999 21:14 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	36.21	B
ANTIMONY	2.19	B
ARSENIC	2.07	U
BARIUM	0.26	B
BERYLLIUM	0.35	B
CADMIUM	0.26	U
CALCIUM	8.69	U
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-1.97	B
IRON	12.30	U
LEAD	-1.48	B
MAGNESIUM	20.32	B
MANGANESE	0.30	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.57	B

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 12, 1999 22:39 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	3.45	B
ARSENIC	2.07	U
BARIUM	0.33	B
BERYLLIUM	0.44	B
CADMIUM	0.26	U
CALCIUM	17.83	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-0.64	B
IRON	12.30	U
LEAD	-1.85	B
MAGNESIUM	25.01	B
MANGANESE	0.28	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.89	B
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name: WP2989**

SAMPLE: CCB

File: APG12A Jul 13, 1999 00:02 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.30	B
BERYLLIUM	0.39	B
CADMIUM	0.31	B
CALCIUM	19.23	B
CHROMIUM	0.59	U
COBALT	0.69	B
COPPER	-0.79	B
IRON	17.34	B
LEAD	-1.94	B
MAGNESIUM	18.88	B
MANGANESE	0.26	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.62	B

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 13, 1999 01:24 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	2.26	B
ARSENIC	-2.53	B
BARIUM	0.21	B
BERYLLIUM	0.21	U
CADMIUM	0.26	U
CALCIUM	17.19	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-1.36	B
IRON	12.30	U
LEAD	-3.05	B
MAGNESIUM	18.41	B
MANGANESE	0.22	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	-5.21	B
VANADIUM	-0.64	B
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 13, 1999 02:47 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	1.93	B
ARSENIC	2.07	U
BARIUM	0.18	B
BERYLLIUM	0.36	B
CADMIUM	0.26	U
CALCIUM	38.19	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-0.82	B
IRON	18.44	B
LEAD	-2.69	B
MAGNESIUM	33.67	B
MANGANESE	0.23	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 13, 1999 04:09 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	2.59	B
ARSENIC	2.07	U
BARIUM	0.28	B
BERYLLIUM	0.26	B
CADMIUM	0.26	U
CALCIUM	25.21	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-0.95	B
IRON	12.30	U
LEAD	-1.48	B
MAGNESIUM	19.81	B
MANGANESE	0.21	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	5.90	B
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG12A Jul 13, 1999 05:32 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	43.85	B
ANTIMONY	4.16	B
ARSENIC	2.07	U
BARIUM	0.43	B
BERYLLIUM	0.21	U
CADMIUM	0.26	U
CALCIUM	43.52	B
CHROMIUM	0.65	B
COBALT	0.64	U
COPPER	-1.21	B
IRON	19.90	B
LEAD	-1.75	B
MAGNESIUM	46.44	B
MANGANESE	0.31	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	13.00	B
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: ICB

File: APG29A Jul 29, 1999 18:11 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	104.54	
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.12	U
BERYLLIUM	0.21	U
CADMIUM	0.35	B
CALCIUM	8.85	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-0.74	B
IRON	12.89	B
LEAD	1.09	U
MAGNESIUM	7.12	B
MANGANESE	0.10	U
NICKEL	1.71	B
SELENIUM	2.57	U
SILVER	-0.73	B
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG29A Jul 29, 1999 19:05 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	64.53	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.12	U
BERYLLIUM	0.21	U
CADMIUM	0.54	B
CALCIUM	39.20	B
CHROMIUM	0.59	U
COBALT	-0.70	B
COPPER	-1.93	B
IRON	14.73	B
LEAD	1.09	U
MAGNESIUM	39.51	B
MANGANESE	0.15	B
NICKEL	0.85	U
SELENIUM	3.87	B
SILVER	-0.70	B
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG29A Jul 29, 1999 20:29 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	26.63	B
ANTIMONY	3.38	B
ARSENIC	2.07	U
BARIUM	0.12	U
BERYLLIUM	0.21	B
CADMIUM	0.26	U
CALCIUM	15.46	B
CHROMIUM	-0.85	B
COBALT	-1.01	B
COPPER	-1.60	B
IRON	12.30	U
LEAD	-1.22	B
MAGNESIUM	8.62	B
MANGANESE	0.10	U
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	7.64	B
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG29A Jul 29, 1999 21:54 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	44.16	B
ANTIMONY	2.03	B
ARSENIC	2.07	U
BARIUM	0.13	B
BERYLLIUM	0.30	B
CADMIUM	0.26	U
CALCIUM	27.73	B
CHROMIUM	0.59	U
COBALT	0.64	U
COPPER	-1.43	B
IRON	12.30	U
LEAD	1.09	U
MAGNESIUM	27.45	B
MANGANESE	0.11	B
NICKEL	0.96	B
SELENIUM	2.57	U
SILVER	-0.76	B
THALLIUM	5.38	B
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG29A Jul 29, 1999 23:19 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	39.86	B
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.22	B
BERYLLIUM	0.24	B
CADMIUM	0.35	B
CALCIUM	39.21	B
CHROMIUM	0.59	U
COBALT	-0.98	B
COPPER	0.55	U
IRON	12.30	U
LEAD	1.09	U
MAGNESIUM	36.49	B
MANGANESE	0.10	U
NICKEL	1.39	B
SELENIUM	2.57	U
SILVER	0.69	U
THALLIUM	6.29	B
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG29A Jul 30, 1999 00:36 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	1.81	U
ARSENIC	2.07	U
BARIUM	0.17	B
BERYLLIUM	0.25	B
CADMIUM	0.26	U
CALCIUM	15.94	B
CHROMIUM	0.59	U
COBALT	-0.91	B
COPPER	-0.93	B
IRON	12.30	U
LEAD	1.09	U
MAGNESIUM	7.97	B
MANGANESE	0.13	B
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	-1.00	B
THALLIUM	4.49	U
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: APG29A Jul 30, 1999 01:12 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	20.93	U
ANTIMONY	1.81	U
ARSENIC	-2.96	B
BARIUM	0.12	U
BERYLLIUM	0.25	B
CADMIUM	0.34	B
CALCIUM	19.32	B
CHROMIUM	-0.71	B
COBALT	-1.19	B
COPPER	-0.64	B
IRON	12.30	U
LEAD	1.09	U
MAGNESIUM	9.34	B
MANGANESE	0.10	U
NICKEL	0.85	U
SELENIUM	2.57	U
SILVER	-1.20	B
THALLIUM	6.84	B
VANADIUM	0.62	U
ZINC	0.48	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: ICB

File: BPG08A Jul 08, 1999 20:07 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	11.95	B
ANTIMONY	16.44	U
ARSENIC	26.86	U
BARIUM	0.48	U
BERYLLIUM	0.33	U
CADMIUM	-3.17	B
CALCIUM	14.65	U
CHROMIUM	4.31	U
COBALT	4.45	U
COPPER	1.62	U
IRON	3.56	U
LEAD	16.82	
MAGNESIUM	17.16	U
MANGANESE	0.97	U
NICKEL	13.21	U
POTASSIUM	449.54	U
SELENIUM	26.25	U
SILVER	2.54	U
SODIUM	11.11	U
VANADIUM	3.58	U
ZINC	1.09	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: BPG08A Jul 08, 1999 20:48 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	15.87	B
ANTIMONY	16.44	U
ARSENIC	26.86	U
BARIUM	0.48	U
BERYLLIUM	0.33	U
CADMIUM	1.94	U
CALCIUM	14.65	U
CHROMIUM	4.31	U
COBALT	4.45	U
COPPER	1.62	U
IRON	3.87	B
LEAD	16.70	U
MAGNESIUM	17.16	U
MANGANESE	0.97	U
NICKEL	13.21	U
POTASSIUM	449.54	U
SELENIUM	26.25	U
SILVER	2.54	U
SODIUM	11.11	U
VANADIUM	3.58	U
ZINC	1.09	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: BPG08A Jul 08, 1999 21:57 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	24.00	B
ANTIMONY	16.44	U
ARSENIC	26.86	U
BARIUM	0.48	U
BERYLLIUM	0.33	U
CADMIUM	1.94	U
CALCIUM	14.65	U
CHROMIUM	4.31	U
COBALT	4.45	U
COPPER	1.62	U
IRON	5.42	B
LEAD	16.70	U
MAGNESIUM	17.60	B
MANGANESE	0.97	U
NICKEL	13.21	U
POTASSIUM	449.54	U
SELENIUM	26.25	U
SILVER	2.54	U
SODIUM	11.11	U
VANADIUM	3.58	U
ZINC	1.09	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: BPG08A Jul 08, 1999 23:06 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	10.76	U
ANTIMONY	16.44	U
ARSENIC	26.86	U
BARIUM	0.48	U
BERYLLIUM	0.33	U
CADMIUM	1.94	U
CALCIUM	14.65	U
CHROMIUM	4.31	U
COBALT	4.45	U
COPPER	1.62	U
IRON	3.97	B
LEAD	16.70	U
MAGNESIUM	17.16	U
MANGANESE	0.97	U
NICKEL	13.21	U
POTASSIUM	449.54	U
SELENIUM	26.25	U
SILVER	2.54	U
SODIUM	13.40	B
VANADIUM	3.58	U
ZINC	1.09	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: BPG08A Jul 09, 1999 00:15 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	23.91	B
ANTIMONY	16.44	U
ARSENIC	26.86	U
BARIUM	0.48	U
BERYLLIUM	0.33	U
CADMIUM	-2.60	B
CALCIUM	14.65	U
CHROMIUM	4.31	U
COBALT	4.45	U
COPPER	1.62	U
IRON	7.01	B
LEAD	16.70	U
MAGNESIUM	17.16	U
MANGANESE	0.97	U
NICKEL	13.21	U
POTASSIUM	449.54	U
SELENIUM	26.25	U
SILVER	2.54	U
SODIUM	13.29	B
VANADIUM	3.58	U
ZINC	1.09	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: CCB

File: BPG08A Jul 09, 1999 01:24 Concentration Units: ug/L

Analyte	RESULT	C
ALUMINUM	19.21	B
ANTIMONY	16.44	U
ARSENIC	26.86	U
BARIUM	0.48	U
BERYLLIUM	0.33	U
CADMIUM	1.94	U
CALCIUM	14.65	U
CHROMIUM	4.31	U
COBALT	4.45	U
COPPER	1.62	U
IRON	5.33	B
LEAD	16.70	U
MAGNESIUM	17.16	U
MANGANESE	0.97	U
NICKEL	13.21	U
POTASSIUM	449.54	U
SELENIUM	26.25	U
SILVER	2.54	U
SODIUM	11.11	U
VANADIUM	3.58	U
ZINC	1.09	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: Ck1ICB

File: DPF25B Jun 25, 1999 13:27 Concentration Units: ug/L

Analyte	RESULT	C
MERCURY	0.02	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: Ck1CCB

File: DPF25B Jun 25, 1999 13:39 Concentration Units: ug/L

Analyte	RESULT	C
MERCURY	0.02	U

FORM III (Part 1) - IN

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: Ck1CCB

File: DPF25B Jun 25, 1999 14:24 Concentration Units: ug/L

Analyte	RESULT	C
MERCURY	0.02	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** WP2989

SAMPLE: Ck1CCB

File: DPF25B Jun 25, 1999 14:42 Concentration Units: ug/L

Analyte	RESULT	C
MERCURY	0.02	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSPF25HGS0

Matrix: SOIL **SDG Name:** WP2989

QC Batch ID: PF25HGS0

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	RESULT	C
MERCURY	0.010	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID: PBSPG08ICS0**

Matrix: SOIL **SDG Name:** WP2989

QC Batch ID: PG08ICS0

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	RESULT	C
ALUMINUM	29.627	
ANTIMONY	0.180	U
ARSENIC	0.210	U
BARIUM	0.050	U
BERYLLIUM	0.030	U
CADMIUM	-0.217	B
CALCIUM	67.343	
CHROMIUM	0.430	U
COBALT	0.450	U
COPPER	0.160	U
IRON	2.249	B
LEAD	0.213	B
MAGNESIUM	7.171	
MANGANESE	0.176	B
NICKEL	1.320	U
POTASSIUM	44.950	U
SELENIUM	0.260	U
SILVER	0.250	U
SODIUM	5.781	B
THALLIUM	0.450	U
VANADIUM	0.360	U
ZINC	0.303	B

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSPG29ICS0

Matrix: SOIL **SDG Name:** WP2989

QC Batch ID: PG29ICS0

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	RESULT	C
CALCIUM	1.965	B
MAGNESIUM	0.580	U

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Client Field ID: 20SLB050607S

Matrix: SOIL

SDG Name: WP2989

Percent Solids: 53.3

Lab Sample ID: WP2989-001S

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	Higb	M
ALUMINUM	26428.1450		24327.4948		219.25	958.1		75	125	P
ANTIMONY	15.1809		-0.1544	U	54.81	27.7	N	75	125	P
ARSENIC	232.4400		22.5199		219.25	95.7		75	125	P
BARIUM	243.2425		35.0773		219.25	94.9		75	125	P
BERYLLIUM	6.7168		1.4490		5.48	96.1		75	125	P
CADMIUM	5.9143		0.1450	U	5.48	107.9		75	125	P
CALCIUM	8017.1330		9323.6556		274.06	-476.7		75	125	P
CHROMIUM	64.3052		43.5790		21.93	94.5		75	125	P
COBALT	63.5192		8.9650		54.81	99.5		75	125	P
COPPER	59.9596		31.8375		27.41	102.6		75	125	P
IRON	33281.5325		36017.8143		109.63	-2495.9		75	125	P
LEAD	108.3045		49.1026		54.81	108.0		75	125	P
MAGNESIUM	5826.1836		5567.9307		548.13	47.1		75	125	P
MANGANESE	497.6930		562.1287		54.81	-117.6		75	125	P
MERCURY	0.7227		0.2932		0.27	159.1	N	75	125	CV
NICKEL	67.0206		14.4084		54.81	96.0		75	125	P
POTASSIUM	5312.9304		2882.1140		2740.64	88.7		75	125	P
SELENIUM	195.9599		0.5093	B	219.25	89.1		75	125	P
SILVER	4.9792		0.5871	B	5.48	80.1		75	125	P
SODIUM	4007.6835		3298.0961		822.19	86.3		75	125	P
THALLIUM	201.5881		1.0128	B	219.25	91.5		75	125	P
VANADIUM	130.8906		77.0706		54.81	98.2		75	125	P
ZINC	188.8671		122.5254		54.81	121.0		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** 20SLB050607S

Matrix: SOIL | **SDG Name:** WP2989

Percent Solids: 53.3 | **Lab Sample ID:** WP2989-001P

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM	35430.7989		24327.4948		302.35	3672.3		75	125	P
ANTIMONY	19.7619		-0.1544	U	75.59	26.1	N	75	125	P
ARSENIC	289.5706		22.5199		302.35	88.3		75	125	P
BARIUM	328.2371		35.0773		302.35	97.0		75	125	P
BERYLLIUM	8.7380		1.4490		7.56	96.4		75	125	P
CADMIUM	7.5241		0.1450	U	7.56	99.5		75	125	P
CALCIUM	11198.7672		9323.6556		377.94	496.1		75	125	P
CHROMIUM	79.4934		43.5790		30.24	118.8		75	125	P
COBALT	81.3499		8.9650		75.59	95.8		75	125	P
COPPER	68.2292		31.8375		37.79	96.3		75	125	P
IRON	38608.9308		36017.8143		151.18	1713.9		75	125	P
LEAD	120.2009		49.1026		75.59	94.1		75	125	P
MAGNESIUM	6628.6817		5567.9307		755.89	140.3		75	125	P
MANGANESE	650.8036		562.1287		75.59	117.3		75	125	P
MERCURY	0.6046		0.2932		0.23	135.4	N	75	125	CV
NICKEL	85.8837		14.4084		75.59	94.6		75	125	P
POTASSIUM	6454.9157		2882.1140		3779.43	94.5		75	125	P
SELENIUM	256.3464		0.5093	B	302.35	84.6		75	125	P
SILVER	7.6571		0.5871	B	7.56	93.5		75	125	P
SODIUM	4367.2543		3298.0961		1133.83	94.3		75	125	P
THALLIUM	272.4271		1.0128	B	302.35	89.8		75	125	P
VANADIUM	152.2277		77.0706		75.59	99.4		75	125	P
ZINC	194.3850		122.5254		75.59	95.1		75	125	P

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** 20SLB050607

Matrix: SOIL **SDG Name:** WP2989

Percent Solids: 53.3 **Lab Sample ID:** WP2989-001

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ALUMINUM		26428.1450		35430.7989		29.1	*	P
ANTIMONY		15.1809		19.7619		26.2	*	P
ARSENIC		232.4400		289.5706		21.9	*	P
BARIUM		243.2425		328.2371		29.7	*	P
BERYLLIUM		6.7168		8.7380		26.2	*	P
CADMIUM		5.9143		7.5241		24.0	*	P
CALCIUM		8017.1330		11198.7672		33.1	*	P
CHROMIUM		64.3052		79.4934		21.1	*	P
COBALT		63.5192		81.3499		24.6	*	P
COPPER		59.9596		68.2292		12.9		P
IRON		33281.5325		38608.9308		14.8		P
LEAD		108.3045		120.2009		10.4		P
MAGNESIUM		5826.1836		6628.6817		12.9		P
MANGANESE		497.6930		650.8036		26.7	*	P
MERCURY		0.7227		0.6046		17.8		CV
NICKEL		67.0206		85.8837		24.7	*	P
POTASSIUM		5312.9304		6454.9157		19.4		P
SELENIUM		195.9599		256.3464		26.7	*	P
SILVER	1.6	4.9792		7.6571		42.4	*	P
SODIUM		4007.6835		4367.2543		8.6		P
THALLIUM		201.5881		272.4271		29.9	*	P
VANADIUM		130.8906		152.2277		15.1		P
ZINC		188.8671		194.3850		2.9		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSSPF25HGS0

Matrix: SOIL **SDG Name:** WP2989

QC Batch ID: PF25HGS0

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	1.8	1.77	98.3	54	146

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSSPG08ICS0

Matrix: SOIL **SDG Name:** WP2989

QC Batch ID: PG08ICS0

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ALUMINUM	5720.0	5034.22	88.0	66	134
ANTIMONY	26.6	30.77	115.7	13	186
ARSENIC	163.0	165.14	101.3	62	138
BARIUM	195.0	189.36	97.1	66	134
BERYLLIUM	78.9	84.18	106.7	72	128
CADMIUM	114.0	116.81	102.5	74	124
CALCIUM	1280.0	1366.53	106.8	70	130
CHROMIUM	175.0	193.61	110.6	69	131
COBALT	73.7	77.72	105.5	70	130
COPPER	91.0	92.68	101.8	71	128
IRON	9080.0	8093.02	89.1	53	146
LEAD	66.0	72.92	110.5	68	132
MAGNESIUM	1210.0	1130.06	93.4	73	126
MANGANESE	261.0	265.95	101.9	78	122
NICKEL	68.3	67.80	99.3	56	144
POTASSIUM	1500.0	1404.79	93.7	64	136
SELENIUM	123.0	115.91	94.2	74	126
SILVER	57.2	58.74	102.7	71	128
SODIUM	1380.0	1473.85	106.8	68	133
THALLIUM	80.0	82.35	102.9	57	142
VANADIUM	95.4	102.46	107.4	68	132
ZINC	190.0	196.33	103.3	76	124

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSSPG29ICS0

Matrix: SOIL **SDG Name:** WP2989

QC Batch ID: PG29ICS0

Concentration Units (ug/L or mg/Kg dry weight): mg/Kg

Analyte	TRUE	FOUND	% R	LIMITS (%)	
CALCIUM	1280.0	1312.06	102.5	70	130
MAGNESIUM	1210.0	1223.79	101.1	73	126

Katahdin
ANALYTICAL SERVICES

Lab Number : WP-2989-1
Report Date: 08/11/99
PO No. : N7912-P99264
Project : CTO#68

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
20SLB050607	Solid	CLIENT	06/18/99	06/19/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	54.	wt %	1.0	0.10	CLP/CIP SOW	06/22/99	JF	1
Total Combustible Organics	14.	wt %	1.0	0.1	ASTM D2974-8	06/22/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 06/21/99 by JF

08/11/99

LJO/baeajc(dw)/djn/msm
PF21VSS7
CC: MS. LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

340 County Road No. 5
P.O. Box 720, Westbrook, ME 04098
Tel: (207) 874-2400 Fax: (207) 775-4029

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210 West Road No. 5, Portsmouth, NH 03801
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Katahdin
ANALYTICAL SERVICES

Lab Number : WP-2989-2
Report Date: 08/11/99
PO No. : N7912-P99264
Project : CTO#68

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
20SLB050607D	Solid	CLIENT	06/18/99	06/19/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	54.	wt %	1.0	0.10	CLP/CIP SOW	06/22/99	JF	1
Total Combustible Organics	14.	wt %	1.0	0.1	ASTM D2974-8	06/22/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 06/21/99 by JF

08/11/99

LJO/baeajc(dw)/djn/msm
PF21VSS7
CC: MS. LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
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Katahdin
ANALYTICAL SERVICES

Lab Number : WP-2989-3
Report Date: 08/11/99
PO No. : N7912-P99264
Project : CTO#68

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
20SLB040304	Solid	CLIENT	06/18/99	06/19/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	58.	wt %	1.0	0.10	CLP/CIP SOW	06/22/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 06/21/99 by JF

08/11/99

LJO/baeajc(dw)/msm
PF21TSS6
CC: MS. LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

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Katahdin
ANALYTICAL SERVICES

Lab Number : WP-2989-4
Report Date: 08/11/99
PO No. : N7912-P99264
Project : CTO#68

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
20SLB020203	Solid	CLIENT	06/18/99	06/19/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	85.	wt %	1.0	0.10	CLP/CIP SOW	06/22/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 06/21/99 by JF

08/11/99

LJO/baeajc(dw)/msm
PF21TSS6
CC: MS. LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

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210 West Road No. 5, Portsmouth, NH 03801
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Katahdin
ANALYTICAL SERVICES

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

Lab Number : WP-2989-5
Report Date: 08/11/99
PO No. : N7912-P99264
Project : CTO#68

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
20SLB030102	Solid	CLIENT	06/18/99	06/19/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	85.	wt %	1.0	0.10	CLP/CIP SOW	06/22/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 06/21/99 by JF

08/11/99

LJO/baeajc(dw)/msm
PF21TSS6
CC: MS. LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

Method Blank and Laboratory Control Sample Results

Client:	Tetra Tech NUS
Work Order:	WP2989

			METHOD BLANK RESULTS						LABORATORY CONTROL SAMPLE RESULTS					
Parameter	Date of Prep	Date of Analysis	Units		Concentration Measured in Blank		Acceptance Range	Practical Quantitation Level**	Units	True Value	Measured Value	Percent Recovered	Acceptance Range (%)	Acceptance Range (mg/kg)
TS -Total Residue	21-Jun-99	22-Jun-99	wt %	<	0.10	<	0.10	0.10	wt %	90	90.2	100	80-120	
	21-Jun-99	22-Jun-99	wt %	<	0.10	<	0.10	0.10			NA		80-120	
TCO-Total Combustible Organics	21-Jun-99	22-Jun-99	wt %	<	0.10	<	0.10	0.10			NA		80-120	

** Practical quantitation level is the lowest concentration measurable for samples with normal chemical and physical composition during routine laboratory operations.

DATA QUALITY COMMENTS:
Results of all quality control measurements are within the laboratory and method specified acceptance range except as noted.

5000003

[redacted]

Duplicate and Matrix Spike/Matrix Spike Duplicate Results

Client:	Tetra Tech NUS
Work Order:	WP2989

			DUPLICATE RESULTS					*MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS*									
			Sample Measurements				Acceptance Range	Concentration or Quantity				Matrix Spike Recovery (%)					
Parameter	Sample No	Units	Rep 1	Rep 2	Mean Conc	RPD (%)	for RPD (%)	Units	Sampl Only	Spike Added	Sample +Spike Dup 1	Sample +Spike Dup 2	Sample +Spike Dup 1	Sample +Spike Dup 2	Acceptance Range (%)	RPD (%)	Acceptance Range (%)
TS	WP2989-1	wt %	99.5	99.5	99.5	0.0	0-20	wt %		NA					75-125		0-20
	WP2989-3	wt %	54.5	53.3	53.9	2.2	0-20	wt %		NA					75-125		0-20
TCO	WP2989-1	wt %	13.8	13.4	13.6	2.9	0-20	wt %		NA					75-125		0-20

RPD = Relative percent difference, which is the absolute value of the difference between two replicate results divided by the mean concentration then multiplied by 100%.

NA = Not applicable.

DATA QUALITY COMMENTS:

Results of all quality control measurements are within the laboratory or contract specified acceptance range except as noted. The laboratory does not use the sample duplicate and matrix spike acceptance ranges as acceptance criteria for a specific analysis. Sample duplicate and matrix spike data are used to evaluate method performance in the environmental sample matrix only. Please refer to LCS data for assessment of quality control for each parameter.

5000004

Client:	Katahdin Analytical
	340 County Road
	Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: July 09, 1999

Sample ID	: 20SLB050607
Lab ID	: 9906694-01
Matrix	: Soil
Date Collected	: 06/18/99
Date Received	: 06/18/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		537	179	358	mg/kg	1.0	AAT	06/24/99	0900	151905	1
Evaporative Loss @ 105 C		44.0	1.00	1.00	wt%	1.0	GJ	06/21/99	1615	151815	2
Total Organic Carbon		22400	390	906	mg/kg	1.0	LIB	07/07/99	1539	152551	3

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550
M 3	SW846 9060 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: July 09, 1999

Sample ID	: 20SLB050607D
Lab ID	: 9906694-02
Matrix	: Soil
Date Collected	: 06/18/99
Date Received	: 06/18/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		829	227	454	mg/kg	1.0	AAT	06/24/99	0900	151905	1
Evaporative Loss @ 105 C		56.0	1.00	1.00	wt%	1.0	GJ	06/21/99	1615	151815	2
Total Organic Carbon		16800	428	992	mg/kg	1.0	LIB	07/07/99	1624	152551	3

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550
M 3	SW846 9060 Modified

Notes:
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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: July 09, 1999

Sample ID	: 20SLB040304
Lab ID	: 9906694-03
Matrix	: Soil
Date Collected	: 06/18/99
Date Received	: 06/18/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		551	175	350	mg/kg	1.0	AAT	06/24/99	0900	151905	1
Evaporative Loss @ 105 C		43.0	1.00	1.00	wt%	1.0	GJ	06/21/99	1615	151815	2

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: July 09, 1999

Sample ID	: 20SLB020203
Lab ID	: 9906694-04
Matrix	: Soil
Date Collected	: 06/18/99
Date Received	: 06/18/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		289	118	236	mg/kg	1.0	AAT	06/24/99	0900	151905	1
Evaporative Loss @ 105 C		15.0	1.00	1.00	wt%	1.0	GJ	06/21/99	1615	151815	2

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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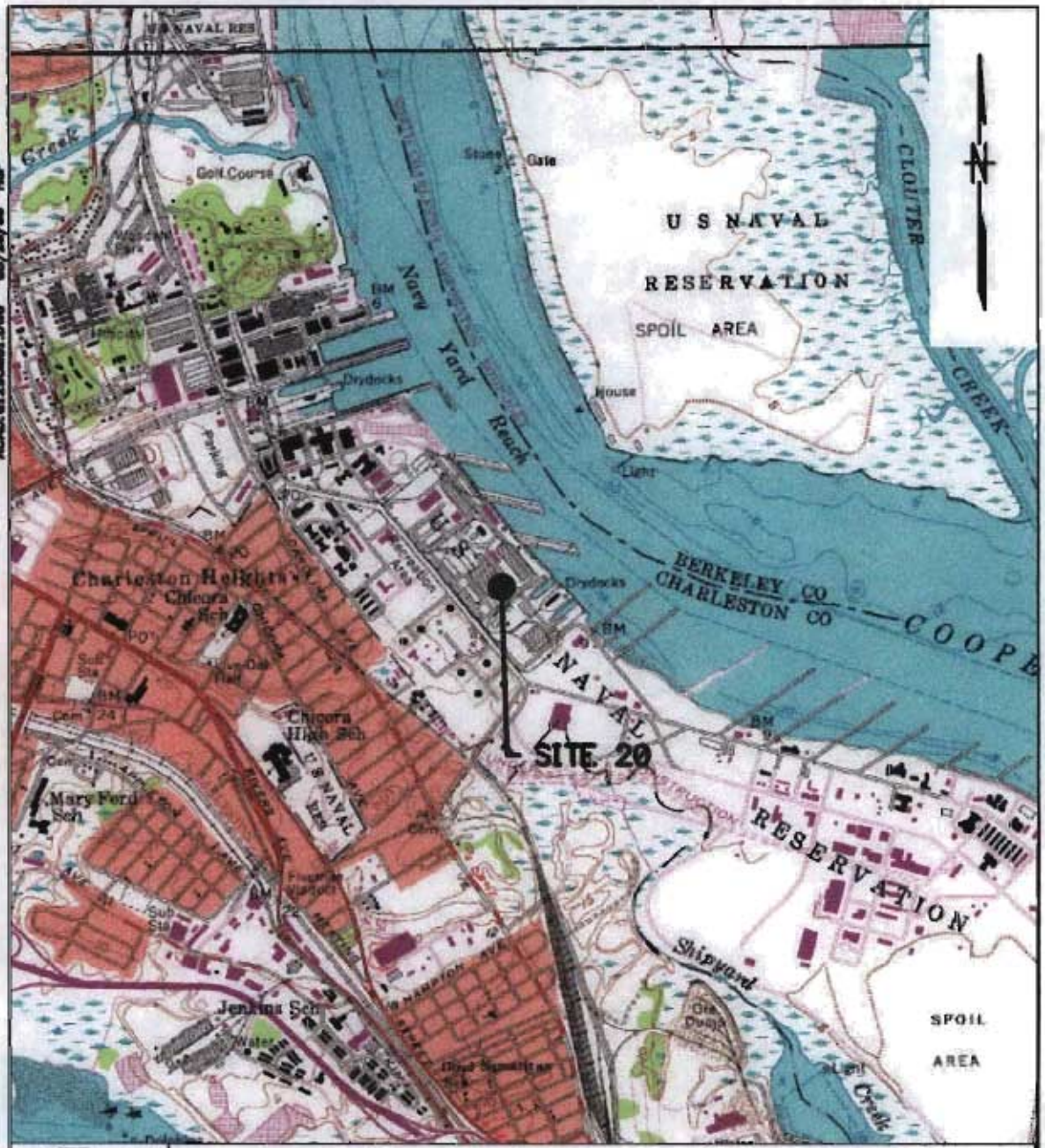
Reviewed By

APPENDIX C
TOPOGRAPHIC MAP WITH SITE LOCATION



SOURCE: QUADRANGLE MAP SOUTH CAROLINA, REVISED 1978
QUADRANGLE MAP NORTH CHARLESTON REVISED, 1978

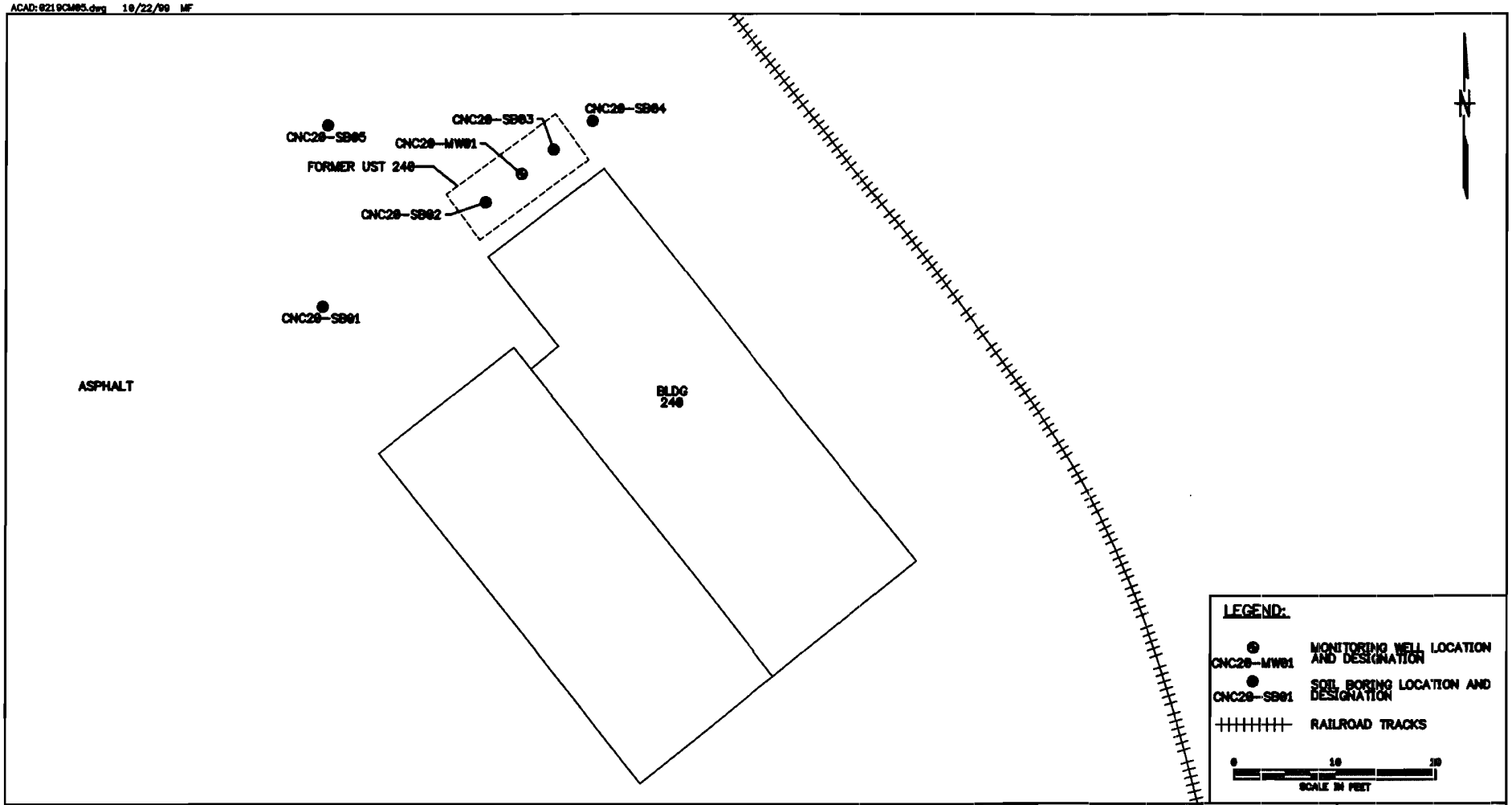
0 2000 4000
SCALE IN FEET

DRAWN BY HJP DATE 8/20/99	SITE LOCATION MAP SITE 20, BUILDING 240, ZONE F CHARLESTON NAVAL COMPLEX NORTH CHARLESTON, SC	CONTRACT NO. N0129	
CHECKED BY DATE		APPROVED BY DATE	
COST/SCHED-AREA		APPROVED BY DATE	
SCALE AS NOTED		DRAWING NO. FIGURE 1	REV. 0

FORM CADD NO. 2SEV_AVZIVE - REV 0 - 1/28/98

APPENDIX D
SITE BASE MAP

ACAD:0219CM05.dwg 10/22/99 MF



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCED

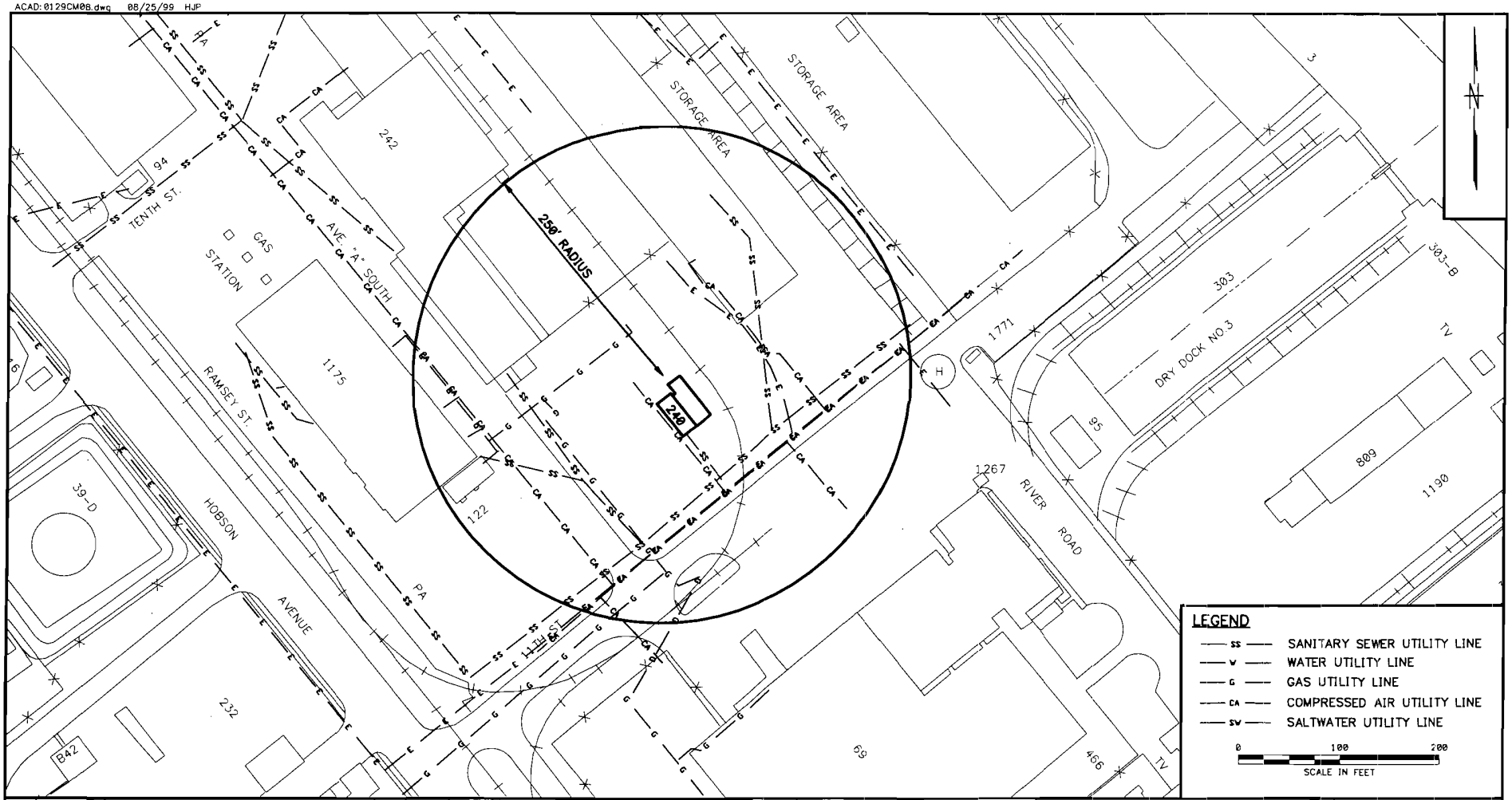
DRAWN BY MF DATE 10/22/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SITE LOCATION MAP
SITE 20, BUILDING 240
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SC

CONTRACT NO. 0219
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 1
REV. 0

FORM CADD NO. XREV_SHJPVS - REV 0 - 1/20/99

ACAD: 0129CM08.dwg 08/25/99 HJP



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY DATE HJP 8/25/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SITE VICINITY MAP
SITE 20, BUILDING 240
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

CONTRACT NO. 0129
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: July 09, 1999

Sample ID	: 20SLB030102
Lab ID	: 9906694-05
Matrix	: Soil
Date Collected	: 06/18/99
Date Received	: 06/18/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		293	115	230	mg/kg	1.0	AAT	06/24/99	0900	151905	1
Evaporative Loss @ 105 C		13.0	1.00	1.00	wt%	1.0	GJ	06/21/99	1615	151815	2

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
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Data reported in mass/mass units is reported as 'dry weight'.

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in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

QUALITY CONTROL SUMMARY

QC Summary Report

Project Description: Former Naval Complex

cc: KATA00199 Lab. Sample ID: 9906694% Report Date: July 09, 1999

Sample/Parameter	Type	Batch	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Analyst	Date	Time
General Chemistry													
QC622438	BLANK	151905											
Total Rec. Petro. Hydrocarbons						105	mg/kg				AAT	06/24/99	0900
QC622441	9906485-01DUP	151905											
Total Rec. Petro. Hydrocarbons				335		291	mg/kg	14.0					
QC622443	9906694-01DUP	151905											
Total Rec. Petro. Hydrocarbons				536		464	mg/kg	14.3					
QC622439	LCS	151905											
Total Rec. Petro. Hydrocarbons			10300			7600	mg/kg		73.8	(70.0 - 116.)			
QC622440	9906485-01MS	151905											
Total Rec. Petro. Hydrocarbons			12000	335		9890	mg/kg		79.8	(70.0 - 130.)			
QC622442	9906694-01MS	151905											
Total Rec. Petro. Hydrocarbons			18400	536		14000	mg/kg		73.4	(70.0 - 130.)			
QC622109	BLANK	151815											
Evaporative Loss @ 105 C						0.00	wt%				GJ	06/21/99	1615
QC622108	9906694-05DUP	151815											
Evaporative Loss @ 105 C				13.0		14.0	wt%	7.41					
QC624957	BLANK	152551											
Total Organic Carbon						7.21	mg/kg				LIB	07/07/99	1414
QC624958	9906925-03DUP	152551											
Total Organic Carbon				6410		6280	mg/kg	1.91			LIB	07/07/99	1457
QC624960	LCS	152551											
Total Organic Carbon			3750			4730	mg/kg		126	(88.0 - 130.)	LIB	07/07/99	1400
QC624959	9906925-03PS	152551											
Total Organic Carbon			8890	6410		15200	mg/kg		98.4	(73.0 - 129.)	LIB	07/07/99	1507

Notes:
The qualifiers in this report are defined as follows:
J indicates presence of analyte < RL (Report Limit)
U indicates presence of analyte < DL (Detect Limit)

n/a indicates that spike recovery limits do not apply when
sample concentration exceeds spike conc by a factor of 4 or more

S. W. COLE ENGINEERING, INC.

REPORT OF GRADATION
ASTM C-117, C-136

Project No. 99008
Date 06/23/1999

Project MISCELLANEOUS

Client KATAHDIN ANALYTICAL

Sample No. 26, WP2989-3, SANDY GRAVEL

Sieve Size	Percent Passing	Specifications %
3/4 "	100.0	
1/2 "	97.9	
1/4 "	96.9	
# 4	96.6	
# 10	90.4	
# 20	63.1	
# 40	30.4	
# 60	13.1	
# 100	4.6	
# 200	1.8	

HYDROMETER ANALYSIS

JOB NO.99-008 BORING NO. SAMPLE NO.S-26

DIAMETER	% PASSING	READING
3.732782E-02	1.803383	2.5
.0264169	1.741181	2.4
1.871086E-02	1.616777	2.2
1.366448E-02	1.616777	2.2
9.670312E-03	1.554574	2.1
6.883411E-03	1.057031	1.3
4.883303E-03	.8082956	.9
3.467103E-03	.4972844	.4
2.455585E-03	.372954	.2
1.420023E-03	.2485495	0