Photo Log

Oct. 7, 2008

106 - 3396	11:19	Four minnow traps and six crab nets being prepared with bait to be deployed
106 - 3397	11:19, 11:40	Crab nets deployed under the bridge in Nānākuli muliwai.
106 - 3398	1141	Minnow traps are placed near branches sitting near the edge of the muliwai under the Nānākuli bridge.
106 - 3399	1144	Trash and other debris caught in the seaweed at bottom of the muliwai
106 - 3401	1153	Last net is placed in the muliwai.
106 - 3402	1155	Prawns seen swimming around minnow trap.
106 - 3403	1201	Samoan crab sitting at the bottom of the muliwai.
106 - 3404	1320	Scoop nets are used in an attempt to catch prawns
106 - 3405	1320	Scoop nets are used near trash at the edge of the muliwai.
106 - 3406	1332	Minnow trap near edge of muliwai.
106 - 3407	1431	Bottom of prawn
106 - 3409	1431	Prawns.
106 - 3408	1431	Prawns Dorsal view
106 - 3410	1437	Prawns. Lateral view.
106 - 3411	1439	Prawns of various sizes. Lateral view

October 8, 2008 Nānākuli & Makua Sites

0900 Susan Carstenn and Maren Anderson arrive on site at Nānākuli Beach Park to meet with OI team and pick up traps left in the Muliwai overnight.

0930 The OI team arrives on site.

0945 OI team picks up crab/prawn traps that were set in the Muliwai overnight.

1000 Susan Carstenn departs from Nānākuli to go to Makua site to meet any possible Malama Makua individuals on site.

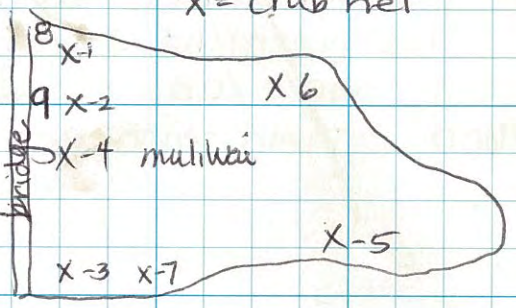
1000 OI team brings traps back to processing area with Macrobrachium grandimanus.

1100 Arrive Makua - deploy minnow trap under bridge at South muliwai

Environmental Conditions - partly cloudy, Air temperature - ~~80~~ mid 80's

Water condition - 6" visibility

X = crab net



11:07 deploy crab net 1 in North muliwai

11:08 " " " 2

11:11 " " " 3

11:14 " " " 4

11:17 " " " 5

11:20 " " " 6

11~~2~~:42 deployed round minnow trap 7 -

11~~2~~:46 " square fish traps 8 & 9 -

11~~2~~:50 checked nets 3, ~~4~~ 4, 2 & 1 - nothing

11:56 " " 5 - nothing

12:00 " " 7 - nothing

enviromental conditions - completely overcast

1:10 checked trap 3 - nothing

env. conditions - partly cloudy

~~1224~~ net ~~trap~~ 4 - empty

(1312) " 2 empty

" 1 empty

" 5 empty

1:20 " 6 empty

(1320)

Pachygrapsus ~~sp~~ minutus - crab from Nanakuli

Keyed out by Tom O.

2:30 Checked nets

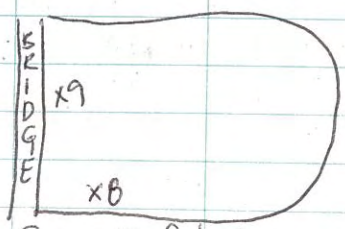
(1430) 1, 2, 4, 3 empty

fish trap 8 empty

fish trap 9 empty

"Rite in the Rain" ALL-WEATHER WRITING PAPER

1445



x=fish trap

Square fish traps re-deployed in mauiwai to be left overnight and retrieved in the morning.

Crab nets 5 & 6 also came up empty.

1500 Field team departs from Makua site.

1530 Field team arrives at Nānākuli mauiwai.

1545 OI team deploys two cylindrical traps into the Nānākuli mauiwai. Traps are set underneath the bridge and left overnight. These traps will be checked in the morning 10/9/08.

1600 Field team departs from Nānākuli mauiwai.

Photo Log 10.8.08 Nānākuli & Makua

107-3412	View of bridge that crosses over the North muliwai at Makua. Crab nets set on bridge waiting to be deployed. Facing Northeast.
107-3413	View of crab net #5 being deployed by 01 team in North Makua muliwai. Facing east.
107-3414	Don from 01 deploying crab net #6 in North muliwai at Makua. Facing east.
107-3415	Don from 01 deploying crab net #6 in North muliwai at Makua. Facing east.
107-3416	Tom from 01 deploying cylindrical minnow trap in North muliwai at Makua. Facing east.
107-3417	01 team deploying two ##square minnow traps off bridge in North muliwai at Makua.

"Rite in the Rain" ALL-WEATHER WRITING PAPER

10-9-00

Nānākuli ~ Mākua

915 TT team arrives on site at Nānākuli beach.
Environmental conditions: Sunny with clouds overhead. Temperatures approximately 88°F. Ocean conditions are flat.

930 OI team arrives on-site

945 OI team goes down to muliwai to check on traps left overnight. One cylider trap was smashed open so it was brought back for repair. The ~~other~~ second trap was re-baited and redeployed. This trap will be retrieved during the scheduled sampling

10:10 Field team departs Nānākuli for Mākua.

1033 TT arrives at Makua beach. Mākama Mākua not present

1040 TT arrives at Range Control to check in and sign out radio and gate keys

1100 TT Field team returns to North Muliwai at Mākua ~~beach~~ to retrieve ~~crab nets~~ minnow traps. Traps contained mosquito fish + akupa

1125 Team relocates to south muliwai and deploys traps and nets near the bridge

1139 Traps are deployed in south muliwai

1150 Last trap deployed in South muliwai

1230 OI returns to muliwai to see if prawns or crab can be caught by scoop net.

1250 Broken minnow trap repaired and deployed in South muliwai

~~1340~~ 1338 Rock crab caught from south muliwai.

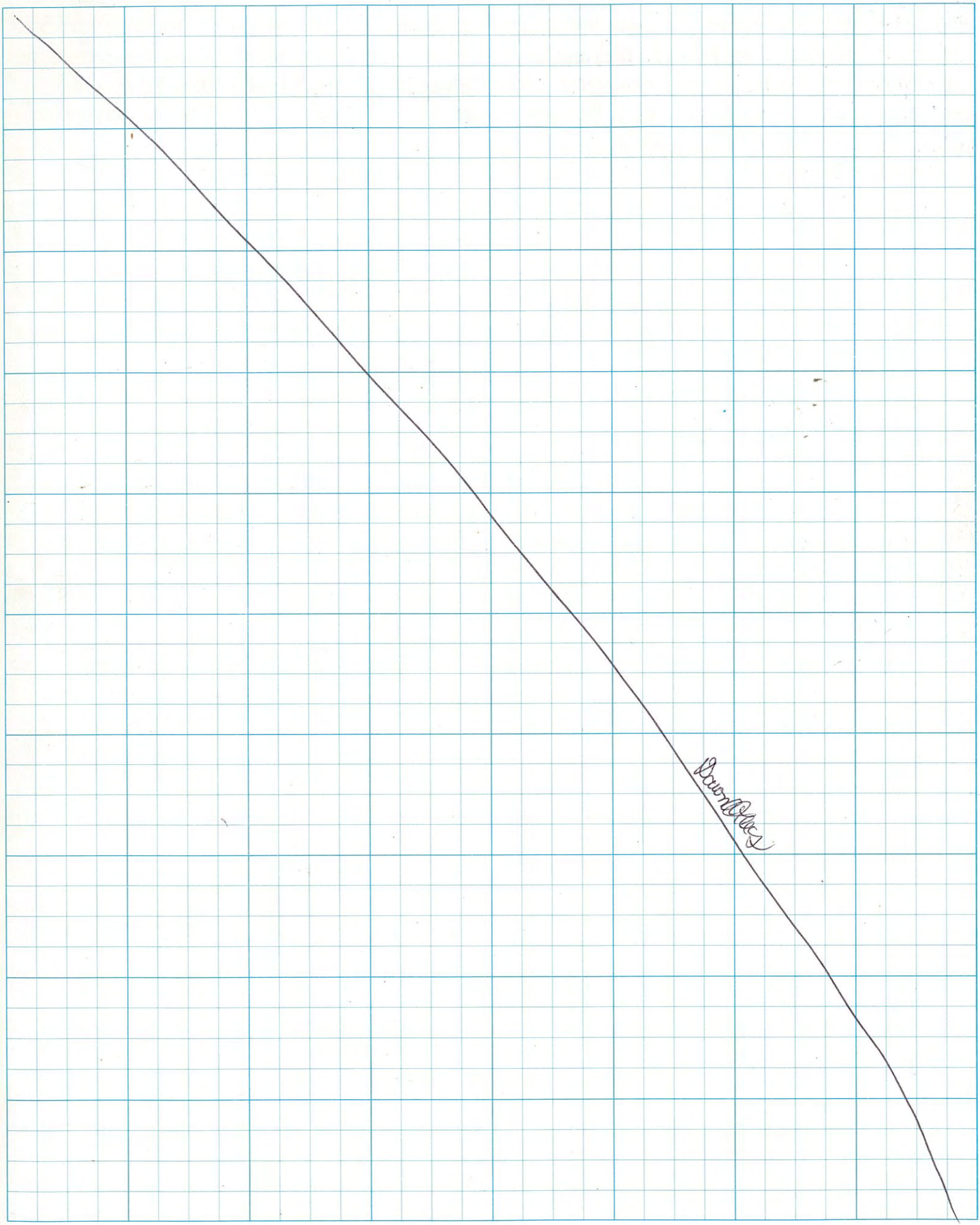
1356 Trap on west side of bridge retrieved. Trap contained mosquito fish.

430 Traps and nets checked. One rock crab caught. Samples are processed. OI will attempt to catch more crabs and prawns on the eastern side of the bridges. Traps and nets located on the western side of bridge are relocated.

545 Traps retrieved empty.

600 Field team leaves Makua Beach to return gates keys and radio to Range control

10-9-09



"Rite in the Rain"
ALL-WEATHER WRITING PAPER

Photo Log

10-9-08

108-3418	11:34	South muliwai. Taken from bridge facing east.
108-3419	11:34	Crab caught from muliwai.
108-3420	11:40	South muliwai showing minnow trap deployed on western side of bridge. Facing West
108-3421	11:45	Two prawns caught in the south muliwai.
108-3422	1337	Rock crab caught in south muliwai.

Field Record: Makua Shellfish Study						
Sample Processor	Maren Anderson					
Data Recorder	Dawn A. Lucas					
Additional Personnel and Duties						
Environmental Conditions	See field notes					
Date	Time	Location	Species	Length/Width (cm)	Mass (g)	Composite ID
10-9-09	11:34	MSM	PACMIN	3.3	29	MSM-01
				3.2	27	-
				3.0	19	
10-9-09	11:45	MSM		8.4/4.0	14	MSM-02
				6.9/3.2	5	

Mākua → Nānākuli 10.10.08

1010 Tetra Tech team arrives on site. Susan Carstenn, Dawn Lieces, Maren Anderson
1025 Minnow traps are baited with salmon bones and deployed in South muliwai. 2 square traps and one cylinder trap is used. Traps were deployed at 10:30, 1035, 1037
1043 Dip nets are used in the muliwai to catch prawns
1045 Environmental Conditions. Sunny with clouds overhead. Light winds from north east and clouds overhead Temperature is approximately 85°F. Waters are flat.
1130 Traps are retrieved empty
1147 Tetra Tech team packs up equipment and leaves site for Nānākuli.
1210 TT team arrives at Nānākuli beach to retrieve trap left over night
1220 Trap removed from Nānākuli muliwai was smashed open and empty.
1225 TT team cleans equipment and prepares final samples for shipment.
1310 TT team leaves Nanākuli Beach

"Rite in the Rain" ALL-WEATHER WRITING PAPER

APPENDIX B
LAB DATA

Tetra Tech EC, Inc.

MULIWAI TISSUE/838

ARF 51706

Sampling Dates August 02 - 24, 2006

Number of pages in this report: _____.

4203 West Swift ∇ Fresno, California 93722 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Case Narrative

ARF: 51706

Project: Muliwai Tissue/838

State Certification Number: CA1312

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sample Receipt Information:

The sample group was received September 21, 2006, frozen on dry ice. The samples were assigned Analytical Request Form (ARF) number 51706. The sample numbers and requested analyses were compared to the chains of custody. No exception was noted. On October 13, 2006 the client requested perchlorate analysis by LC-Mass Spec (in order to achieve lower reporting limits than allowed by EPA method 314) for the following samples: 2FD, NW1FD, NW2FD, NW1SW1-1FD and 9AFD and 10A COMP.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
1	AX49331	MISC	8/2/06	9/21/06
3	AX49332	MISC	8/2/06	9/21/06
4	AX49333	MISC	8/2/06	9/21/06
1B	AX49334	MISC	8/3/06	9/21/06
5	AX49335	MISC	8/3/06	9/21/06
6	AX49336	MISC	8/3/06	9/21/06
7	AX49337	MISC	8/3/06	9/21/06
9	AX49338	MISC	8/3/06	9/21/06
10	AX49339	MISC	8/3/06	9/21/06
12	AX49340	MISC	8/4/06	9/21/06
13	AX49341	MISC	8/4/06	9/21/06
14	AX49342	MISC	8/4/06	9/21/06
NW1	AX49343	MISC	8/5/06	9/21/06
NW2	AX49344	MISC	8/6/06	9/21/06
NW3	AX49345	MISC	8/6/06	9/21/06
NW4	AX49346	MISC	8/5/06	9/21/06
NW5	AX49347	MISC	8/5/06	9/21/06
NW6	AX49348	MISC	8/19/06	9/21/06
NW7	AX49349	MISC	8/19/06	9/21/06
NW8	AX49350	MISC	8/19/06	9/21/06
NW9	AX49351	MISC	8/19/06	9/21/06
NW10	AX49352	MISC	8/20/06	9/21/06
NW1SW3-1	AX49353	MISC	8/24/06	9/21/06
NW1SW1-1	AX49354	MISC	8/24/06	9/21/06
NW1SW2-1	AX49355	MISC	8/9/06	9/21/06
COMP 8,8A	AX49356	MISC	8/3/06	9/21/06

2FD	AX49357	MISC	8/3/06	9/21/06
NW1FD	AX49358	MISC	8/5/06	9/21/06
NW2FD	AX49359	MISC	8/19/06	9/21/06
NW1SW1-1FD	AX49360	MISC	8/9/06	9/21/06
9AFD AND 10A COMP	AX49361	MISC	8/3/06	9/21/06

Percent moisture was provided by Tetra Tech.

EPA Method 8081A
Organochlorine Pesticides

Sample Preparation:

The fish tissue samples were extracted according to EPA method 3550B. The extracts were cleaned with florisil prior to analysis.

Analysis Information:

Samples:

The samples were analyzed according to EPA method 8081A using a Hewlett Packard GC equipped with an ECD.

Calibrations:

Initial and continuing calibrations were performed according to the method. All acceptance criteria were met.

Blanks:

No target analyte was detected above the reporting limit for the method blank.

Spikes and Duplicates:

A Laboratory Control Spike (LCS) was used for quality assurance. Sample NW1FD and the MS/MSD performed on the sample had low surrogate recoveries. All other recoveries were acceptable.

Sample NW1FD was designated by the client for MS/MSD analysis. All target compounds recovered low in the MS and MSD; all RPDs exceeded the 30% limit.

Surrogates:

All surrogates recovered within acceptance limits.

Summary:

No other analytical problem was encountered.

EPA Method 8270C

Sample Preparation:

The tissue samples were extracted according to EPA method 3550B. Samples 2FD, NW1FD, and the matrix spikes performed on sample NW1FD were concentrated to a final volume of 5mL since they could not be concentrated to 1mL. As a result, the reporting limits for 2FD and NW1FD are raised accordingly.

Sample Analysis Information:

The samples were analyzed according to EPA Method 8270C using a Hewlett Packard GC/MS.

Quality Control/Assurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All spike recoveries were acceptable.

Sample NW1FD was designated by the client for an MS/MSD analysis. All spike recoveries were acceptable.

Method blanks

No target compound was detected at or above the reporting level.

Surrogates

Sample NW1SW1-1FD recovered 2-Fluorophenol and Fluorobiphenyl below the lower control limits at 44.6% and 26.2% respectively. Re-analysis of the sample at a dilution factor of 5 provided similar results. Due to limited sample volume, the sample could not be re-extracted. Only the undiluted analysis is reported. All other surrogate recoveries were within control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

Chrysene-d12 recovered below the lower control limit in sample 9AFD AND 10A COMP. Sample 9AFD AND 10A COMP was also analyzed at a dilution factor of 5 where the internal standards are acceptable. Both analyses are reported. Perylene-d12 recovered below the lower control limit in samples NW2FD, NW1SW1-1FD, 9AFD AND 10A COMP, and the MS/MSD performed on sample NW1FD. No target analyte is quantitated using the Perylene-d12 internal standard. All other method criteria were met.

Summary:

No other problem was encountered.

EPA Method 8330A
Explosives

Sample Preparation:

The samples were extracted according to EPA method 8330A, within acceptable holding times. Two grams of fish sample were weighed and then dried overnight prior to extraction.

Analysis:

The samples were analyzed according to EPA Method 8330A using a Hewlett Packard 1050 HPLC with UV detector and an Agilent 1100 HPLC with UV detector. The system's computer program inaccurately calculated the baseline on some of the peak integrations. These baselines were manually integrated for an accurate peak area count. Chromatograms for both before and after manual integration are contained in the report.

An additional LC/Mass Spec analysis was performed by the laboratory for three samples (1B, NW9 and NW1SW1-1) in order to confirm the presence of 2,4-DNT that was detected on both LC/UV columns. The LC/MS analysis indicated that 2,4-DNT was not present in the samples, and the Extracted Ion Profiles (EIP) were included in the package behind the LC/UV sample chromatograms.

The samples were reported without correcting for % moisture, since the fish were dried prior to extraction.

Quality Control/Assurance:

Spike Recovery

Laboratory Control Spikes (LCS/LCSD) were used for quality assurance. All spike recoveries met acceptance criteria.

Samples "4" and "NW1SW3-1" were selected by the client for MS/MSD analysis. For "4 MS/MSD", the RDX recovered above control limits, at 152% and 194% due to an elevated chromatographic baseline from the sample matrix. For "NW1SW3-1 MS/MSD", the 2,4-DNT recovered below control limits, at 77.3% and 68.4%. Nitroglycerine for the MSD recovered below control limits, at 63.9%, and the %RPD was greater than the 25% acceptance criteria, at 33%. Both sets of MS/MSD were re-analyzed with similar results, and no further action was taken.

Method blanks:

No target analyte was detected above the reporting limits for the method blanks.

Surrogates:

All surrogate recoveries were within control limits, with the exception of sample "NW1SW3-1" in which the surrogate recovered at 47.2%. The sample was re-analyzed with similar results. There were no target analytes detected in the sample, and no further action was taken.

Calibration:

The initial and continuing calibrations and second source were analyzed according to the method. All acceptance criteria were met.

Summary:

No other analytical problem was encountered. All data are acceptable.

Perchlorate by LC-Mass Spec

Sample Preparation and Analysis Information:

The samples were prepared according to the cleanup method CA CDFA CFSAN Rev 2 April 2005 and analyzed according to the DoD Perchlorate Handbook March 2006, using an Agilent 1100 LC-Mass Spec (ESI). The samples were prepared past the recommended 28-day hold time.

Sample "9AFD/10A COMP" was J-flagged as an "estimated value", even though the concentration was greater than the reporting limit, in accordance with the DoD acceptance criteria for the 83/85 ion ratio.

Quality Control/Assurance

Calibrations:

Calibrations were performed according to the DoD Perchlorate Handbook March 2006. All calibration acceptance criteria were met. The second source met acceptance criteria.

Blanks:

The method blanks contained no Perchlorate at or above the MDL.

Spikes:

A Laboratory Control Spike (LCS) was prepared using DI water. The LCS recoveries met acceptance criteria.

An Interference Check Sample (I.C.S.) was prepared using a mixed anions solution. The ICS recovery met acceptance criteria.

Sample NW1FD was selected by the client for matrix spike / matrix spike duplicate analysis; however there was insufficient sample volume remaining to perform matrix spikes for this sample. The laboratory randomly selected sample 2FD for MS/MSD analysis. The spike recoveries were outside acceptance criteria due to the parent sample perchlorate response at approximately six times the spike level. The MS/MSD were re-analyzed with similar results.

Internal Standards:

The area counts of the sample Internal Standards were compared to the average I.S. area counts of the second source and initial CCV. All I.S. were within the 50%D DoD Perchlorate Handbook March 2006 acceptance criteria.

Summary:

All data were acceptable. No other analytical exception is noted.

EPA Method 8260B
Volatile Organic Compounds

Preparation Information:

The fish tissue samples were purged according to EPA method 5035.

Analysis Information:

The samples were analyzed according to EPA method 8260B using a Hewlett Packard GC/MS. The samples were screened for J-values between the MDL and the PQL.

Quality Control/Assurance

Spike Recoveries

Laboratory Control Spikes (LCS) and matrix spikes (MS/MSD) were used for quality assurance. A second source standard was used for the LCS. All recoveries met acceptance criteria.

Samples NW1FD was designated by the client for MS/MSD analysis. Most target compounds recovered outside the control limits.

Method blanks

The blanks contained no other target compound at or above reporting limits.

Surrogates

The surrogate recoveries are summarized on the Forms 2 & 8. Sample 2FD recovered Bromofluorobenzene below the 82% limit at 76.9%. All other recoveries were within acceptance limits.

Initial and Continuing Calibrations

Initial and continuing calibrations were analyzed according to the method. All acceptance criteria were met.

Internal Standards

Internal standard recoveries were checked against the mid-point of the initial calibrations. All IS recoveries were acceptable.

Tuning:

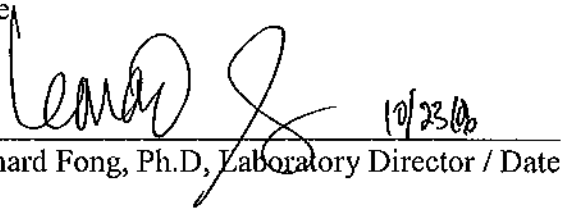
The instrument was tuned using BFB. All method criteria were met.

Summary:

No other exception was noted.

CERTIFICATION

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 hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.



10/23/06

Leonard Fong, Ph.D, Laboratory Director / Date

ARF Summary
Chain of Custody

APPL - Analysis Request Form 51706

Client: Tetra Tech, Inc.
Address: 820 Mililani St, Ste 700
Hololulu, HI 96813
Attn: SUSAN CARSTENN
Phone: 808-533-3366 Fax: 808-533-3306
Job: MULIWAI TISSUE/838
PO #: NA
Chain of Custody (Y/N): Y #
RAD Screen (Y/N): Y pH (Y/N): N
Turn Around Type: STD

Received by: CM
Date Received: 09/21/06 Time: 10:30
Delivered by: FED EX
Shuttle Custody Seals (Y/N): Y
Chest Temp(s): FROZEN
Color: VOA FRIG
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Cynthia Heeb
QC Report Type: DVP4/HI/EDD
Due Date: 10/03/06

Comments:
***See ATTACHED SPECIAL ANALYTE LIST and Reporting Limits!!*
Columbia Analytical will provide moisture data.
Tissue Samples homgenized and frozen at CAS/Kelso prior to shipment
Use moisture corrected self calculating forms
FINAL results due to Client 10-11-06
send Excel EDD w/QC to mark Rigby and Gary Floyd
send pdf of report to scarstenn@ttsfo.com, GFloyd@ttsfo.com, and Mark.Rigby@tetratech.com
10-5-06: Add pentachlorophenol to the 8270C analyte list

Sample Distribution:
GC: 5-$8270S, 5-$88SS
Extractions: 25-_MSE018, 5-_SON002LL, 5-_SON009
VOA: 1-$8260SX, 4-$8260S
LCMS: 25-$83TTS, 5-$CLO4LCS
Wetlab: 30-MOIST
Other: 1-HOLD

Charges:

Invoice To:
GARY FLOYD
180 Howard St., Ste 250
San Francisco, CA 94105
415-974-1221

	Client ID		APPL ID	Sampled	Analyses Requested
1.	1		AX49331M	08/02/06 00:00	$83TTS, MOIST
2.	3		AX49332M	08/02/06 00:00	$83TTS, MOIST
3.	4	MS/MSD	AX49333M	08/02/06 00:00	$83TTS, MOIST
4.	1B		AX49334M	08/03/06 00:00	$83TTS, MOIST
5.	5		AX49335M	08/03/06 00:00	$83TTS, MOIST
6.	6		AX49336M	08/03/06 00:00	$83TTS, MOIST
7.	7		AX49337M	08/03/06 00:00	$83TTS, MOIST

8.	9		AX49338M	08/03/06 00:00	$83TTS, MOIST
9.	10		AX49339M	08/03/06 00:00	$83TTS, MOIST
10.	12		AX49340M	08/04/06 00:00	$83TTS, MOIST
11.	13		AX49341M	08/04/06 00:00	$83TTS, MOIST
12.	14		AX49342M	08/04/06 00:00	$83TTS, MOIST
13.	NW1		AX49343M	08/05/06 00:00	HOLD
14.	NW2		AX49344M	08/06/06 00:00	$83TTS, MOIST
15.	NW3		AX49345M	08/06/06 00:00	$83TTS, MOIST
16.	NW4		AX49346M	08/05/06 00:00	$83TTS, MOIST
17.	NW5		AX49347M	08/05/06 00:00	$83TTS, MOIST
18.	NW6		AX49348M	08/19/06 00:00	$83TTS, MOIST
19.	NW7		AX49349M	08/19/06 00:00	$83TTS, MOIST
20.	NW8		AX49350M	08/19/06 00:00	$83TTS, MOIST
21.	NW9		AX49351M	08/19/06 00:00	$83TTS, MOIST
22.	NW10		AX49352M	08/20/06 00:00	$83TTS, MOIST
23.	NW1SW3-1	MS/MSD	AX49353M	08/24/06 00:00	$83TTS, MOIST
24.	NW1SW1-1		AX49354M	08/24/06 00:00	$83TTS, MOIST
25.	NW1SW2-1		AX49355M	08/09/06 00:00	$83TTS, MOIST
26.	COMP 8,8A		AX49356M	08/03/06 00:00	$83TTS, MOIST
27.	2FD		AX49357M	08/03/06 00:00	$8260SX, $8270S, $88SS, $CLO4LCS, MOIST
28.	NW1FD	MS/MSD	AX49358M	08/05/06 00:00	$8260S, $8270S, $88SS, $CLO4LCS, MOIST
29.	NW2FD		AX49359M	08/19/06 00:00	$8260S, $8270S, $88SS, $CLO4LCS, MOIST
30.	NW1SW1-1FD		AX49360M	08/09/06 00:00	$8260S, $8270S, $88SS, $CLO4LCS, MOIST
31.	9AFD AND 10A COMP		AX49361M	08/03/06 00:00	$8260S, $8270S, $88SS, $CLO4LCS, MOIST

Initials _____ Date _____

APPL Sample Receipt Form

ARF# **51706**

Sample	Container Type	Count	Sample	Container Type	Count	Sample	Container Type	Count
AX49331	21 8oz Jar	1						
AX49332	21 8oz Jar	1						
AX49333	21 8oz Jar	3						
AX49334	21 8oz Jar	1						
AX49335	21 8oz Jar	1						
AX49336	21 8oz Jar	1						
AX49337	21 8oz Jar	1						
AX49338	21 8oz Jar	1						
AX49339	21 8oz Jar	1						
AX49340	21 8oz Jar	1						
AX49341	21 8oz Jar	1						
AX49342	21 8oz Jar	1						
AX49343	21 8oz Jar	3						
AX49344	21 8oz Jar	1						
AX49345	21 8oz Jar	1						
AX49346	21 8oz Jar	1						
AX49347	21 8oz Jar	1						
AX49348	21 8oz Jar	1						
AX49349	21 8oz Jar	1						
AX49350	21 8oz Jar	1						
AX49351	21 8oz Jar	1						
AX49352	21 8oz Jar	1						
AX49353	21 8oz Jar	1						
AX49354	21 8oz Jar	3						
AX49355	21 8oz Jar	1						
AX49356	21 8oz Jar	1						
AX49357	21 8oz Jar	1						
AX49358	21 8oz Jar	2						
AX49359	21 8oz Jar	1						
AX49360	21 8oz Jar	1						
AX49361	21 8oz Jar	1						

Columbia Analytical Services, Inc.

1317 South 13th, Kelso, WA 98626

Phone: (360) 5677-7222 Fax: (360) 636-1068

SR# K0607294

Company Name: Tetra Tech

Project Name/Number: Muliwai Tissue/838

Project Manager: Susan Carstenn

Sample ID	Date	Time	LAB ID	Matrix	Number of Containers	Contact Tetra Tech for testing requirements					REMARKS
1	08/02/06			Tissue	1	X					K0607294-001
3	08/02/06			Tissue	1	X					K0607294-004
4	08/02/06			Tissue	3	X					K0607294-005
1b	08/03/06			Tissue	1	X					K0607294-006
5	08/03/06			Tissue	1	X					K0607294-007
6	08/03/06			Tissue	1	X					K0607294-008
7	08/03/06			Tissue	1	X					K0607294-012
9	08/03/06			Tissue	1	X					K0607294-016
10	08/03/06			Tissue	1	X					K0607294-018

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

____ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date: _____

REPORT REQUIREMENTS

____ I. Routine Report

____ II. Report Dup., MS, MSD as r

____ III. Data Validation Report (in raw data)

V. EDD

Comments/Special Instructions:

Contact Susan Carstenn at Tetra Tech for testing requirements.

Custody of sample aliquots relinquished to APPL/Fresno

Samples homogenized and frozen at CAS/Kelso prior to shipment.

RELINQUISHED BY:

Signature: _____

Printed Name: Amanda Juell

Firm: CAS/KELSO

RECEIVED BY:

Signature: A. Juell

Printed Name: Juell

Firm: CAS/Kelso

9/20/06 1420

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: C. Moua

Firm: Appl Inc

Date/Time: 9/21/06 1030

Columbia Analytical Services, Inc.
1317 South 13th, Kelso, WA 98626
Phone: (360) 5677-7222 Fax: (360) 636-1068

SR# K0607294

Company Name	Tetra Tech
Project Name/Number	Muliwai Tissue/838
Project Manager	Susan Carstenn

Sample ID	Date	Time	LAB ID	Matrix	Number of Containers	Contact Tetra Tech for testing requirements					REMARKS
12	08/04/06			Tissue	1	X					K0607294-020
13	08/04/06			Tissue	1	X					K0607294-021
14	08/04/06			Tissue	1	X					K0607294-022
NW1	08/05/06			Tissue	3	X					K0607294-024
NW2	08/06/06			Tissue	1	X					K0607294-025
NW3	08/06/06			Tissue	1	X					K0607294-026
NW4	08/05/06			Tissue	1	X					K0607294-027
NW5	08/05/06			Tissue	1	X					K0607294-029
NW6	08/19/06			Tissue	1	X					K0607294-030
NW7	08/19/06			Tissue	1	X					K0607294-031
NW8	08/19/06			Tissue	1	X					K0607294-032

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day
____ Standard (21 days)
____ Provide FAX Preliminary Results

Requested Report Date: _____

REPORT REQUIREMENTS

____ I. Routine Report
____ II. Report Dup., MS, MSD as r
____ III. Data Validation Report (in raw data)
V. EDD

Comments/Special Instructions:

Contact Susan Carstenn at Tetra Tech for testing requirements.

Custody of sample aliquots relinquished to APPL/Fresno
Samples homogenized and frozen at CAS/Kelso prior to shipment.

RELINQUISHED BY:
Signature: _____
Printed Name: Amanda Juell
Firm: CAS/KELSO

RECEIVED BY:
Signature: A. Juell
Printed Name: Juell
Firm: CAS/Kelso
9/20/06 1420

RELINQUISHED BY:
Signature: _____
Printed Name: _____
Firm: _____
Date/Time: _____

RECEIVED BY:
Signature: [signature]
Printed Name: C. Moon
Firm: Appl Fno
Date/Time: 9/21/06 1030

Columbia Analytical Services, Inc.
1317 South 13th, Kelso, WA 98626
Phone: (360) 5677-7222 Fax: (360) 636-1068

SR# K0607294
PAGE 3 OF 3

Company Name:	Tetra Tech
Project Name/Number:	Muliwai Tissue/838
Project Manager:	Susan Carstenn

Sample ID	Date	Time	LAB ID	Matrix	Number of Containers	Contact Tetra Tech for testing requirements					REMARKS
NW9	08/19/06			Tissue	1	X					K0607294-034
NW10	08/20/06			Tissue	1	X					K0607294-035
NW1SW3-1	08/24/06			Tissue	1	X					K0607294-036
NW1SW1-1	08/24/06			Tissue	3	X					K0607294-037
NW1SW2-1	08/09/06			Tissue	1	X					K0607294-039
Comp 8,8a	08/03/06			Tissue	1	X					K0687294-040

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day
____ Standard (21 days)
____ Provide FAX Preliminary Results

Requested Report Date:_____

REPORT REQUIREMENTS

____ I. Routine Report

____ II. Report Dup., MS, MSD as r
____ III. Data Validation Report (in
raw data)
V. EDD

Comments/Special Instructions:
Contact Susan Carstenn at Tetra Tech for testing requirements.

Custody of sample aliquots relinquished to APPL/Fresno
Samples homogenized and frozen at CAS/Kelso prior to shipment.

RELINQUISHED BY:
Signature: _____
Printed Name: Amanda Juell
Firm: CAS/KELSO

RECEIVED BY:
Signature: A. Juell
Printed Name: Juell
Firm: CAS/Kelso
9/20/06 1420

RELINQUISHED BY:
Signature: _____
Printed Name: _____
Firm: _____
Date/Time: _____

RECEIVED BY:
Signature: _____
Printed Name: C. Moua
Firm: Appl Inc
Date/Time: 9/21/06 1030

Columbia Analytical Services, Inc.

1317 South 13th, Kelso, WA 98626

Phone: (360) 577-7222 Fax: (360) 636-1068

SR# K0607294

PAGE _____ OF _____

Company Name:	Tetra Tech
Project Name/Number:	Muliwai Tissue/Project 838
Project Manager:	Susan Carstenn

Sample ID	Date	Time	LAB ID	Matrix	No. of Containers	Field Duplicates Contact Tetra Tech					REMARKS
2fd	08/03/06			Tissue	1	X					K0607294-009
NW1fd	08/05/06			Tissue	2	X					K0607294-028
NW2fd	08/19/06			Tissue	1	X					K0607294-033
NW1SW1-1fd	08/09/06			Tissue	1	X					K0607294-038
9afd and 10a Comp	08/03/06			Tissue	1	X					K0607294-042

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

____ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date:_____

REPORT REQUIREMENTS

____ I. Routine Report:

____ II. Report Dup., MS, MSD as req.

____ III. Data Validation Report (includes raw data)

V. EDD

Comments/Special Instructions:

Contact Susan Carstenn at Tetra Tech for testing requirements.

NW1fd=extra volume provided for MS/MSD.

Custody of sample aliquots relinquished to APPL/Fresno, CA

Samples homogenized and frozen at CAS/Kelso prior to shipment.

RELINQUISHED BY:

Signature: _____

Printed Name: Amanda Juell

Firm: CAS/KELSO

RECEIVED BY:

Signature: A. Juell

Printed Name: A. JUELL

Firm: CAS/Kelso

9/20/06 1430

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: C. Moua

Firm: Appl Inc

Date/Time: 9/21/06 1030

20

Client Sample ID	Labcode	Explosives Subaliquot for APPL	Field Duplicate Subaliquot for APPL
		40	
1	k0607294-001	40	
3	k0607294-004	40	
4	k0607294-005	40	
1b	k0607294-006	40	
5	k0607294-007	40	
6	k0607294-008	40	
2fd	k0607294-009	--	120
7	k0607294-012	40	
8	k0607294-014	--	
9	k0607294-016	40	
9afd	k0607294-017	--	120
10	k0607294-018	40	
12	k0607294-020	40	
13	k0607294-021	40	
14	k0607294-022	40	
NW1	k0607294-024	40	
NW2	k0607294-025	40	
NW3	k0607294-026	40	
NW4	k0607294-027	40	
NW1fd	k0607294-028	--	360
NW5	k0607294-029	40	
NW6	k0607294-030	40	
NW7	k0607294-031	40	
NW8	k0607294-032	40	
NW2fd	k0607294-033	--	120
NW9	k0607294-034	40	
NW10	k0607294-035	40	
NW1SW3-1	k0607294-036	40	
NW1SW1-1	k0607294-037	40	
NW1SW1-1fd	k0607294-038	--	120
NW1SW2-1	k0607294-039	40	
Comp 8,8a	k0607294-040	40	
o 9afd and 10a	k0607294-042	--	120

Client Sample ID	Labcode	Field Duplicate Subaliquot for APPL	Field Duplicate Subaliquot for STL	Field Duplicate Subaliquot for Battelle
2fd	k0607294-009	120	30	40
9afd	k0607294-017	120	30	40
NW1fd	k0607294-028	360	90	120
NW2fd	k0607294-033	120	30	40
NW1SW1-1fd	k0607294-038	120	30	40
p 9afd and 10a	k0607294-042	120	30	40

Contact : Cynthia Theeb

APPL

4203 West Swift Ave.

Fresno, CA 93722

559 - 275 - 2175

Chemical	method	MDL	PQL	unit
Purgeable Organics	**10g, 14 days**			
Styrene	8260B	0.69	5	ug/Kg
Ethylbenzene	8260B	0.64	5	ug/Kg
m-Xylene	8260B	0.43	5	ug/Kg
p-Xylene	8260B			
o-Xylene	8260B	0.61	5	ug/Kg
Toluene	8260B	0.65	5	ug/Kg
1,2,4-Trimethylbenzene	8260B	1.18	5	ug/Kg
Pesticides	**30g, 14 days**	**low level**		
4,4'-DDT	8081A	0.4	5	ug/Kg
Aldrin	8081A	1.4	5	ug/Kg
alpha BHC	8081A	1	5	ug/Kg
beta BHC	8081A	1	5	ug/Kg
delta BHC	8081A	1.1	5	ug/Kg
gamma BHC (lindane)	8081A	0.9	5	ug/Kg
Heptachlor	8081A	1.1	5	ug/Kg
Heptachlor epoxide	8081A	1.1	5	ug/Kg
Energetics	**30g, 14 days**			
2,4-DNT	8330	80	500	ug/Kg
RDX (Cyclonite)	8330	80	500	ug/Kg
Nitroglycerine	8330 modified	185	500	ug/Kg
Other	**5g, 28days**			
Perchlorate	314m	2.06	20	ug/Kg
Phthalate Esters	**30g, 14 days**			
Bis(2-ethylhexyl) phthalate	8270C	61.6	330	ug/Kg
Dimethyl phthalate	8270C	63.3	330	ug/Kg
Di-n-butyl phthalate	8270C	65.9	330	ug/Kg
Diethyl phthalate	8270C	62.1	330	ug/Kg
Di-n-octyl phthalate	8270C	58.4	330	ug/Kg
Pyrene	8270C	54.1	330	ug/Kg

EPA METHOD 8081A
Organochlorine Pesticides

APPL, INC.

EPA METHOD 8081A
Organochlorine Pesticides
QC Summary

APPL, INC.

Method Blank
EPA 8081A SOIL

Blank Name/QCG: **061006S-49358 - 105638**
Batch ID: $88SS-061006A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	4,4'-DDT	Not detected	5	0.4	ug/Kg	10/6/06	10/10/06
BLANK	a-BHC	Not detected	5	1	ug/Kg	10/6/06	10/10/06
BLANK	Aldrin	Not detected	5	1.4	ug/Kg	10/6/06	10/10/06
BLANK	b-BHC	Not detected	5	1	ug/Kg	10/6/06	10/10/06
BLANK	d-BHC	Not detected	5	1.1	ug/Kg	10/6/06	10/10/06
BLANK	g-BHC (Lindane)	Not detected	5	0.9	ug/Kg	10/6/06	10/10/06
BLANK	Heptachlor	Not detected	5	1.1	ug/Kg	10/6/06	10/10/06
BLANK	Heptachlor epoxide	Not detected	5	1.1	ug/Kg	10/6/06	10/10/06
BLANK	Surrogate: 2,4,5,6-Tetrachloro-m-xylen	59.0	40-123		%	10/6/06	10/10/06
BLANK	Surrogate: DECA-PCB	66.9	29-125		%	10/6/06	10/10/06

Run #: 132
Instrument: LUCY
Sequence: 061005
Initials: MA

GC SC-Blank-REG MDLs
Printed: 10/10/06 1:35:21 PM

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/10/06

Matrix: MISC Instrument: LUCY

APPL ID.	Client Sample No.	Surrogate: 2,4,5,6-Tetrachloro-m-		Surrogate: DECA-PCB	
061006A-BLK	Blank	59.0		66.9	
061006A-LCS	Lab Control Spike	73.0		84.0	
AX49357	2FD	67.1		50.5	
AX49358	NW1FD	31.8	#	27.4	#
AX49359	NW2FD	75.5		58.8	
AX49360	NW1SW1-1FD	49.4		61.9	
AX49361	9AFD AND 10A COMP	68.2		56.0	
061006A-MS	Matrix Spike	24.9	*	20.4	*
061006A-MSD	Matrix SpikeD	31.5	*	24.0	*

Comments: Batch: \$88SS-061006A

Printed: 10/10/06 4:23:51 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8081A SOIL

APPL ID: **061006S-49358 LCS - 105638**
Batch ID: $88SS-061006A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/Kg	SPK Result ug/Kg	SPK % Recovery	Recovery Limits
4,4'-DDT	667	637	95.5	47-120
a-BHC	667	585	87.7	41-114
Aldrin	667	545	81.7	40-108
b-BHC	667	521	78.1	63-129
d-BHC	667	559	83.8	52-105
g-BHC (Lindane)	667	572	85.8	46-114
Heptachlor	667	543	81.4	48-115
Heptachlor epoxide	667	538	80.7	61-110
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	333	243	73.0	40-123
Surrogate: DECA-PCB	257	216	84.0	29-125

Comments: _____

Primary	SPK
Extraction Date :	10/6/06
Analysis Date :	10/10/06
Instrument :	LUCY
Run :	133
Initials :	MA

Printed: 10/10/06 1:35:21 PM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8081A SOIL

APPL ID: **061006S-49358 MS - 105638**
Batch ID: $88SS-061006A
Sample ID: AX49358
Client ID: NW1FD

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl ug/Kg	Matrix Result ug/Kg	SPK Result ug/Kg	DUP Result ug/Kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
4,4'-DDT	667	ND	138	187	20.7 #	28.0 #	47-120	30.2 #	30
a-BHC	667	2.7	148	218	21.8 #	32.3 #	41-114	38.3 #	30
Aldrin	667	ND	142	193	21.3 #	28.9 #	40-108	30.4 #	30
b-BHC	667	ND	127	190	19.0 #	28.5 #	63-129	39.7 #	30
d-BHC	667	ND	131	200	19.6 #	30.0 #	52-105	41.7 #	30
g-BHC (Lindane)	667	ND	160	228	24.0 #	34.2 #	46-114	35.1 #	30
Heptachlor	667	11	147	209	20.4 #	29.7 #	48-115	34.8 #	30
Heptachlor epoxide	667	4.6	130	179	18.8 #	26.1 #	61-110	31.7 #	30
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	333	NA	82.9	105	24.9 #	31.5 #	40-123		
Surrogate: DECA-PCB	257	NA	52.4	61.7	20.4 #	24.0 #	29-125		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Extraction Date :	10/6/06	10/6/06
Analysis Date :	10/10/06	10/10/06
Instrument :	LUCY	LUCY
Run :	148	149
Initials :	MA	

Printed: 10/11/06 3:10:16 PM
APPL Standard MSD

EPA 8081A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/10/06

Matrix: MISC Instrument: LUCY

Blank ID: 061006A-BLK Time Analyzed: 1020

APPL ID.	Client Sample No.	File ID.	Date Analyzed
061006A-BLK	Blank	132	10/10/06 1020
061006A-LCS	Lab Control Spike	133	10/10/06 1035
AX49357	2FD	134	10/10/06 1051
AX49358	NW1FD	135	10/10/06 1107
AX49359	NW2FD	136	10/10/06 1123
AX49360	NW1SW1-1FD	137	10/10/06 1138
AX49361	9AFD AND 10A COMP	138	10/10/06 1154
061006A-MS	Matrix Spike	148	10/10/06 1355
061006A-MSD	Matrix SpikeD	149	10/10/06 1531

Comments: Batch: \$88SS-061006A

Printed: 10/11/06 3:13:06 PM
Form 4, Blank Summary

EPA METHOD 8081A
Organochlorine Pesticides
Sample Data

APPL, INC.

EPA 8081A SOIL

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: 2FD

APPL ID: AX49357

Sample Collection Date: 8/3/06

QCG: $88SS-061006A-105638

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 69.2 Percent Moisture.)							
EPA 8081A	4,4'-DDT	Not detected	16	1.3	ug/Kg	10/6/06	10/10/06
EPA 8081A	a-BHC	Not detected	16	3.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	Aldrin	Not detected	16	4.5	ug/Kg	10/6/06	10/10/06
EPA 8081A	b-BHC	Not detected	16	3.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	d-BHC	Not detected	16	3.6	ug/Kg	10/6/06	10/10/06
EPA 8081A	g-BHC (Lindane)	Not detected	16	2.9	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor	Not detected	16	3.6	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor epoxide	Not detected	16	3.6	ug/Kg	10/6/06	10/10/06
EPA 8081A	Surrogate: 2,4,5,6-Tetrachloro-m-xylen	67.1	40-123		%	10/6/06	10/10/06
EPA 8081A	Surrogate: DECA-PCB	50.5	29-125		%	10/6/06	10/10/06

Run #: 134
Instrument: LUCY
Sequence: 061005
Dilution Factor: 1
Initials: MA

Printed: 10/13/06 12:24:31 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8081A SOIL

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW1FD
Sample Collection Date: 8/5/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49358
QCG: $88SS-061006A-105638

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 66.9 Percent Moisture.)							
EPA 8081A	4,4'-DDT	Not detected	15	1.2	ug/Kg	10/6/06	10/10/06
EPA 8081A	a-BHC	8.2 J	15	3.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	Aldrin	Not detected	15	4.2	ug/Kg	10/6/06	10/10/06
EPA 8081A	b-BHC	Not detected	15	3.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	d-BHC	Not detected	15	3.3	ug/Kg	10/6/06	10/10/06
EPA 8081A	g-BHC (Lindane)	Not detected	15	2.7	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor	33 Y	15	3.3	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor epoxide	14 J	15	3.3	ug/Kg	10/6/06	10/10/06
EPA 8081A	Surrogate: 2,4,5,6-Tetrachloro-m-xylen	31.8 #	40-123		%	10/6/06	10/10/06
EPA 8081A	Surrogate: DECA-PCB	27.4 #	29-125		%	10/6/06	10/10/06

J = Estimated value.
# = Recovery (or RPD) is outside QC limits.
Y = % Difference between primary and confirmation column is > 40%.

Run #: 135
Instrument: LUCY
Sequence: 061005
Dilution Factor: 1
Initials: MA

Printed: 10/13/06 12:24:31 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8081A SOIL

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW2FD
Sample Collection Date: 8/19/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49359
QCG: $88SS-061006A-105638

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 71.2 Percent Moisture.)							
EPA 8081A	4,4'-DDT	Not detected	17	1.4	ug/Kg	10/6/06	10/10/06
EPA 8081A	a-BHC	Not detected	17	3.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	Aldrin	Not detected	17	4.9	ug/Kg	10/6/06	10/10/06
EPA 8081A	b-BHC	Not detected	17	3.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	d-BHC	Not detected	17	3.8	ug/Kg	10/6/06	10/10/06
EPA 8081A	g-BHC (Lindane)	Not detected	17	3.1	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor	Not detected	17	3.8	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor epoxide	7.6 J	17	3.8	ug/Kg	10/6/06	10/10/06
EPA 8081A	Surrogate: 2,4,5,6-Tetrachloro-m-xylen	75.5	40-123		%	10/6/06	10/10/06
EPA 8081A	Surrogate: DECA-PCB	58.8	29-125		%	10/6/06	10/10/06

J = Estimated value.

Run #:	136
Instrument:	LUCY
Sequence:	061005
Dilution Factor:	1
Initials:	MA

Printed: 10/13/06 12:24:31 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8081A SOIL

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

Sample ID: NW1SW1-1FD

Sample Collection Date: 8/9/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706

APPL ID: AX49360

QCG: $88SS-061006A-105638

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 75.4 Percent Moisture.)							
EPA 8081A	4,4'-DDT	Not detected	20	1.6	ug/Kg	10/6/06	10/10/06
EPA 8081A	a-BHC	Not detected	20	4.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	Aldrin	Not detected	20	5.7	ug/Kg	10/6/06	10/10/06
EPA 8081A	b-BHC	Not detected	20	4.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	d-BHC	Not detected	20	4.5	ug/Kg	10/6/06	10/10/06
EPA 8081A	g-BHC (Lindane)	Not detected	20	3.7	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor	Not detected	20	4.5	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor epoxide	Not detected	20	4.5	ug/Kg	10/6/06	10/10/06
EPA 8081A	Surrogate: 2,4,5,6-Tetrachloro-m-xylen	49.4	40-123		%	10/6/06	10/10/06
EPA 8081A	Surrogate: DECA-PCB	61.9	29-125		%	10/6/06	10/10/06

Run #: 137
Instrument: LUCY
Sequence: 061005
Dilution Factor: 1
Initials: MA

Printed: 10/13/06 12:24:31 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8081A SOIL

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

Sample ID: 9AFD AND 10A COMP

Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706

APPL ID: AX49361

QCG: $88SS-061006A-105638

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 72.9 Percent Moisture.)							
EPA 8081A	4,4'-DDT	Not detected	18	1.5	ug/Kg	10/6/06	10/10/06
EPA 8081A	a-BHC	Not detected	18	4.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	Aldrin	Not detected	18	5.2	ug/Kg	10/6/06	10/10/06
EPA 8081A	b-BHC	Not detected	18	4.0	ug/Kg	10/6/06	10/10/06
EPA 8081A	d-BHC	Not detected	18	4.1	ug/Kg	10/6/06	10/10/06
EPA 8081A	g-BHC (Lindane)	Not detected	18	3.3	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor	Not detected	18	4.1	ug/Kg	10/6/06	10/10/06
EPA 8081A	Heptachlor epoxide	Not detected	18	4.1	ug/Kg	10/6/06	10/10/06
EPA 8081A	Surrogate: 2,4,5,6-Tetrachloro-m-xylen	68.2	40-123		%	10/6/06	10/10/06
EPA 8081A	Surrogate: DECA-PCB	56.0	29-125		%	10/6/06	10/10/06

Run #: 138
Instrument: LUCY
Sequence: 061005
Dilution Factor: 1
Initials: MA

Printed: 10/13/06 12:24:31 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA METHOD 8270C
Semivolatile Organic Compounds

APPL, INC.

EPA METHOD 8270C
Semivolatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8270C Soils

Blank Name/QCG: **061006S-49358 - 105614**
Batch ID: $8270S-061005A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	Bis (2-ethylhexyl) phthalate	Not detected	330	61.6	ug/Kg	10/6/06	10/9/06
BLANK	Di-n-butylphthalate	Not detected	330	65.9	ug/Kg	10/6/06	10/9/06
BLANK	Di-n-octylphthalate	Not detected	330	58.4	ug/Kg	10/6/06	10/9/06
BLANK	Diethyl phthalate	Not detected	330	62.1	ug/Kg	10/6/06	10/9/06
BLANK	Dimethyl phthalate	Not detected	330	63.3	ug/Kg	10/6/06	10/9/06
BLANK	Pentachlorophenol	Not detected	330	58.7	ug/Kg	10/6/06	10/9/06
BLANK	Pyrene	Not detected	330	54.1	ug/Kg	10/6/06	10/9/06
BLANK	Surrogate recovery (2FP)	61.1	48-118		%	10/6/06	10/9/06
BLANK	Surrogate recovery (FBP)	77.6	39-116		%	10/6/06	10/9/06
BLANK	Surrogate recovery (NBZ)	85.3	49-142		%	10/6/06	10/9/06
BLANK	Surrogate recovery (PHL)	63.7	47-122		%	10/6/06	10/9/06
BLANK	Surrogate recovery (TBP)	61.4	44-114		%	10/6/06	10/9/06
BLANK	Surrogate recovery (TPH)	72.3	40-135		%	10/6/06	10/9/06

Run #: 1009L003
Instrument: Linus
Sequence: L061005
Initials: LF

GC SC-Blank-REG MDLs
Printed: 10/10/06 10:55:26 AM

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/9/06

Matrix: MISC Instrument: Linus

APPL ID.	Client Sample No.	Surrogate recovery (2FP)		Surrogate recovery (FBP)	
061005A-BLK	Blank	61.1		77.6	
061005A-LCS	Lab Control Spike	62.7		80.5	
AX49361	9AFD AND 10A COMP	54.8		83.1	
AX49357	2FD	65.5		92.7	
AX49358	NW1FD	63.3		101	
AX49359	NW2FD	53.1		77.6	
AX49360	NW1SW1-1FD	44.6	#	26.2	#
AX49361	9AFD AND 10A COMP	55.0		78.5	
061005A-MS	Matrix Spike	60.7		94.0	
061005A-MSD	Matrix SpikeD	61.0		94.3	

Comments: Batch: \$8270S-061005A

Printed: 10/10/06 10:16:48 AM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/9/06

Matrix: MISC Instrument: Linus

APPL ID.	Client Sample No.	Surrogate recovery (NBZ)	Surrogate recovery (PHL)
061005A-BLK	Blank	85.3	63.7
061005A-LCS	Lab Control Spike	85.3	64.3
AX49361	9AFD AND 10A COMP	77.2	60.4
AX49357	2FD	91.6	72.3
AX49358	NW1FD	94.1	70.8
AX49359	NW2FD	76.3	58.2
AX49360	NW1SW1-1FD	80.2	65.0
AX49361	9AFD AND 10A COMP	77.7	60.0
061005A-MS	Matrix Spike	93.1	66.1
061005A-MSD	Matrix SpikeD	91.6	66.9

Comments: Batch: $8270S-061005A

Printed: 10/10/06 10:16:49 AM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/9/06

Matrix: MISC Instrument: Linus

APPL ID.	Client Sample No.	Surrogate recovery (TBP)	Surrogate recovery (TPH)
061005A-BLK	Blank	61.4	72.3
061005A-LCS	Lab Control Spike	63.3	80.2
AX49361	9AFD AND 10A COMP	61.6	52.8
AX49357	2FD	71.3	93.4
AX49358	NW1FD	72.6	103
AX49359	NW2FD	60.3	70.3
AX49360	NW1SW1-1FD	52.4	63.4
AX49361	9AFD AND 10A COMP	63.4	75.8
061005A-MS	Matrix Spike	68.5	118
061005A-MSD	Matrix SpikeD	64.8	124

Comments: Batch: $8270S-061005A

Printed: 10/10/06 10:16:49 AM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8270C Soils

APPL ID: **061006S-49358 LCS - 105614**
Batch ID: $8270S-061005A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/Kg	SPK Result ug/Kg	SPK % Recovery	Recovery Limits
Bis (2-ethylhexyl) phthalate	1670	1400	83.8	38-148
Di-n-butylphthalate	1670	1380	82.6	36-151
Di-n-octylphthalate	1670	1380	82.6	51-139
Diethyl phthalate	1670	1370	82.0	51-126
Dimethyl phthalate	1670	1360	81.4	33-142
Pentachlorophenol	1670	1550	92.8	32-150
Pyrene	1670	1380	82.6	45-137
Surrogate recovery (2FP)	6670	4180	62.7	48-118
Surrogate recovery (FBP)	3330	2680	80.5	39-116
Surrogate recovery (NBZ)	3330	2840	85.3	49-142
Surrogate recovery (PHL)	6670	4290	64.3	47-122
Surrogate recovery (TBP)	6670	4220	63.3	44-114
Surrogate recovery (TPH)	3330	2670	80.2	40-135

Comments:

Primary	SPK
Extraction Date :	10/6/06
Analysis Date :	10/9/06
Instrument :	Linus
Run :	1009L004
Initials :	LF

Printed: 10/10/06 10:16:54 AM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8270C Soils

APPL ID: **061006S-49358 MS - 105614**
Batch ID: $8270S-061005A
Sample ID: AX49358
Client ID: NW1FD

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl ug/Kg	Matrix Result ug/Kg	SPK Result ug/Kg	DUP Result ug/Kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Bis (2-ethylhexyl) phthalate	1670	1200	2790	2820	95.2	97.0	38-148	1.1	30
Di-n-butylphthalate	1670	480	1900	1930	85.0	86.8	36-151	1.6	30
Di-n-octylphthalate	1670	ND	1300	1370	77.8	82.0	51-139	5.2	30
Diethyl phthalate	1670	ND	1630	1700	97.6	102	51-126	4.2	30
Dimethyl phthalate	1670	ND	1620	1650	97.0	98.8	33-142	1.8	30
Pentachlorophenol	1670	ND	733	761	43.9	45.6	32-150	3.7	30
Pyrene	1670	ND	1880	1920	113	115	45-137	2.1	30
Surrogate recovery (2FP)	6670	NA	4050	4070	60.7	61.0	48-118		
Surrogate recovery (FBP)	3330	NA	3130	3140	94.0	94.3	39-116		
Surrogate recovery (NBZ)	3330	NA	3100	3050	93.1	91.6	49-142		
Surrogate recovery (PHL)	6670	NA	4410	4460	66.1	66.9	47-122		
Surrogate recovery (TBP)	6670	NA	4570	4320	68.5	64.8	44-114		
Surrogate recovery (TPH)	3330	NA	3930	4130	118	124	40-135		

Comments:

Primary	SPK	DUP
Extraction Date :	10/6/06	10/6/06
Analysis Date :	10/10/06	10/10/06
Instrument :	Linus	Linus
Run :	1009L017	1009L018
Initials :	LF	

Printed: 10/10/06 10:17:00 AM
APPL MSD SCII

EPA 8270C

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/9/06

Matrix: MISC Instrument: Linus

Blank ID: 061005A-BLK Time Analyzed: 1954

APPL ID.	Client Sample No.	File ID.	Date Analyzed
061005A-BLK	Blank	1009L003	10/9/06 1954
061005A-LCS	Lab Control Spike	1009L004	10/9/06 2021
AX49361	9AFD AND 10A COMP	1009L009	10/9/06 2232
AX49357	2FD	1009L012	10/9/06 2351
AX49358	NW1FD	1009L013	10/10/06 0018
AX49359	NW2FD	1009L014	10/10/06 0044
AX49360	NW1SW1-1FD	1009L015	10/10/06 0111
AX49361	9AFD AND 10A COMP	1009L016	10/10/06 0137
061005A-MS	Matrix Spike	1009L017	10/10/06 0203
061005A-MSD	Matrix SpikeD	1009L018	10/10/06 0229

Comments: Batch: $8270S-061005A

Printed: 10/10/06 10:17:03 AM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 51706
Matrix: Soil
ID: SVTUNE 06-07-06

SDG No: 51706
Date Analyzed: 10/9/06
Instrument: Linus
Time Analyzed: 19:08

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	061005A BLK 1/30.00G	1009L003.D	10/9/06 19:54
2	Lab Control Spike	061005A LCS-1 1/30.0	1009L004.D	10/9/06 20:21
3	9AFD AND 10A COMP	AX49361M01 1/30.00G	1009L009.D	10/9/06 22:32
4	2FD	AX49357M01 5/30.00G	1009L012.D	10/9/06 23:51
5	NW1FD	AX49358M01 5/30.00G	1009L013.D	10/10/06 0:18
6	NW2FD	AX49359M01 1/30.00G	1009L014.D	10/10/06 0:44
7	NW1SW1-1FD	AX49360M01 1/30.00G	1009L015.D	10/10/06 1:11
8	9AFD AND 10A COMP	AX49361M01 1/30.00G	1009L016.D	10/10/06 1:37
9	Matrix Spike	AX49358M01 MS-1 5/30	1009L017.D	10/10/06 2:03
10	Matrix Spike Dup	AX49358M01 MSD-1 5/3	1009L018.D	10/10/06 2:29
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	30 - 60% of mass 198	35.9
68	0 - 2% of mass 69	1.5
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	45.5
197	0 - 1% of mass 198	0.2
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.6
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	77.2
442	40 - 150% of mass 198	77.3
443	17 - 23% of mass 442	19.1

Form 5
Tune Summary

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: SDG No.: 51706

Lab File ID (Standard): 1009L002.D Date Analyzed: 9 Oct 06 19:28

Instrument ID: Linus Time Analyzed: 9 Oct 06 19:28

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	530658	4.32	2112610	5.71	1122000	7.71
	UPPER LIMIT	1061316	4.82	4225220	6.21	2244000	8.21
	LOWER LIMIT	265329	3.82	1056305	5.21	561000	7.21
	SAMPLE NO.						
01	061005A BLK 1/30.00G	522160	4.31	2244080	5.70	1257120	7.71
02	061005A LCS-1 1/30.00	501925	4.32	2116530	5.71	1156120	7.71
03	AX49361M01 1/30.00G	532589	4.32	2242590	5.71	1199330	7.71
04	AX49357M01 5/30.00G	477375	4.32	2019730	5.71	1133820	7.72
05	AX49358M01 5/30.00G	464652	4.32	1930850	5.72	1031670	7.72
06	AX49359M01 1/30.00G	440801	4.33	1851560	5.72	994146	7.72
07	AX49360M01 1/30.00G	430961	4.33	1911550	5.73	1098000	7.73
08	AX49361M01 1/30.00G	421155	4.33	1762850	5.72	931370	7.73
09	AX49358M01 MS-1 5/30	433118	4.34	1797210	5.73	976886	7.74
10	AX49358M01 MSD-1 5/3	444697	4.34	1852570	5.73	1001950	7.74
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

8A

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 51706

Lab File ID (Standard): 1009L002.D Date Analyzed: 9 Oct 06 19:28

Instrument ID: Linus Time Analyzed: 9 Oct 06 19:28

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1821770	9.43	1482750	12.50	1421010	14.04
	UPPER LIMIT	3643540	9.93	2965500	13.00	2842020	14.54
	LOWER LIMIT	910885	8.93	741375	12.00	710505	13.54
	SAMPLE NO.						
01	061005A BLK 1/30.00G	2019310	9.43	1896990	12.50	1624400	14.04
02	061005A LCS-1 1/30.00	1832330	9.43	1605590	12.50	1585550	14.04
03	AX49361M01 1/30.00G	1920720	9.43	1630970	12.55	1311490	14.10
04	AX49357M01 5/30.00G	1772160	9.44	1375350	12.56	925378	14.10
05	AX49358M01 5/30.00G	1690230	9.44	1200490	12.55	710982	14.10
06	AX49359M01 1/30.00G	1546620	9.45	799786	12.69	520340 *	14.16
07	AX49360M01 1/30.00G	1804360	9.45	1276940	12.53	686871 *	14.09
08	AX49361M01 1/30.00G	1102620	9.45	712723 *	12.69	415805 *	14.17
09	AX49358M01 MS-1 5/30	1563540	9.46	822680	12.57	451236 *	14.13
10	AX49358M01 MSD-1 5/	1605130	9.46	786936	12.57	442666 *	14.12
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

EPA METHOD 8270C
Semivolatile Organic Compounds
Sample Data

APPL, INC.

EPA 8270C Soils

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 2FD
Sample Collection Date: 8/3/06

ARF: 51706
APPL ID: AX49357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 69.2 Percent Moisture.)							
EPA 8270C	Bis (2-ethylhexyl) phthalate	Not detected	5400	1000	ug/Kg	10/6/06	10/9/06
EPA 8270C	Di-n-butylphthalate	1500 J	5400	1100	ug/Kg	10/6/06	10/9/06
EPA 8270C	Di-n-octylphthalate	Not detected	5400	950	ug/Kg	10/6/06	10/9/06
EPA 8270C	Diethyl phthalate	Not detected	5400	1000	ug/Kg	10/6/06	10/9/06
EPA 8270C	Dimethyl phthalate	Not detected	5400	1000	ug/Kg	10/6/06	10/9/06
EPA 8270C	Pentachlorophenol	Not detected	5400	950	ug/Kg	10/6/06	10/9/06
EPA 8270C	Pyrene	Not detected	5400	880	ug/Kg	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (2FP)	65.5	48-118		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (FBP)	92.7	39-116		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (NBZ)	91.6	49-142		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (PHL)	72.3	47-122		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (TBP)	71.3	44-114		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (TPH)	93.4	40-135		%	10/6/06	10/9/06

J = Estimated value.

Run #:	1009L012
Instrument:	Linus
Sequence:	L061005
Dilution Factor:	5
Initials:	LF

Printed: 10/16/06 8:25:34 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270C Soils

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW1FD
Sample Collection Date: 8/5/06

ARF: 51706
APPL ID: AX49358

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 66.9 Percent Moisture.)							
EPA 8270C	Bis (2-ethylhexyl) phthalate	3500 J	5000	930	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-butylphthalate	1400 J	5000	1000	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-octylphthalate	Not detected	5000	880	ug/Kg	10/6/06	10/10/06
EPA 8270C	Diethyl phthalate	Not detected	5000	940	ug/Kg	10/6/06	10/10/06
EPA 8270C	Dimethyl phthalate	Not detected	5000	960	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pentachlorophenol	Not detected	5000	890	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pyrene	Not detected	5000	820	ug/Kg	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (2FP)	63.3	48-118		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (FBP)	101	39-116		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (NBZ)	94.1	49-142		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (PHL)	70.8	47-122		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TBP)	72.6	44-114		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TPH)	103	40-135		%	10/6/06	10/10/06

J = Estimated value.

Run #:	1009L013
Instrument:	Linus
Sequence:	L061005
Dilution Factor:	5
Initials:	LF

Printed: 10/16/06 8:25:34 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270C Soils

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW2FD
Sample Collection Date: 8/19/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49359

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 71.2 Percent Moisture.)							
EPA 8270C	Bis (2-ethylhexyl) phthalate	Not detected	1100	210	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-butylphthalate	610 J	1100	230	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-octylphthalate	Not detected	1100	200	ug/Kg	10/6/06	10/10/06
EPA 8270C	Diethyl phthalate	Not detected	1100	220	ug/Kg	10/6/06	10/10/06
EPA 8270C	Dimethyl phthalate	Not detected	1100	220	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pentachlorophenol	Not detected	1100	200	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pyrene	Not detected	1100	190	ug/Kg	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (2FP)	53.1	48-118		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (FBP)	77.6	39-116		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (NBZ)	76.3	49-142		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (PHL)	58.2	47-122		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TBP)	60.3	44-114		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TPH)	70.3	40-135		%	10/6/06	10/10/06

J = Estimated value.

Run #: 1009L014
Instrument: Linus
Sequence: L061005
Dilution Factor: 1
Initials: LF

Printed: 10/16/06 8:25:34 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270C Soils

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW1SW1-1FD
Sample Collection Date: 8/9/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49360

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 75.4 Percent Moisture.)							
EPA 8270C	Bis (2-ethylhexyl) phthalate	Not detected	1300	250	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-butylphthalate	480 J	1300	270	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-octylphthalate	Not detected	1300	240	ug/Kg	10/6/06	10/10/06
EPA 8270C	Diethyl phthalate	Not detected	1300	250	ug/Kg	10/6/06	10/10/06
EPA 8270C	Dimethyl phthalate	Not detected	1300	260	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pentachlorophenol	Not detected	1300	240	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pyrene	Not detected	1300	220	ug/Kg	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (2FP)	44.6 #	48-118		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (FBP)	26.2 #	39-116		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (NBZ)	80.2	49-142		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (PHL)	65.0	47-122		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TBP)	52.4	44-114		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TPH)	63.4	40-135		%	10/6/06	10/10/06

J = Estimated value.
# = Recovery (or RPD) is outside QC limits.

Run #: 1009L015
Instrument: Linus
Sequence: L061005
Dilution Factor: 1
Initials: LF

Printed: 10/16/06 8:25:34 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270C Soils

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 9AFD AND 10A COMP
Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49361

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 72.9 Percent Moisture.)							
EPA 8270C	Bis (2-ethylhexyl) phthalate	3100	1200	230	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-butylphthalate	960 J	1200	240	ug/Kg	10/6/06	10/10/06
EPA 8270C	Di-n-octylphthalate	Not detected	1200	220	ug/Kg	10/6/06	10/10/06
EPA 8270C	Diethyl phthalate	Not detected	1200	230	ug/Kg	10/6/06	10/10/06
EPA 8270C	Dimethyl phthalate	Not detected	1200	230	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pentachlorophenol	Not detected	1200	220	ug/Kg	10/6/06	10/10/06
EPA 8270C	Pyrene	Not detected	1200	200	ug/Kg	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (2FP)	55.0	48-118		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (FBP)	78.5	39-116		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (NBZ)	77.7	49-142		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (PHL)	60.0	47-122		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TBP)	63.4	44-114		%	10/6/06	10/10/06
EPA 8270C	Surrogate recovery (TPH)	75.8	40-135		%	10/6/06	10/10/06

J = Estimated value.

Run #:	1009L016
Instrument:	Linus
Sequence:	L061005
Dilution Factor:	1
Initials:	LF

Printed: 10/16/06 8:25:34 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270C Soils - Dilution

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 9AFD AND 10A COMP
Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49361

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 72.9 Percent Moisture.)							
EPA 8270C	Bis (2-ethylhexyl) phthalate	3600 J	6100	1100	ug/Kg	10/6/06	10/9/06
EPA 8270C	Di-n-butylphthalate	1500 J	6100	1200	ug/Kg	10/6/06	10/9/06
EPA 8270C	Di-n-octylphthalate	Not detected	6100	1100	ug/Kg	10/6/06	10/9/06
EPA 8270C	Diethyl phthalate	Not detected	6100	1100	ug/Kg	10/6/06	10/9/06
EPA 8270C	Dimethyl phthalate	Not detected	6100	1200	ug/Kg	10/6/06	10/9/06
EPA 8270C	Pentachlorophenol	Not detected	6100	1100	ug/Kg	10/6/06	10/9/06
EPA 8270C	Pyrene	Not detected	6100	1000	ug/Kg	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (2FP)	54.8	48-118		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (FBP)	83.1	39-116		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (NBZ)	77.2	49-142		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (PHL)	60.4	47-122		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (TBP)	61.6	44-114		%	10/6/06	10/9/06
EPA 8270C	Surrogate recovery (TPH)	52.8	40-135		%	10/6/06	10/9/06

J = Estimated value.

Run #: 1009L009
Instrument: Linus
Sequence: L061005
Dilution Factor: 5
Initials: LF

Printed: 10/16/06 8:25:34 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA METHOD 8330A

APPL, INC.

EPA METHOD 8330A

QC Summary

APPL, INC.

Method Blank
EPA 8330A Explosives-Soil

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Blank Name/QCG: **060929S - 105776**
Batch ID: $83TTS-060929B

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	2,4-DNT	Not detected	0.60	mg/kg	9/29/2006	10/8/2006
BLANK	Nitroglycerine	Not detected	0.60	mg/kg	9/29/2006	10/8/2006
BLANK	RDX	Not detected	0.60	mg/kg	9/29/2006	10/8/2006
BLANK	Surrogate recovery: 1,2-DNB	93.0	70-130	%	9/29/2006	10/8/2006

Run #: LUX07_17
Instrument: AGIL_1100
Sequence: LU1007A
Initials: SD

Printed: 10/13/2006 11:18:10 AM

Laboratory Control Spike Recoveries
EPA 8330A Explosives-Soil

APPL ID: **060929S-49351 LCS - 105776**
Batch ID: $83TTS-060929B

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4-DNT	3.13	3.23	2.88	103	92.0	80-125	11.5	25
Nitroglycerine	3.13	2.88	2.87	92.0	91.7	75-125	0.35	25
RDX	3.13	2.73	2.79	87.2	89.1	70-135	2.2	25
1,2-DNB (S)	5.00	4.64	4.63	92.8	92.6	70-130		

Comments: _____

Primary	SPK	DUP
Extraction Date :	9/29/06	9/29/06
Analysis Date :	10/8/06	10/8/06
Instrument :	AGIL_1100	AGIL_1100
Run :	LUX07_14	LUX07_15
Initials :	SD	

Printed: 10/13/06 11:42:44 AM
APPL Standard LCSD

Method Blank

EPA 8330A Explosives-Soil

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Blank Name/QCG: **061003S - 105767**
Batch ID: $83TTS-061003A

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	2,4-DNT	Not detected	0.60	mg/kg	10/3/2006	10/6/2006
BLANK	Nitroglycerine	Not detected	0.60	mg/kg	10/3/2006	10/6/2006
BLANK	RDX	Not detected	0.60	mg/kg	10/3/2006	10/6/2006
BLANK	Surrogate recovery: 1,2-DNB	100	70-130	%	10/3/2006	10/6/2006

Run #: LUX05_18
Instrument: AGIL_1100
Sequence: LU1005A
Initials: SD

Printed: 10/13/2006 11:18:02 AM

Laboratory Control Spike Recovery
EPA 8330A Explosives-Soil

APPL ID: **061003S-49333 LCS - 105767**
Batch ID: $83TTS-061003A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
2,4-DNT	3.13	2.86	91.4	80-125
Nitroglycerine	3.13	2.93	93.6	75-125
RDX	3.13	3.12	99.7	70-135
1,2-DNB (S)	5.00	4.75	95.0	70-130

Comments:

Primary	SPK
Extraction Date :	10/3/06
Analysis Date :	10/6/06
Instrument :	AGIL_1100
Run :	LUX05_14
Initials :	SD

Printed: 10/13/06 11:42:01 AM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8330A Explosives-Soil

APPL ID: **061003S-49333 MS - 105767**
Batch ID: $83TTS-061003A
Sample ID: AX49333
Client ID: 4

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4-DNT	3.13	ND	3.23	3.30	103	105	80-125	2.1	25
Nitroglycerine	3.13	ND	3.15	3.51	101	112	75-125	10.8	25
RDX	3.13	ND	4.76	6.07	152 #	194 #	70-135	24.2	25
1,2-DNB (S)	5.00	NA	4.69	4.79	93.8	95.8	70-130		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Extraction Date :	10/3/06	10/3/06
Analysis Date :	10/6/06	10/6/06
Instrument :	AGIL_1100	AGIL_1100
Run :	LUX05_15	LUX05_16
Initials :	SD	

Printed: 10/13/06 11:39:39 AM
APPL Standard MSD

Matrix Spike Recoveries

EPA 8330A Explosives-Soil

APPL ID: **061003S-49353 MS - 105768**
Batch ID: $83TTS-061003AA
Sample ID: AX49353
Client ID: NW1SW3-1

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2,4-DNT	3.13	ND	2.42	2.14	77.3 #	68.4 #	80-125	12.3	25
Nitroglycerine	3.13	ND	2.79	2.00	89.1	63.9 #	75-125	33.0 #	25
RDX	3.13	ND	3.60	2.92	115	93.3	70-135	20.9	25
1,2-DNB (S)	5.00	NA	4.16	3.63	83.2	72.6	70-130		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Extraction Date :	10/3/06	10/3/06
Analysis Date :	10/7/06	10/7/06
Instrument :	AGIL_1100	AGIL_1100
Run :	LUX05_47	LUX05_48
Initials :	SD	

Printed: 10/13/06 11:39:39 AM
APPL Standard MSD

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/8/06

Matrix: MISC Instrument: AGIL_1100

APPL ID.	Client Sample No.	1,2-DNB (S)
060929B-LCS	Lab Control Spike	92.8
060929B-LCSD	Lab Control SpikeD	92.6
060929B-BLK	Blank	93.0
AX49351	NW9	81.5
AX49352	NW10	83.9
AX49354	NW1SW1-1	93.0
AX49355	NW1SW2-1	84.9
AX49356	COMP 8,8A	80.8

Comments: Batch: $83TTS-060929B

Printed: 10/12/06 2:53:10 PM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc.
Case No: 51706
Matrix: MISC

SDG No: 51706
Date Analyzed: 10/6/06
Instrument: AGIL_1100

APPL ID.	Client Sample No.	1,2-DNB (S)
061003A-LCS	Lab Control Spike	95.0
061003A-MS	Matrix Spike	93.8
061003A-MSD	Matrix SpikeD	95.8
061003A-BLK	Blank	100
AX49331	1	89.0
AX49332	3	111
AX49333	4	106
AX49334	1B	102
AX49335	5	118
AX49336	6	111
AX49337	7	121
AX49338	9	98.5
AX49339	10	89.4
AX49340	12	94.1
AX49341	13	109
AX49342	14	109
AX49344	NW2	87.0
AX49345	NW3	82.1
AX49346	NW4	130
AX49347	NW5	78.8
AX49348	NW6	77.8
AX49349	NW7	90.7
AX49350	NW8	83.0

Comments: Batch: $83TTS-061003A

Printed: 10/12/06 2:53:10 PM
Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/7/06

Matrix: MISC Instrument: AGIL_1100

APPL ID.	Client Sample No.	1,2-DNB (S)	
AX49353	NW1SW3-1	47.2	#
061003AA-MS	Matrix Spike	83.2	
061003AA-MSD	Matrix SpikeD	72.6	

Comments: Batch: $83TTS-061003AA

Printed: 10/12/06 2:53:10 PM

Form 2 & 8, Surrogate Recovery Summary

EPA 8330A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/8/06

Matrix: MISC Instrument: AGIL_1100

Blank ID: 060929B-BLK Time Analyzed: 0357

APPL ID.	Client Sample No.	File ID.	Date Analyzed
060929B-LCS	Lab Control Spike	LUX07_14	10/8/06 0149
060929B-LCSD	Lab Control SpikeD	LUX07_15	10/8/06 0231
060929B-BLK	Blank	LUX07_17	10/8/06 0357
AX49351	NW9	LUX07_18	10/8/06 0440
AX49352	NW10	LUX07_19	10/8/06 0523
AX49354	NW1SW1-1	LUX07_20	10/8/06 0606
AX49355	NW1SW2-1	LUX07_21	10/8/06 0649
AX49356	COMP 8,8A	LUX07_22	10/8/06 0732

Comments: Batch: $83TTS-060929B

Printed: 10/12/06 2:53:04 PM
Form 4, Blank Summary

EPA 8330A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/6/06

Matrix: MISC Instrument: AGIL_1100

Blank ID: 061003A-BLK Time Analyzed: 0713

APPL ID.	Client Sample No.	File ID.	Date Analyzed
061003A-LCS	Lab Control Spike	LUX05_14	10/6/06 0421
061003A-MS	Matrix Spike	LUX05_15	10/6/06 0504
061003A-MSD	Matrix SpikeD	LUX05_16	10/6/06 0547
061003A-BLK	Blank	LUX05_18	10/6/06 0713
AX49331	1	LUX05_19	10/6/06 0756
AX49332	3	LUX05_20	10/6/06 0838
AX49333	4	LUX05_21	10/6/06 0921
AX49334	1B	LUX05_22	10/6/06 1004
AX49335	5	LUX05_23	10/6/06 1047
AX49336	6	LUX05_24	10/6/06 1130
AX49337	7	LUX05_29	10/6/06 1504
AX49338	9	LUX05_30	10/6/06 1547
AX49339	10	LUX05_31	10/6/06 1630
AX49340	12	LUX05_32	10/6/06 1713
AX49341	13	LUX05_34	10/6/06 1842
AX49342	14	LUX05_34	10/6/06 1842
AX49344	NW2	LUX05_35	10/6/06 1925
AX49345	NW3	LUX05_36	10/6/06 2008
AX49346	NW4	LUX05_37	10/6/06 2051
AX49347	NW5	LUX05_38	10/6/06 2134
AX49348	NW6	LUX05_43	10/7/06 0108
AX49349	NW7	LUX05_44	10/7/06 0151
AX49350	NW8	LUX05_45	10/7/06 0234

Comments: Batch: $83TTS-061003A

EPA 8330A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed:

Matrix: MISC Instrument: AGIL_1100

Blank ID: Time Analyzed:

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AX49353	NW1SW3-1	LUX05_46	10/7/06 0317
061003AA-MS	Matrix Spike	LUX05_47	10/7/06 0400
061003AA-MSD	Matrix SpikeD	LUX05_48	10/7/06 0443

Comments: Batch: $83TTS-061003AA

Printed: 10/12/06 2:53:04 PM
Form 4, Blank Summary

EPA METHOD 8330A

Sample Data

APPL, INC.

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: 1

APPL ID: AX49331

Sample Collection Date: 8/2/06

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	89.0	70-130	%	10/3/06	10/6/06

Run #: LUX05_19
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:47 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: 3

APPL ID: AX49332

Sample Collection Date: 8/2/06

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	111	70-130	%	10/3/06	10/6/06

Run #: LUX05_20
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:47 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 4
Sample Collection Date: 8/2/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49333
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	106	70-130	%	10/3/06	10/6/06

Run #: LUX05_21
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:47 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 1B
Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49334
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	102	70-130	%	10/3/06	10/6/06

Run #: LUX05_22
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:48 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 5
Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49335
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	118	70-130	%	10/3/06	10/6/06

Run #: LUX05_23
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:48 AM
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EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: 6

APPL ID: AX49336

Sample Collection Date: 8/3/06

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	111	70-130	%	10/3/06	10/6/06

Run #: LUX05_24
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

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Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

Sample ID: 7

Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706

APPL ID: AX49337

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	121	70-130	%	10/3/06	10/6/06

Run #: LUX05_29
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:49 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 9
Sample Collection Date: 8/3/06

ARF: 51706
APPL ID: AX49338
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	98.5	70-130	%	10/3/06	10/6/06

Run #: LUX05_30
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:49 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

Sample ID: 10

Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706

APPL ID: AX49339

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	89.4	70-130	%	10/3/06	10/6/06

Run #: LUX05_31
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:49 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 12
Sample Collection Date: 8/4/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49340
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	94.1	70-130	%	10/3/06	10/6/06

Run #: LUX05_32
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

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EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 13
Sample Collection Date: 8/4/06

ARF: 51706
APPL ID: AX49341
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	109	70-130	%	10/3/06	10/6/06

Run #: LUX05_34
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:50 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 14
Sample Collection Date: 8/4/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49342
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	109	70-130	%	10/3/06	10/6/06

Run #: LUX05_34
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

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EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW2
Sample Collection Date: 8/6/06

ARF: 51706
APPL ID: AX49344
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	87.0	70-130	%	10/3/06	10/6/06

Run #: LUX05_35
Instrument: AGIL_100
Sequence: LU105A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:51 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: NW3

APPL ID: AX49345

Sample Collection Date: 8/6/06

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	82.1	70-130	%	10/3/06	10/6/06

Run #: LUX05_36
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:51 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: NW4

APPL ID: AX49346

Sample Collection Date: 8/5/06

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	130	70-130	%	10/3/06	10/6/06

Run #: LUX05_37
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:52 AM
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EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW5
Sample Collection Date: 8/5/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49347
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/6/06
EPA 8330A	Surrogate recovery: 1,2-DNB	78.8	70-130	%	10/3/06	10/6/06

Run #: LUX05_38
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:52 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

Sample ID: NW6

Sample Collection Date: 8/19/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706

APPL ID: AX49348

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Surrogate recovery: 1,2-DNB	77.8	70-130	%	10/3/06	10/7/06

Run #: LUX05_43
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:52 AM
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EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW7
Sample Collection Date: 8/19/06

ARF: 51706
APPL ID: AX49349
QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Surrogate recovery: 1,2-DNB	90.7	70-130	%	10/3/06	10/7/06

Run #: LUX05_44
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:53 AM
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EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: NW8

APPL ID: AX49350

Sample Collection Date: 8/19/06

QCG: $83TTS-061003A-105767

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Surrogate recovery: 1,2-DNB	83.0	70-130	%	10/3/06	10/7/06

Run #: LUX05_45
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:53 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW9
Sample Collection Date: 8/19/06

ARF: 51706
APPL ID: AX49351
QCG: $83TTS-060929B-105776

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Surrogate recovery: 1,2-DNB	81.5	70-130	%	9/29/07	10/8/06

Run #: LUX07_18
Instrument: AGIL_1100
Sequence: LU1007A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:53 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW10
Sample Collection Date: 8/20/06

ARF: 51706
APPL ID: AX49352
QCG: $83TTS-060929B-105776

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Surrogate recovery: 1,2-DNB	83.9	70-130	%	9/29/07	10/8/06

Run #: LUX07_19
Instrument: AGIL_1100
Sequence: LU1007A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:53 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW1SW3-1
Sample Collection Date: 8/24/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49353
QCG: $83TTS-061003AA-10576

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	10/3/06	10/7/06
EPA 8330A	Surrogate recovery: 1,2-DNB	47.2 #	70-130	%	10/3/06	10/7/06

= Recovery (or RPD) is outside QC limits.

Run #: LUX05_46
Instrument: AGIL_1100
Sequence: LU1005A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:54 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: NW1SW1-1

APPL ID: AX49354

Sample Collection Date: 8/24/06

QCG: $83TTS-060929B-105776

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Surrogate recovery: 1,2-DNB	93.0	70-130	%	9/29/07	10/8/06

Run #: LUX07_20
Instrument: AGIL_1100
Sequence: LU1007A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:54 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: NW1SW2-1

APPL ID: AX49355

Sample Collection Date: 8/9/06

QCG: $83TTS-060929B-105776

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Surrogate recovery: 1,2-DNB	84.9	70-130	%	9/29/07	10/8/06

Run #: LUX07_21
Instrument: AGIL_1100
Sequence: LU1007A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:54 AM
Form 1 - APPL Standard GC - No MC

EPA 8330A Explosives-Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

Sample ID: COMP 8,8A

Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706

APPL ID: AX49356

QCG: $83TTS-060929B-105776

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8330A	2,4-DNT	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Nitroglycerine	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	RDX	Not detected	0.60	mg/kg	9/29/07	10/8/06
EPA 8330A	Surrogate recovery: 1,2-DNB	80.8	70-130	%	9/29/07	10/8/06

Run #: LUX07_22
Instrument: AGIL_1100
Sequence: 061007A
Dilution Factor: 1
Initials: SD

Printed: 10/13/06 11:43:54 AM
Form 1 - APPL Standard GC - No MC

Perchlorate
LC-MS

APPL, INC.

Perchlorate
LC-MS

QC Summary

APPL, INC.

Method Blank
Perchlorate in Solids

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Blank Name/QCG: **061014S-49357 - 105898**
Batch ID: $CLO4LCS-061014A

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	Perchlorate	Not detected	5.0	2	ug/Kg	10/14/06	10/17/06

Run #: LQ1017_20
Instrument: AGIL_1100
Sequence: LQ061017
Initials: SD

GC SC-Blank-REG MDLs
Printed: 10/23/06 11:25:12 AM

Laboratory Control Spike Recovery
Perchlorate in Solids

APPL ID: **061014S-49357 LCS - 105898**
Batch ID: $CLO4LCS-061014A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/Kg	SPK Result ug/Kg	SPK % Recovery	Recovery Limits
Perchlorate	8.00	7.26	90.8	85-115

Comments:

Primary	SPK
Extraction Date :	10/14/06
Analysis Date :	10/17/06
Instrument :	AGIL_1100
Run :	LQ1017_15
Initials :	SD

Printed: 10/23/06 11:25:45 AM

APPL Standard LCS

Laboratory Control Spike Recovery
Perchlorate in Solids

APPL ID: **061017S-49358 LCS - 105899**
Batch ID: $CLO4LCS-061017A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/Kg	SPK Result ug/Kg	SPK % Recovery	Recovery Limits
Perchlorate	5.00	4.80	96.0	70-130

Comments: _____

Primary	SPK
Extraction Date :	10/17/06
Analysis Date :	10/17/06
Instrument :	AGIL_1100
Run :	LQ1017_16
Initials :	SD

Printed: 10/23/06 11:25:45 AM

APPL Standard LCS

Matrix Spike Recoveries
Perchlorate in Solids

APPL ID: **061017S-49357 MS - 105898**
Batch ID: $CLO4LCS-061014A
Sample ID: AX49357
Client ID: 2FD

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl ug/Kg	Matrix Result ug/Kg	SPK Result ug/Kg	DUP Result ug/Kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Perchlorate	8.00	50	55.1	82.7	63.8 #	409 #	85-115	40.1 #	15

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Extraction Date :	10/17/06	10/17/06
Analysis Date :	10/17/06	10/17/06
Instrument :	AGIL_1100	AGIL_1100
Run :	LQ1017_17	LQ1017_18
Initials :	SD	

Printed: 10/23/06 2:57:32 PM
APPL MSD SCII

LC/MS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY FORM

DATA SEQUENCE : 10/17/06_A

DETECTOR ID : AGILENT 1100 G1946D SL

Perchlorate_IS Average Area Count Response					306665.50	___
Lower Limit Response					153332.75	___
Upper Limit Response					459998.25	___
SAMPLE INJECTION ID :			DATA FILE ID:	RT	AREA COUNT	
PER_IS	0.005 PPM	10/17/06	>LQ1017_01	15.490	315298.00	---
PERCHLORATE	0.0002PPM	10/17/06	>LQ1017_02	15.529	310124.00	---
PERCHLORATE	0.0005PPM	10/17/06	>LQ1017_03	15.499	308815.00	---
PERCHLORATE	0.001 PPM	10/17/06	>LQ1017_04	15.512	313970.00	---
PERCHLORATE	0.002 PPM	10/17/06	>LQ1017_05	15.549	317506.00	---
PERCHLORATE	0.005 PPM	10/17/06	>LQ1017_06	15.572	303898.00	---
PERCHLORATE	0.010 PPM	10/17/06	>LQ1017_07	15.524	303962.00	---
PER_IS	0.005 PPM	10/17/06	>LQ1017_08	15.622	314217.00	---
*PER_SS	0.0005PPM	10/17/06	>LQ1017_09	15.648	320188.00	---
*PER_SS	0.002 PPM	10/17/06	>LQ1017_10	15.663	309507.00	---
PER_IS	0.005 PPM	10/17/06	>LQ1017_11	15.686	299408.00	---
*PER_CCV_1	0.0005PPM	10/17/06	>LQ1017_12	15.666	297542.00	---
*PER_CCV_1	0.002 PPM	10/17/06	>LQ1017_13	15.701	299425.00	---
ACN	1 DF	10/17/06	>LQ1017_14	15.669	9259.78	***
061014MLCSA	8421 DF	10/14/06	>LQ1017_15	15.675	320981.00	---
061017M ICSA	8421 DF	10/17/06	>LQ1017_16	14.509	249508.00	---
59357M-MS	8421 DF	10/17/06	>LQ1017_17	14.765	279577.00	---
59357M-MSD	8421 DF	10/17/06	>LQ1017_18	14.699	239725.00	---
PER_IS	0.005 PPM	10/15/06	>LQ1017_19	15.763	316663.00	---
061014MBLKA	8421 DF	10/14/06	>LQ1017_20	15.699	309280.00	---
59357M	8421 DF	10/14/06	>LQ1017_21	14.754	305154.00	---
59358M	8421 DF	10/14/06	>LQ1017_22	14.835	276503.00	---
59359M	8421 DF	10/14/06	>LQ1017_23	14.708	255533.00	---
59360M	8421 DF	10/14/06	>LQ1017_24	15.059	371997.00	---
59361M	8421 DF	10/14/06	>LQ1017_25	14.385	347144.00	---
PER_IS	0.005 PPM	10/17/06	>LQ1017_26	15.758	305267.00	---
PER_CCV_2	0.0005PPM	10/17/06	>LQ1017_27	15.676	312812.00	---
PER_CCV_2	0.002 PPM	10/17/06	>LQ1017_28	15.815	315248.00	---

*** Internal Standard Response Outlier

* Area Count Used for Averaging Purposes

FILE ID : LQ1017A.INT

Perchlorate
LC-MS

Sample Data

APPL, INC.

Perchlorate in Solids

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: 2FD

APPL ID: AX49357

Sample Collection Date: 8/3/06

QCG: $CLO4LCS-061014A-1058

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 69.2 Percent Moisture.)							
LCMS	Perchlorate	160	16.0	6.5	ug/Kg	10/14/06	10/17/06

Run #:	LQ1017_21
Instrument:	AGIL_1100
Sequence:	LQ061017
Dilution Factor:	1
Initials:	SD

Printed: 10/23/06 11:25:25 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Perchlorate in Solids

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW1FD
Sample Collection Date: 8/5/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49358
QCG: $CLO4LCS-061017A-1058

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 66.9 Percent Moisture.)							
LCMS	Perchlorate	8.8 J	15.0	6.0	ug/Kg	10/14/06	10/17/06

J = Estimated value.

Run #:	LQ1017_22
Instrument:	AGIL_1100
Sequence:	LQ061017
Dilution Factor:	1
Initials:	SD

Printed: 10/23/06 11:25:25 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Perchlorate in Solids

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW2FD
Sample Collection Date: 8/19/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49359
QCG: $CLO4LCS-061014A-1058

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 71.2 Percent Moisture.)							
LCMS	Perchlorate	10 J	17.0	6.9	ug/Kg	10/14/06	10/18/06

J = Estimated value.

Run #:	LQ1017_23
Instrument:	AGIL_1100
Sequence:	LQ061017
Dilution Factor:	1
Initials:	SD

Printed: 10/23/06 11:25:25 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Perchlorate in Solids

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW1SW1-1FD
Sample Collection Date: 8/9/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49360
QCG: $CLO4LCS-061014A-1058

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 75.4 Percent Moisture.)							
LCMS	Perchlorate	Not detected	20.0	8.1	ug/Kg	10/14/06	10/18/06

Run #:	LQ1017_24
Instrument:	AGIL_1100
Sequence:	LQ061017
Dilution Factor:	1
Initials:	SD

Printed: 10/23/06 11:25:25 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Perchlorate in Solids

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 9AFD AND 10A COMP
Sample Collection Date: 8/3/06

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49361
QCG: $CLO4LCS-061014A-1058

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 72.9 Percent Moisture.)							
LCMS	Perchlorate	21 J	18.0	7.4	ug/Kg	10/14/06	10/18/06

J = Estimated value.

Run #:	LQ1017_25
Instrument:	AGIL_1100
Sequence:	LQ061017
Dilution Factor:	1
Initials:	SD

Printed: 10/23/06 11:25:25 AM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank
EPA 8260B Soil

Blank Name/QCG: **061004S-49358 - 105602**
Batch ID: S8260S-061004AC

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	1,2,4-Trimethylbenzene	Not detected	5.0	1.18	ug/Kg	10/4/2006	10/4/2006
BLANK	Ethylbenzene	Not detected	5.0	0.64	ug/Kg	10/4/2006	10/4/2006
BLANK	m&p-Xylenes	2.4 J	5.0	0.43	ug/Kg	10/4/2006	10/4/2006
BLANK	o-Xylenes	Not detected	5.0	0.61	ug/Kg	10/4/2006	10/4/2006
BLANK	Styrene	Not detected	5.0	0.69	ug/Kg	10/4/2006	10/4/2006
BLANK	Toluene	Not detected	5.0	0.65	ug/Kg	10/4/2006	10/4/2006
BLANK	Surrogate recovery (BFB)	95.2	82-121		%	10/4/2006	10/4/2006
BLANK	Surrogate recovery (DBFM)	96.9	74-122		%	10/4/2006	10/4/2006
BLANK	Surrogate recovery (DCA)	93.5	59-120		%	10/4/2006	10/4/2006
BLANK	Surrogate recovery (TOL)	101	71-127		%	10/4/2006	10/4/2006

J = Estimated value.

Run #: 1004C17
Instrument: Chico
Sequence: C061004
Initials: GM

GC SC-Blank-REG MDLs
Printed: 10/23/2006 4:46:06 PM

Method Blank

EPA 8260B Soil Re-analysis

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Blank Name/QCG: **061003S-49357 - 105604**
Batch ID: $8260S-061002BC

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	1,2,4-Trimethylbenzene	Not detected	5.0	1.18	ug/Kg	10/3/2006	10/3/2006
BLANK	Ethylbenzene	Not detected	5.0	0.64	ug/Kg	10/3/2006	10/3/2006
BLANK	m&p-Xylenes	Not detected	5.0	0.43	ug/Kg	10/3/2006	10/3/2006
BLANK	o-Xylenes	Not detected	5.0	0.61	ug/Kg	10/3/2006	10/3/2006
BLANK	Styrene	Not detected	5.0	0.69	ug/Kg	10/3/2006	10/3/2006
BLANK	Toluene	Not detected	5.0	0.65	ug/Kg	10/3/2006	10/3/2006
BLANK	Surrogate recovery (BFB)	86.6	82-121		%	10/3/2006	10/3/2006
BLANK	Surrogate recovery (DBFM)	90.4	74-122		%	10/3/2006	10/3/2006
BLANK	Surrogate recovery (DCA)	95.8	59-120		%	10/3/2006	10/3/2006
BLANK	Surrogate recovery (TOL)	87.8	71-127		%	10/3/2006	10/3/2006

Run #: 1002C23
Instrument: Chico
Sequence: C060928
Initials: GM

GC SC-Blank-REG MDLs
Printed: 10/23/2006 4:46:06 PM

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/03/06

Matrix: MISC Instrument: Chico

APPL ID.	Client Sample No.	Surrogate recovery (BFB)		Surrogate recovery (DBFM)
061002BC-LCS	Lab Control Spike	89.8		86.1
061002BC-BLK	Blank	86.6		90.4
AX49357	2FD	76.9	#	95.8

Comments: Batch: S8260S-061002BC

Printed: 10/12/06 3:09:24 PM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/03/06

Matrix: MISC Instrument: Chico

APPL ID.	Client Sample No.	Surrogate recovery (DCA)	Surrogate recovery (TOL)
061002BC-LCS	Lab Control Spike	87.9	82.2
061002BC-BLK	Blank	95.8	87.8
AX49357	2FD	106	89.7

Comments: Batch: S8260S-061002BC

Printed: 10/12/06 3:09:25 PM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/04/06

Matrix: MISC Instrument: Chico

APPL ID.	Client Sample No.	Surrogate recovery (BFB)	Surrogate recovery (DBFM)
061004AC-LCS	Lab Control Spike	100	96.3
061004AC-BLK	Blank	95.2	96.9
AX49358	NW1FD	87.6	98.9
AX49359	NW2FD	86.6	104
AX49360	NW1SW1-1FD	98.5	102
AX49361	9AFD AND 10A COMP	93.8	106
061004AC-MS	Matrix Spike	91.2	102
061004AC-MSD	Matrix SpikeD	97.8	96.3

Comments: Batch: S8260S-061004AC

Printed: 10/12/06 3:09:25 PM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/04/06

Matrix: MISC Instrument: Chico

APPL ID.	Client Sample No.	Surrogate recovery (DCA)	Surrogate recovery (TOL)
061004AC-LCS	Lab Control Spike	96.6	98.6
061004AC-BLK	Blank	93.5	101
AX49358	NW1FD	111	96.5
AX49359	NW2FD	118	98.1
AX49360	NW1SW1-1FD	113	101
AX49361	9AFD AND 10A COMP	120	101
061004AC-MS	Matrix Spike	108	97.7
061004AC-MSD	Matrix SpikeD	99.7	108

Comments: Batch: S8260S-061004AC

Printed: 10/12/06 3:09:25 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8260B Soil Re-analysis

APPL ID: **061003S-49357 LCS - 105604**
Batch ID: $8260S-061002BC

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/Kg	SPK Result ug/Kg	SPK % Recovery	Recovery Limits
Ethylbenzene	50.0	47.4	94.8	78-127
m&p-Xylenes	100	96.9	96.9	87-121
o-Xylenes	50.0	46.3	92.6	87-121
Styrene	50.0	46.7	93.4	65-135
Toluene	50.0	48.2	96.4	81-131
Surrogate recovery (BFB)	35.4	31.8	89.8	82-121
Surrogate recovery (DBFM)	34.6	29.8	86.1	74-122
Surrogate recovery (DCA)	34.0	29.9	87.9	59-120
Surrogate recovery (TOL)	36.6	30.1	82.2	71-127

Comments: _____

Primary	SPK
Extraction Date :	10/3/2006
Analysis Date :	10/3/2006
Instrument :	Chico
Run :	1002C19
Initials :	GM

Printed: 10/23/2006 4:46:08 PM

APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B Soil

APPL ID: **061004S-49358 LCS - 105602**
Batch ID: $8260S-061004AC

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/Kg	SPK Result ug/Kg	SPK % Recovery	Recovery Limits
1,2,4-Trimethylbenzene	50.0	46.1	92.2	65-135
Ethylbenzene	50.0	46.3	92.6	78-127
m&p-Xylenes	100	93.3	93.3	87-121
o-Xylenes	50.0	48.9	97.8	87-121
Styrene	50.0	48.7	97.4	65-135
Toluene	50.0	45.8	91.6	81-131
Surrogate recovery (BFB)	31.9	31.9	100	82-121
Surrogate recovery (DBFM)	29.8	28.7	96.3	74-122
Surrogate recovery (DCA)	29.1	28.1	96.6	59-120
Surrogate recovery (TOL)	35.3	34.8	98.6	71-127

Comments: _____

Primary	SPK
Extraction Date :	10/4/2006
Analysis Date :	10/4/2006
Instrument :	Chico
Run :	1004C15
Initials :	GM

Printed: 10/23/2006 4:46:08 PM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8260B Soil

APPL ID: **061005S-49358 MS - 105602**
Batch ID: $8260S-061004AC
Sample ID: AX49358
Client ID: NW1FD

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl ug/Kg	Matrix Result ug/Kg	SPK Result ug/Kg	DUP Result ug/Kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2,4-Trimethylbenzene	250	ND	28.9	37.3	11.6 #	14.9 #	65-135	25.4	30
Ethylbenzene	250	ND	40.7	56.9	16.3 #	22.8 #	78-127	33.2 #	30
m&p-Xylenes	100	6.5	73.4	113	66.9 #	107	87-121	42.5 #	30
o-Xylenes	50.0	ND	34.4	45.2	68.8 #	90.4	87-121	27.1	30
Styrene	250	ND	30.0	35.5	12.0 #	14.2 #	65-135	16.8	30
Toluene	250	ND	64.6	74.9	25.8 #	30.0 #	81-131	14.8	30
Surrogate recovery (BFB)	31.9	NA	29.1	31.2	91.2	97.8	82-121		
Surrogate recovery (DBFM)	29.8	NA	30.3	28.7	102	96.3	74-122		
Surrogate recovery (DCA)	29.1	NA	31.3	29.0	108	99.7	59-120		
Surrogate recovery (TOL)	35.3	NA	34.5	38.0	97.7	108	71-127		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Extraction Date :	10/5/2006	10/5/2006
Analysis Date :	10/5/2006	10/5/2006
Instrument :	Chico	Chico
Run :	1005C13	1005C14
Initials :	GM	

Printed: 10/23/2006 4:46:14 PM
APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/03/06

Matrix: MISC Instrument: Chico

Blank ID: 061002BC-BLK Time Analyzed: 0310

APPL ID.	Client Sample No.	File ID.	Date Analyzed
061002BC-LCS	Lab Control Spike	1002C19	10/03/06 0007
061002BC-BLK	Blank	1002C23	10/03/06 0310
AX49357	2FD	1002C28	10/03/06 0652

Comments: Batch: \$8260S-061002BC

Printed: 10/12/06 3:09:43 PM
Form 4, Blank Summary

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 51706

Case No: 51706 Date Analyzed: 10/04/06

Matrix: MISC Instrument: Chico

Blank ID: 061004AC-BLK Time Analyzed: 2229

APPL ID.	Client Sample No.	File ID.	Date Analyzed
061004AC-LCS	Lab Control Spike	1004C15	10/04/06 2058
061004AC-BLK	Blank	1004C17	10/04/06 2229
AX49358	NW1FD	1004C22	10/05/06 0220
AX49359	NW2FD	1004C23	10/05/06 0309
AX49360	NW1SW1-1FD	1004C24	10/05/06 0354
AX49361	9AFD AND 10A COMP	1004C26	10/05/06 0522
061004AC-MS	Matrix Spike	1005C13	10/05/06 1916
061004AC-MSD	Matrix SpikeD	1005C14	10/05/06 1959

Comments: Batch: \$8260S-061004AC

Printed: 10/12/06 3:09:43 PM
Form 4, Blank Summary

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

APPL, INC.

EPA 8260B Soil Re-analysis

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: 2FD
Sample Collection Date: 8/3/2006

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 51706
APPL ID: AX49357
QCG: $8260S-061002BC-105604

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 69.2 Percent Moisture.)							
EPA 8260B	Ethylbenzene	Not detected	16.0	2.1	ug/Kg	10/3/2006	10/3/2006
EPA 8260B	m&p-Xylenes	1.6 J	16.0	1.4	ug/Kg	10/3/2006	10/3/2006
EPA 8260B	o-Xylenes	Not detected	16.0	2.0	ug/Kg	10/3/2006	10/3/2006
EPA 8260B	Styrene	Not detected	16.0	2.2	ug/Kg	10/3/2006	10/3/2006
EPA 8260B	Toluene	Not detected	16.0	2.1	ug/Kg	10/3/2006	10/3/2006
EPA 8260B	Surrogate recovery (BFB)	76.9 #	82-121		%	10/3/2006	10/3/2006
EPA 8260B	Surrogate recovery (DBFM)	95.8	74-122		%	10/3/2006	10/3/2006
EPA 8260B	Surrogate recovery (DCA)	106	59-120		%	10/3/2006	10/3/2006
EPA 8260B	Surrogate recovery (TOL)	89.7	71-127		%	10/3/2006	10/3/2006

J = Estimated value.
# = Recovery (or RPD) is outside QC limits.

Run #: 1002C28
Instrument: Chico
Sequence: C060928
Dilution Factor: 1
Initials: GM

Printed: 10/23/2006 4:45:12 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW1FD
Sample Collection Date: 8/5/2006

ARF: 51706
APPL ID: AX49358
QCG: $8260S-061004AC-105602

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 66.9 Percent Moisture.)							
EPA 8260B	1,2,4-Trimethylbenzene	Not detected	76.0	18	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Ethylbenzene	Not detected	76.0	9.7	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	m&p-Xylenes	20 J	76.0	6.5	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	o-Xylenes	Not detected	76.0	9.2	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Styrene	Not detected	76.0	10	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Toluene	Not detected	76.0	9.8	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (BFB)	87.6	82-121		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DBFM)	98.9	74-122		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DCA)	111	59-120		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (TOL)	96.5	71-127		%	10/5/2006	10/5/2006

J = Estimated value.

Run #: 1004C22
Instrument: Chico
Sequence: C061004
Dilution Factor: 5
Initials: GM

Printed: 10/23/2006 4:45:13 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN
Project: MULIWAI TISSUE/838
Sample ID: NW2FD
Sample Collection Date: 8/19/2006

ARF: 51706
APPL ID: AX49359
QCG: $8260S-061004AC-105602

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 71.2 Percent Moisture.)							
EPA 8260B	1,2,4-Trimethylbenzene	Not detected	87.0	20	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Ethylbenzene	Not detected	87.0	11	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	m&p-Xylenes	16 J	87.0	7.5	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	o-Xylenes	Not detected	87.0	11	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Styrene	Not detected	87.0	12	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Toluene	Not detected	87.0	11	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (BFB)	86.6	82-121		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DBFM)	104	74-122		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DCA)	118	59-120		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (TOL)	98.1	71-127		%	10/5/2006	10/5/2006

J = Estimated value.

Run #: 1004C23
Instrument: Chico
Sequence: C061004
Dilution Factor: 5
Initials: GM

Printed: 10/23/2006 4:45:13 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: NW1SW1-1FD

APPL ID: AX49360

Sample Collection Date: 8/9/2006

QCG: $8260S-061004AC-105602

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 75.4 Percent Moisture.)							
EPA 8260B	1,2,4-Trimethylbenzene	Not detected	100.0	24	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Ethylbenzene	Not detected	100.0	13	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	m&p-Xylenes	16 J	100.0	8.7	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	o-Xylenes	Not detected	100.0	12	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Styrene	Not detected	100.0	14	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Toluene	Not detected	100.0	13	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (BFB)	98.5	82-121		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DBFM)	102	74-122		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DCA)	113	59-120		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (TOL)	101	71-127		%	10/5/2006	10/5/2006

J = Estimated value.

Run #: 1004C24
Instrument: Chico
Sequence: C061004
Dilution Factor: 5
Initials: GM

Printed: 10/23/2006 4:45:13 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8260B Soil

Tetra Tech, Inc.
820 Mililani St, Ste 700
Hololulu, HI 96813

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: SUSAN CARSTENN

Project: MULIWAI TISSUE/838

ARF: 51706

Sample ID: 9AFD AND 10A COMP

APPL ID: AX49361

Sample Collection Date: 8/3/2006

QCG: $8260S-061004AC-105602

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Concentrations and Limits have been adjusted to reflect 72.9 Percent Moisture.)							
EPA 8260B	1,2,4-Trimethylbenzene	Not detected	92.0	22	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Ethylbenzene	Not detected	92.0	12	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	m&p-Xylenes	17 J	92.0	7.9	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	o-Xylenes	Not detected	92.0	11	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Styrene	Not detected	92.0	13	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Toluene	Not detected	92.0	12	ug/Kg	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (BFB)	93.8	82-121		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DBFM)	106	74-122		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (DCA)	120	59-120		%	10/5/2006	10/5/2006
EPA 8260B	Surrogate recovery (TOL)	101	71-127		%	10/5/2006	10/5/2006

J = Estimated value.

Run #: 1004C26
Instrument: Chico
Sequence: C061004
Dilution Factor: 5
Initials: GM

Printed: 10/23/2006 4:45:13 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Analytical Chemistry Data Package
Inorganics Analysis

Project: USACE - HAWAII
Tetra Tech

Analysis of Metals in Tissue

Battelle Project No. 52222
CF No. 2613

Marine Sciences Laboratory
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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Al	Sb	As	Ba	Be	Cd	Cr
					Instrument:	*ICP-OES*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-OES*
K0607294-009	2fd	2613-1	*Tissue*	8/3/06	30.8	1517	0.0527 J	1.46 J	19.5	0.0100 J	0.0292 J	12.4
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	21.2	0.02 U	25.2	0.620 J	0.005 U	0.155	1.56
K0607294-028DUP	NW1fd DUP	2613-2DUP	*Tissue*	8/5/06	33.1	11.3	0.02 U	26.2	0.697 J	0.005 U	0.151	1.41
K0607294-033	NW2fd	2613-3	*Tissue*	8/19/06	28.8	15.6	0.0259 J	6.17	7.58	0.005 U	0.132	1.49
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	337	0.145	109	13.3	0.00559 J	0.265	1.59
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	377	0.145	110	12.8	0.005 U	0.256	1.98
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	2711	0.0481 J	29.8	12.5	0.0261	0.147	13.2
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	2683	0.0469 J	30.6	11.9	0.0277	0.143	13.5
DETECTION LIMITS												
Achieved Method Detection Limit (DRY Wt.) [(1)]						**0.374**	**0.02**	**0.585**	**0.5**	**0.0048**	**0.008**	**0.041**
Reporting Limit (RL)						**1.2**	**0.06**	**2**	**2**	**0.015**	**0.03**	**0.13**
METHOD BLANK												
Blank		Blank 092506 R1			*28.0*	0.374 U	0.02 U	0.585 U	0.5 U	0.005 U	0.008 U	0.0468 J
Blank		Blank 092506 R2			*28.0*	0.374 U	0.02 U	0.585 U	0.5 U	0.005 U	0.008 U	0.0570 J
		Mean Blank										0.0519 J
Blank		Blank 100606			*28.0*	NA	NA	NA	NA	NA	NA	NA
BLANK SPIKE RESULTS												
Blank		Blank 092506 R1			*28.0*	0.374 U	0.02 U	0.585 U	0.5 U	0.005 U	0.008 U	0.0468 J
LCS		LCS 092506 L1			*28.0*	NA	2.06	1.66 J	2.04	1.84	2.07	2.14
		Spike Concentration				**NA**	2.0	2.0	2.0	2.0	2.0	2.0
		Percent Recovery				**NA**	**103%**	**83%**	**102%**	**92%**	**104%**	**105%**
Blank		Blank 092506 R2			*28.0*	0.374 U	0.02 U	0.585 U	0.5 U	0.005 U	0.008 U	0.0570 J
LCS		LCS 092506 L2			*28.0*	104	25.0	24.0	26.8	24.0	24.8	26.3
		Spike Concentration				101	25	25	25	25	25	25
		Percent Recovery				**103%**	**100%**	**96%**	**107%**	**96%**	**99%**	**105%**
MATRIX SPIKE RESULTS												
K0607294-038MS		2613-4 MS				446	2.12	125	15.2	1.92	2.14	25.9
K0607294-038MSD		2613-4 MSD				458	2.28	130	15.2	2.02	2.24	25.7
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	337	0.145	109	13.3	0.00559 J	0.265	1.59
		Spike Concentration, MS				100.4	1.90	24.9	1.90	1.90	1.90	24.9
		Spike Concentration, MSD				96.6	2.01	23.9	2.01	2.01	2.01	23.9
		Percent Recovery, MS				**108%**	**104%**	**SL**	**100%**	**101%**	**99%**	**98%**
		Percent Recovery, MSD				**125%**	**106%**	**SL**	**95%**	**100%**	**98%**	**101%**
		RPD				**14%**	**2%**	**NA**	**6%**	**1%**	**0%**	**3%**

BATTELLE MARINE SCIENCES LABORATORY
1529 West Sequim Bay Road
Sequim, Washington 98382
(360) 681-4564

TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Al	Sb	As	Ba	Be	Cd	Cr
					Instrument:	*ICP-OES*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-OES*
MATRIX SPIKE RESULTS (cont.)												
K0607294-042MS		2613-5 MS				2337	2.16	50.5	43.2	1.78	2.16	35.5
K0607294-042MSD		2613-5 MSD				2517	2.01	51.9	40.8	1.66	1.99	36.8
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	2711	0.0481 J	29.8	12.5	0.0261	0.147	13.2
	Spike Concentration, MS					101.2	2.06	25.1	25.1	2.06	2.06	25.1
	Spike Concentration, MSD					100.6	1.92	24.9	24.9	1.92	1.92	24.9
	Percent Recovery, MS					**SL**	**103%**	**82%**	**122%**	**85%**	**98%**	**89%**
	Percent Recovery, MSD					**SL**	**102%**	**89%**	**114%**	**85%**	**96%**	**95%**
	RPD					**NA**	**0%**	**7%**	**7%**	**0%**	**2%**	**6%**
REPLICATE ANALYSIS RESULTS												
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	21.2	0.02 U	25.2	0.620	0.005 U	0.155	1.56
K0607294-028DUP	NW1fd DUP	2613-2DUP	*Tissue*	8/5/06	33.1	11.3	0.02 U	26.2	0.697	0.005 U	0.151	1.41
Mean						16.3		25.7	0.659		0.153	1.49
RPD						**61% &**	**NA**	**4%**	**12%**	**NA**	**3%**	**10%**
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	337	0.145	109	13.3	0.00559 J	0.265	1.59
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	377	0.145	110	12.8	0.005 U	0.256	1.98
Mean						357	0.145	110	13.1		0.261	1.79
RPD						**11%**	**0%**	**1%**	**4%**	**NA**	**3%**	**22%**
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	2711	0.0481 J	29.8	12.5	0.0261	0.147	13.2
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	2683	0.0469 J	30.6	11.9	0.0277	0.143	13.5
Mean						2697	0.0475	30.2	12.2	0.0269	0.145	13.4
RPD						**1%**	**3%**	**3%**	**5%**	**6%**	**3%**	**2%**
STANDARD REFERENCE MATERIAL												
SRM 1566b		1566-b 092506				152	0.010 U	6.42	8.02	0.00663 J	2.48	0.587
		Certified Value				197	0.011	7.65	8.6	NC	2.48	NC
		PD				**23%**	**5%**	**16%**	**7%**	**NA**	**0%**	**NA**
SRM DORM-2		DORM-2 092506				9.42	0.0333 J	16.3	2.22	0.005 U	0.0448	30.9
		Certified Value				10.9	NC	18.0	NC	NC	0.043	34.7
		PD				**14%**	**NA**	**9%**	**NA**	**NA**	**4%**	**11%**
SRM IAEA 140		IAEA 140 092506				868	0.147	36.7	10.4	0.0355	0.486	9.00
		Certified Value				NC	NC	44.3	NC	NC	0.537	10.4
		PD				**NA**	**NA**	**17%**	**NA**	**NA**	**9%**	**13%**

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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Al	Sb	As	Ba	Be	Cd	Cr
					Instrument:	*ICP-OES*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-MS*	*ICP-OES*

U Analyte not detected above the laboratory achieved method detection limit, MDL reported
J Value detected is greater than the MDL, but less than the reporting limit (RL or PQL)
& QC value outside the accuracy or precision criteria goal
(spike recovery ±25%; SRM ±25% PD; duplicate precision <25% RSD).
B Blank concentration greater than 3 X MDL and sample concentration less than 10 times detected blank.
RPD Relative Percent Difference
NS Sample was not spiked for this analyte
SL Inappropriate spike level relative to the native sample concentration
PD Percent Difference
NC Not Certified
NA Not Applicable/appropriate
(1) Detection limits converted between dry weight and wet weight using mean percent dry wt.
(2) Achieved Detection limits reported from the 2006 Tissue MDL Study

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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Co	Cu	Fe	Pb	Mn	Se	Ag
					Instrument:	*ICP-MS*	*ICP-MS*	*ICP-OES*	*ICP-MS*	*ICP-MS*	*FIAS*	*ICP-MS*
K0607294-009	2fd	2613-1	*Tissue*	8/3/06	30.8	2.58	17.3	2818	1.31	125	2.14	0.0546
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	0.133	3.32	71.5	0.146	2.23	1.19	0.0132 J
K0607294-028DUP	NW1fd DUP	2613-2DUP	*Tissue*	8/5/06	33.1	0.145	3.45	68.5	0.178	2.78	1.20	0.0135 J
K0607294-033	NW2fd	2613-3	*Tissue*	8/19/06	28.8	0.133	2.95	80.5	2.24	6.27	0.879	0.01 U
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	0.791	2.34	459	0.967	10.1	0.0743	0.0601
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	0.803	2.44	537	0.985	10.5	0.0686	0.0622
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	2.23	67.8	3460	2.61	150	2.83	0.610
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	2.13	67.5	3463	2.52	145	2.85	0.603
DETECTION LIMITS												
Achieved Method Detection Limit (DRY Wt.) [(1)]						**0.0014**	**0.08**	**1.4**	**0.02**	**0.02**	**0.0109**	**0.01**
Reporting Limit (RL)						**0.0045**	**0.3**	**4**	**0.06**	**0.06**	**0.035**	**0.03**
METHOD BLANK												
Blank		Blank 092506 R1			*28.0*	0.0014 U	0.08 U	1.6 U	0.2 U	0.2 U	0.0109 U	0.01 U
Blank		Blank 092506 R2			*28.0*	0.0014 U	0.08 U	1.6 U	0.2 U	0.2 U	0.0109 U	0.01 U
		Mean Blank										
Blank		Blank 100606			*28.0*	NA	NA	NA	NA	NA	0.0134 J	NA
BLANK SPIKE RESULTS												
Blank		Blank 092506 R1			*28.0*	0.0014 U	0.08 U	1.6 U	0.2 U	0.2 U	0.0109 U	0.01 U
LCS		LCS 092506 L1			*28.0*	2.1	2.09	NA	2.03	2.37	1.84	1.97
		Spike Concentration				2.0	2.0	**NA**	2.0	2.0	2.0	2.0
		Percent Recovery				**105%**	**105%**	**NA**	**102%**	**119%**	**92%**	**99%**
Blank		Blank 092506 R2			*28.0*	0.0014 U	0.08 U	1.6 U	0.2 U	0.2 U	0.0109 U	0.01 U
LCS		LCS 092506 L2			*28.0*	26.4	26.0	26.2	25.5	26.4	**NA**	25.5
		Spike Concentration				25	25	25	25	25	**NA**	25
		Percent Recovery				**106%**	**104%**	**105%**	**102%**	**106%**	**NA**	**102%**
MATRIX SPIKE RESULTS												
K0607294-038MS		2613-4 MS				25.9	4.09	485	26.0	34.3	1.82	1.71
K0607294-038MSD		2613-4 MSD				25.7	4.56	517	25.3	36.0	1.72	1.83
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	0.791	2.34	459	0.967	10.1	0.0743	0.0601
		Spike Concentration, MS				24.9	1.90	24.9	24.9	24.9	1.90	1.90
		Spike Concentration, MSD				23.9	2.01	23.9	23.9	23.9	2.01	2.01
		Percent Recovery, MS				**101%**	**92%**	**SL**	**101%**	**97%**	**92%**	**87%**
		Percent Recovery, MSD				**104%**	**110%**	**SL**	**102%**	**108%**	**82%**	**88%**
		RPD				**3%**	**18%**	**NA**	**1%**	**11%**	**12%**	**1%**

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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Co	Cu	Fe	Pb	Mn	Se	Ag
					Instrument:	*ICP-MS*	*ICP-MS*	*ICP-OES*	*ICP-MS*	*ICP-MS*	*FIAS*	*ICP-MS*
MATRIX SPIKE RESULTS (cont.)												
K0607294-042MS		2613-5 MS				26.5	89.6 D	2870	28.2	161	4.44	25.1
K0607294-042MSD		2613-5 MSD				26.6	93.9 D	3121	27.9	168	4.30	25.1
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	2.23	67.8	3460	2.61	150	2.83	0.610
	Spike Concentration, MS					25.1	25.1	25.1	25.1	25.1	2.06	25.1
	Spike Concentration, MSD					24.9	24.9	24.9	24.9	24.9	1.92	24.9
	Percent Recovery, MS					**97%**	**87%**	**SL**	**102%**	**SL**	**78%**	**98%**
	Percent Recovery, MSD					**98%**	**105%**	**SL**	**102%**	**SL**	**77%**	**98%**
	RPD					**1%**	**19%**	**NA**	**0%**	**NA**	**2%**	**1%**
REPLICATE ANALYSIS RESULTS												
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	0.133	3.32	71.5	0.146	2.23	1.19	0.0132 J
K0607294-028DUP	NW1fd DUP	2613-2DUP	*Tissue*	8/5/06	33.1	0.145	3.45	68.5	0.178	2.78	1.20	0.0135 J
Mean						0.139	3.39	70.0	0.162	2.51	1.20	0.0134
RPD						**9%**	**4%**	**4%**	**20%**	**22%**	**1%**	**2%**
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	0.791	2.34	459	0.967	10.1	0.0743	0.0601
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	0.803	2.44	537	0.985	10.5	0.0686	0.0622
Mean						0.797	2.39	498	0.976	10.3	0.0715	0.0612
RPD						**2%**	**4%**	**16%**	**2%**	**4%**	**8%**	**3%**
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	2.23	67.8	3460	2.61	150	2.83	0.610
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	2.13	67.5	3463	2.52	145	2.85	0.603
Mean						2.18	67.7	3461	2.57	148	2.84	0.607
RPD						**5%**	**0%**	**0%**	**4%**	**3%**	**1%**	**1%**
STANDARD REFERENCE MATERIAL												
SRM 1566b		1566-b 092506				0.345	68.6	201	0.285	18.1	2.01	0.620
		Certified Value				0.371	71.6	205.8	0.308	18.5	2.06	0.666
		PD				**7%**	**4%**	**2%**	**7%**	**2%**	**2%**	**7%**
SRM DORM-2		DORM-2 092506				0.172	2.12	141	0.0608	3.66	1.26	0.0372
		Certified Value				0.182	2.34	142	0.065	3.7	1.40	0.041
		PD				**5%**	**9%**	**1%**	**6%**	**0%**	**10%**	**9%**
SRM IAEA 140		IAEA 140 092506				0.864	4.22	1157	2.61	55.8	0.0829	0.0760
		Certified Value				0.876	5.05	1256	2.19	56.1	NC	NC
		PD				**1%**	**16%**	**8%**	**19%**	**1%**	**NA**	**NA**

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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Co	Cu	Fe	Pb	Mn	Se	Ag
					Instrument:	*ICP-MS*	*ICP-MS*	*ICP-OES*	*ICP-MS*	*ICP-MS*	*FIAS*	*ICP-MS*

U Analyte not detected above the laboratory achieved method detection limit, ME
J Value detected is greater than the MDL, but less than the reporting limit (RL or
& QC value outside the accuracy or precision criteria goal
(spike recovery ±25%; SRM ±25% PD; duplicate precision <25% RSD).
B Blank concentration greater than 3 X MDL and sample concentration less than
RPD Relative Percent Difference
NS Sample was not spiked for this analyte
SL Inappropriate spike level relative to the native sample concentration
PD Percent Difference
NC Not Certified
NA Not Applicable/appropriate
(1) Detection limits converted between dry weight and wet weight using mean perc
(2) Achieved Detection limits reported from the 2006 Tissue MDL Study

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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Tl	V	Zn	Total Hg
					Instrument:	*ICP-MS*	*ICP-OES*	*ICP-OES*	*CVAA*
K0607294-009	2fd	2613-1	*Tissue*	8/3/06	30.8	0.00325 J	10.3	104	0.0581
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	0.003 U	0.106	54.2	0.0978
K0607294-028DUP	NW1fd DUP	2613-2DUP	*Tissue*	8/5/06	33.1	0.003 U	0.107	57.2	0.0918
K0607294-033	NW2fd	2613-3	*Tissue*	8/19/06	28.8	0.0126	0.312	73.0	0.0285 J
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	0.0268	4.42	12.1	0.00958 U
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	0.0262	5.22	12.6	0.00958 U
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	0.00586 J	12.9	201	0.0922
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	0.00536 J	12.8	196	0.0896
DETECTION LIMITS									
Achieved Method Detection Limit (DRY Wt.) [(1)]						**0.003**	**0.011**	**0.5**	**0.00958**
Reporting Limit (RL)						**0.01**	**0.035**	**2**	**0.03**
METHOD BLANK									
Blank		Blank 092506 R1			*28.0*	0.003 U	0.011 U	0.5 U	0.00958 U
Blank		Blank 092506 R2			*28.0*	0.003 U	0.011 U	0.5 U	0.00958 U
		Mean Blank							
Blank		Blank 100606			*28.0*	NA	NA	NA	NA
BLANK SPIKE RESULTS									
Blank		Blank 092506 R1			*28.0*	0.003 U	0.011 U	0.5 U	0.00958 U
LCS		LCS 092506 L1			*28.0*	2.09	2.06	2.11	2.13
		Spike Concentration				2.0	2.0	2.0	2.0
		Percent Recovery				**105%**	**103%**	**105%**	**107%**
Blank		Blank 092506 R2			*28.0*	0.003 U	0.011 U	0.5 U	0.00958 U
LCS		LCS 092506 L2			*28.0*	25.5	25.7	103	**NA**
		Spike Concentration				25	25	101	**NA**
		Percent Recovery				**102%**	**103%**	**102%**	**NA**
MATRIX SPIKE RESULTS									
K0607294-038MS		2613-4 MS				2.08	28.9	118	2.04
K0607294-038MSD		2613-4 MSD				2.24	28.6	117	2.06
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	0.0268	4.42	12.1	0.00958 U
		Spike Concentration, MS				1.90	24.9	100.4	1.90
		Spike Concentration, MSD				2.01	23.9	96.6	2.01
		Percent Recovery, MS				**108%**	**99%**	**106%**	**108%**
		Percent Recovery, MSD				**110%**	**101%**	**108%**	**102%**
		RPD				**2%**	**3%**	**3%**	**5%**

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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Tl	V	Zn	Total Hg
					Instrument:	*ICP-MS*	*ICP-OES*	*ICP-OES*	*CVAA*
MATRIX SPIKE RESULTS (cont.)									
K0607294-042MS		2613-5 MS				2.23	38.2	299	2.26
K0607294-042MSD		2613-5 MSD				2.08	38.5	310	2.09
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	0.00586 J	12.9	201	0.0922
		Spike Concentration, MS				2.06	25.1	101.2	2.06
		Spike Concentration, MSD				1.92	24.9	100.6	1.92
		Percent Recovery, MS				**108%**	**101%**	**97%**	**105%**
		Percent Recovery, MSD				**108%**	**103%**	**108%**	**104%**
		RPD				**0%**	**2%**	**11%**	**1%**
REPLICATE ANALYSIS RESULTS									
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	0.003 U	0.106	54.2	0.0978
K0607294-028DUP	NW1fd DUP	2613-2DUP	*Tissue*	8/5/06	33.1	0.003 U	0.107	57.2	0.0918
Mean							0.107	55.7	0.0948
RPD						**NA**	**1%**	**5%**	**6%**
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	0.0268	4.42	12.1	0.00958 U
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	0.0262	5.22	12.6	0.00958 U
Mean						0.0265	4.82	12.3	
RPD						**2%**	**17%**	**4%**	**NA**
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	0.00586 J	12.9	201	0.0922
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	0.00536 J	12.8	196	0.0896
Mean						0.00561	12.8	199	0.0909
RPD						**9%**	**1%**	**3%**	**3%**
STANDARD REFERENCE MATERIAL									
SRM 1566b		1566-b 092506				0.00543 J	0.527	1462	0.0402
		Certified Value				NC	0.577	1424	0.0371
		PD				**NA**	**9%**	**3%**	**8%**
SRM DORM-2		DORM-2 092506				0.00529 J	0.107	28.9	4.57
		Certified Value				NC	NC	25.6	4.64
		PD				**NA**	**NA**	**13%**	**2%**
SRM IAEA 140		IAEA 140 092506				0.0187	3.72	46.3	0.0374
		Certified Value				NC	3.67	47.3	0.038
		PD				**NA**	**1%**	**2%**	**2%**

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TETRA TECH - Hawaii
METALS IN TISSUES, Dry Weigh

(concentrations in µg/g Dry wt. - data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Tl	V	Zn	Total Hg
					Instrument:	*ICP-MS*	*ICP-OES*	*ICP-OES*	*CVAA*

U Analyte not detected above the laboratory achieved method detection limit, ME
J Value detected is greater than the MDL, but less than the reporting limit (RL or
& QC value outside the accuracy or precision criteria goal
(spike recovery ±25%; SRM ±25% PD; duplicate precision <25% RSD).
B Blank concentration greater than 3 X MDL and sample concentration less than
RPD Relative Percent Difference
NS Sample was not spiked for this analyte
SL Inappropriate spike level relative to the native sample concentration
PD Percent Difference
NC Not Certified
NA Not Applicable/appropriate
(1) Detection limits converted between dry weight and wet weight using mean perc
(2) Achieved Detection limits reported from the 2006 Tissue MDL Study

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TETRA TECH - Hawaii
METALS IN TISSUES
(data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Percent Lipids (%)	Methylmercury (ug/g DRY WT)
					Instrument:		*CVAF*
K0607294-009	2fd	2613-1	*Tissue*	8/3/06	30.8	16.0	0.0544
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	21.3	0.200
K0607294-028DUP	NW1fd	2613-2DUP	*Tissue*	8/5/06	33.1	22.8	NA
K0607294-033	NW2fd	2613-3	*Tissue*	8/19/06	28.8	9.09	0.0491
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	NA	0.00129 U
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	NA	0.00129 U
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	13.9	0.0618
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	NA	0.0633
DETECTION LIMITS							
Achieved Detection Limit				*Mean Dry Wt.*	*28.0*	0.1	**0.00129**
Achieved Reporting Limit						0.3	**0.00410**
METHOD BLANK							
Blank		Blank 092506 R1			*28.0*	0.14 J	0.00129 U
Blank		Blank 092506 R2			*28.0*	NA	0.00129 U
Blank		Blank 092506 R3			*28.0*	NA	0.00129 U
MATRIX SPIKE RESULTS							
K0607294-033MS		2613-3 MS					2.13
K0607294-033MSD		2613-3 MSD					2.11
K0607294-033	NW2fd	2613-3	*Tissue*	8/19/06	28.8	9.09	0.0491
		Spike Concentration, MS					2.00
		Spike Concentration, MSD					1.99
		Percent Recovery, MS					**104%**
		Percent Recovery, MSD					**103%**
		RPD					**1%**
K0607294-038MS		2613-4 MS					0.200
K0607294-038MSD		2613-4 MSD					0.213
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	NA	0.00129 U
		Spike Concentration, MS					0.200
		Spike Concentration, MSD					0.201
		Percent Recovery, MS					**100%**
		Percent Recovery, MSD					**106%**
		RPD					**6%**

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TETRA TECH - Hawaii
METALS IN TISSUES
(data are not blank corrected)

Client Code	Field Sample ID	MSL Code	Matrix	Collection Date	Percent Dry Wt.	Percent Lipids (%)	Methylmercury (ug/g DRY WT)
					Instrument:		*CVAF*
REPLICATE ANALYSIS RESULTS							
K0607294-028	NW1fd	2613-2	*Tissue*	8/5/06	33.1	21.3	0.200
K0607294-028DUP	NW1fd	2613-2DUP	*Tissue*	8/5/06	33.1	22.8	NA
Mean						22.1	
RPD						**7%**	**NA**
K0607294-038	NW1SW1-1fd	2613-4	*Plant*	8/9/06	24.6	NA	0.00129 U
K0607294-038DUP	NW1SW1-1fd DUP	2613-4DUP	*Plant*	8/9/06	24.6	NA	0.00129 U
Mean							0.00129 U
RPD							**NA**
K0607294-042	9afd and 10a Comp	2613-5	*Tissue*	8/3/06	27.1	13.9	0.0618
K0607294-042DUP	9afd and 10a Comp DUP	2613-5DUP	*Tissue*	8/3/06	27.1	NA	0.0633
Mean							0.0626
RPD							**2%**
STANDARD REFERENCE MATERIAL							
SRM Dolt-2		DOLT-2 092506					0.693
		Certified Value					0.693
		PD					**0%**
SRM IAEA 140		IAEA 140 092506					0.000795
		Certified Value					0.000626
		PD					**27% &**

U Analyte not detected above the laboratory achieved method detection limit, MDL reported
J Value detected is greater than the MDL, but less than the reporting limit (RL or PQL)
& QC value outside the accuracy or precision criteria goal
(spike recovery ±25%; SRM ±25% PD; duplicate precision <25% RPD).
B Blank concentration greater than 3 X MDL and sample concentration less than 10 times detected blank.
RPD Relative Percent Difference
NS Sample was not spiked for this analyte
PD Percent Difference

QA/QC NARRATIVE

PROJECT:	USACE Hawaii
PARAMETER:	Total Metals – Al, Sb, As, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Se, Ag, Tl, V, Zn, THg
LABORATORY:	Battelle Marine Sciences Laboratory (MSL), Sequim, Washington
MATRIX:	Fish Tissue and Seaweed
SAMPLE CUSTODY AND PROCESSING:	Battelle received four fish tissue samples and one seaweed sample on 09/21/06. The samples were received in good condition (i.e. cooler temperature acceptable and containers intact). Samples were assigned a Battelle Central File (CF) identification number 2613 and sample information was entered into Battelle's sample tracking system. The following lists information on sample receipt and processing activities:

Sample Receipt Date:	09/21/06
Sample IDs:	2613*1-3,5 (Fish) 2613*4 (Seaweed)
Collection dates:	August 2006
Cooler temp. on arrival:	-3.4°C
Digestion Date (Aqua Regia)	09/25/06
CVAA analysis: (Total Hg)	09/29/06
HG-AAS analysis: (Se)	10/06/06 and 10/09/06
ICP-OES analysis: (Al, Cr, Fe, V, Zn)	10/06/06
ICP-MS analysis: (Sb, As, Ba, Be, Cd, Co, Cu, Pb, Mn, Se, Ag, Tl, V)	10/04/06 and 10/05/06

METHODS:

The samples were analyzed for 18 metals including: aluminum (Al), antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), lead (Pb), manganese (Mn), selenium (Se), silver (Ag), thallium (Tl), vanadium (V), zinc (Zn), and total mercury (THg).

Samples were freeze-dried and homogenized using a ball-mill prior to digestion according to Battelle SOP MSL-C-003, Percent Dry Weight and Homogenizing Dry Sediment, Soil and Tissue. Tissue samples were digested according to Battelle SOP MSL-I-024, Mixed Acid Tissue Digestion. An approximately 500-mg aliquot of each dried, homogeneous sample was combined with nitric and hydrochloric acids (aqua regia) in a Teflon vessel and heated in an oven at 130ºC (±10ºC) for a minimum of eight hours. After heating and cooling, deionized water was added to the acid-digested tissue to achieve analysis volume and the digestates were submitted for analysis by four methods.

Digested samples were analyzed for THg by cold-vapor atomic absorption spectroscopy (CVAA) according to Battelle SOP MSL-I-016, *Total Mercury in Tissues and Sediments by Cold Vapor Atomic Absorption*, which is based on EPA Method 245.6, *Determination of Mercury in Tissue by Cold Vapor Atomic Absorption Spectrometry*.

Digested samples were analyzed for Se using hydride generation flow injection atomic

QA/QC NARRATIVE

METHODS cont.

absorption spectroscopy (HG-AAS) according to Battelle SOP MSL-I-030, *Determination of Metals in Aqueous and Digestate Samples by Hydride Generation Atomic Absorption Flow Injection Spectroscopy (HGAA-FIAS)*. The base method for this procedure is EPA Method 270.3.

Digested samples were analyzed for Cr, Al, Fe, and Zn using inductively coupled plasma optical emissions spectroscopy (ICP-OES) according to Battelle SOP MSL-I-033, *Determination of Elements in Aqueous and Digestate Samples by ICP-OES*. This procedure is based on two methods modified and adapted for analysis of low-level samples: EPA Method 6010B and 200.7.

Digested samples were analyzed for all other metals using inductively coupled plasma-mass spectrometry (ICP-MS) according to Battelle SOP MSL-I-022, Determination of Elements in Aqueous and Digestate Samples by ICP/MS. This procedure is based on two methods modified and adapted for analysis of solid sample digestates: EPA Method 1638, Determination of Trace Elements in Ambient Waters by Inductively Coupled Plasma-Mass Spectrometry and EPA Method 200.8, Determination of Trace Elements in Water and Wastes by ICP-MS.

All results are reported in units of µg/g dry weight. Reported results are NOT BLANK CORRECTED.

HOLDING TIMES:

The recommended holding times for metals analyses is one year frozen. The recommended holding times were achieved for all metals.

DETECTION LIMITS and DATA QUALIFIERS:

Analytical results were reported to the laboratory achieved detection limit (MDL) from the Annual MDL study determined following 40 CFR Part 136 Appendix B. The MDL was determined using seven replicates of clean tissue process through the entire preparation and analytical procedure. Laboratory reporting limits (RL) are determined by multiplying the MDL by 3.14 to determine a statistical reporting limit.

Data were evaluated and flagged in accordance with the following criteria:

U Analyte not detected above the laboratory achieved detection limit, MDL reported
J Analyte detected above the MDL, but less than the reporting limit
& QC value outside the accuracy or precision criteria goal
B Blank concentration greater than 3 times the MDL and sample concentration < 10 times the detected blank

QA/QC NARRATIVE

QA/QC METHOD QUALITY CRITERIA (MQC):

Analyte	Analytical Method	Range of Recovery	SRM Accuracy	Relative Precision	MDL (µg/g dry wt.)	RL (µg/g dry wt.)
Al	ICP-OES	75-125%	≤25%	≤25%	0.374	1.2
Sb	ICP-MS	75-125%	≤25%	≤25%	0.02	0.06
As	ICP-MS	75-125%	≤25%	≤25%	0.585	2
Ba	ICP-MS	75-125%	≤25%	≤25%	0.5	2
Be	ICP-MS	75-125%	≤25%	≤25%	0.0048	0.015
Cd	ICP-MS	75-125%	≤25%	≤25%	0.008	0.03
Cr	ICP-OES	75-125%	≤25%	≤25%	0.041	0.13
Co	ICP-MS	75-125%	≤25%	≤25%	0.0014	0.0045
Cu	ICP-MS	75-125%	≤25%	≤25%	0.08	0.3
Fe	ICP-OES	75-125%	≤25%	≤25%	1.4	4
Pb	ICP-MS	75-125%	≤25%	≤25%	0.02	0.06
Mn	ICP-MS	75-125%	≤25%	≤25%	0.02	0.06
Se	HG-AAS	75-125%	≤25%	≤25%	0.0109	0.035
Ag	ICP-MS	75-125%	≤25%	≤25%	0.01	0.03
Tl	ICP-MS	75-125%	≤25%	≤25%	0.003	0.01
V	ICP-OES	75-125%	≤25%	≤25%	0.011	0.035
Zn	ICP-OES	75-125%	≤25%	≤25%	0.5	2
Hg	CVAA	75-125%	≤25%	≤25%	0.00958	0.03

METHOD BLANKS: Two method blanks were analyzed with the tissue and seaweed sample batch. The blank concentrations were less than the RL for all metals; therefore, no further action is required. Data are not blank corrected.

LABORATORY CONTROL SAMPLE/BLANK SPIKE ACCURACY: Two laboratory control samples (LCS) were analyzed with this batch of samples. The LCS samples were spiked at the low range (2 ppm) and the high range (25 ppm) for all metals except Al, Fe, Se, and Hg. The low range is not appropriate for Al and Fe and the high range is not appropriate for Se and Hg. LCS recoveries were within the QC acceptance criterion of 75% to 125% for all metals.

MATRIX SPIKE ACCURACY: One tissue sample and one seaweed sample were selected for a matrix spike and matrix spike duplicate (MS/MSD). The MS recoveries were within the QC criterion of 75% to 125% recovery for all metals spiked at an appropriate level relative to the native sample concentration. The tissue sample concentration was significantly higher than a majority of whole fish tissue and therefore underspiked for Al, Fe, and Mn. The seaweed sample concentration was significantly higher than anticipated for selected metals and therefore underspiked for As and Fe. Acceptable accuracy was demonstrated by multiple SRMs both tissue and plant material and LCS samples for these metals.

REPLICATE PRECISION: Precision for this digestion batch was assessed by the analysis of laboratory duplicates (a split of the sample carried through the entire sample preparation and analysis process) and duplicate matrix spikes. Precision was expressed as the relative percent difference (RPD) of replicate results. Precision was evaluated for both the tissue and seaweed matrices. The RPD values were within the QC criterion of ≤25% for all detected metals except one fish tissue replicate for Al (61%). Acceptable precision was demonstrated on the alternate measure of precision for Al.

QA/QC NARRATIVE

STANDARD REFERENCE MATERIAL ACCURACY:

SRM accuracy was expressed as the percent recovery between the measured and certified value for each SRM. Recovery of a particular analyte exceeded QC criteria if the percent recovery was outside the range of 75% to 125% recovery.

Tissue SRMs certified at an acceptable levels for Be and Tl were not available in appropriate matrices for this set of samples. Certified high purity standards were used to verify instrument calibration accuracy. An independent standard lot number was used to verify analytical accuracy.

SRM 1566b Oyster Tissue was analyzed with this digestion batch. The percent recoveries were within the QC acceptance criterion for all certified metals. SRM 1566b provides a reference value for Sb. The percent recovery is provided for information purposes.

SRM DORM-2 Dogfish Muscle was analyzed with this digestion batch. The percent recoveries were within the QC acceptance criterion for all certified metals.

SRM IAEA 140 FUCUS was analyzed with this digestion batch. The percent recoveries were within the QC acceptance criterion for all certified metals.

Analytical Note:

Selected tissue sample concentrations for Al, Fe, and Mn were significantly higher than a majority of whole fish tissues analyzed previously. This could indicate a problem with contamination in the preparation step. If a metal blade made of any metal except titanium was used in the homogenization process, these metals could have been introduced to the sample during homogenization.

QA/QC SUMMARY

PROJECT: USACE Hawaii
PARAMETER: Methyl Mercury and Lipids
LABORATORY: Battelle/Marine Sciences Laboratory, Sequim, Washington
MATRIX: Tissue and seaweed

SAMPLE CUSTODY: Battelle received four tissue samples and one seaweed sample on 09/21/06. The samples were received in good condition (i.e. cooler temperature acceptable and containers intact). Samples were assigned a Battelle Central File (CF) identification number 2613 and sample information was entered into Battelle's sample tracking system.

The following lists information on sample receipt and processing.

Sample Receipt Date:	09/21/06
Sample IDs:	2613*1-3,5 (tissue) and 2613*4 (seaweed)
Collection dates:	August 2006
Cooler temp. on arrival:	-3.4°C
Lipids Analysis Date	10/03/06 and 10/06/06
Methyl Hg Extraction Date	9/25/06
Methyl Hg Analysis Date	9/28/06

QA/QC DATA QUALITY OBJECTIVES:

Analyte	Analytical Method	Range of Recovery	Relative Precision	Achieved Detection Limit (µg/g dry Wt.)
% Lipids	Bligh-Dyer, 1959	NA	±25%	0.1%
Methylmercury	CVAF (EPA 1630)	65-135%	±35%	0.00129

ANALYTICAL NOTE: The first % lipids extraction of sample NW2fd yielded a value of 9%, which did not agree with other fish samples. The sample was extracted a second time with a value of 9%. Therefore, the value has been confirmed.

HOLDING TIMES: The suggested holding time for methyl mercury in tissue following EPA draft Method 1630 is six months frozen. All samples were archived frozen until analysis. Following these guidelines, holding times were achieved for all samples.

DETECTION LIMITS: Analytical results were reported to the laboratory achieved detection limit (MDL) from the Annual MDL study determined following CFR 40 Part 136 Appendix B. The MDL was determined using seven replicates of clean tissue.

Data were evaluated and flagged in accordance with the following criteria:

U Analyte not detected above the laboratory achieved detection limit, MDL reported
J Analyte detected above the MDL, but less than the reporting limit

cc: Project Manager/Central File
Login File 2613

SAMPLE LOGIN

(SOP# MSL-A-001)

Project Manager: Brandenberge✓
Date Received: 09/21/06
Batch: 1

PROJECT: CAS/ Tetra Tech

SPONSOR CODE	Sample I.D.	BATTELLE CODE	MATRIX	STORAGE LOCATION	PARAMETERS REQUESTED	COLLECTION DATE	INITIALS
K0607294-009 ✓	2fd ✓	2613-1 ✓	tissue	Deep Freezer D-1	metals	08/03/06	MLFM
K0607294-028 ✓	NW1fd ✓	2613-2	tissue	Deep Freezer D-1	metals	08/05/06	MLFM
K0607294-033 ✓	NW2fd ✓	2613-3	tissue	Deep Freezer D-1	metals	08/19/06	MLFM
K0607294-038 ✓	NW1SW1-1fd ✓	2613-4	tissue	Deep Freezer D-1	metals	08/09/06	MLFM
K0607294-042 ✓	9afd and 10a Comp ✓	2613-5 ✓	tissue	Deep Freezer D-1	metals	08/03/06	MLFM

V'd 9/22/06

Columbia Analytical Services, Inc.

1317 South 13th, Kelso, WA 98626

Phone: (360) 5677-7222 Fax: (360) 636-1068

SR# K0607294

PAGE _____ OF _____

Company Name:	Tetra Tech					Analysis Requested					
Project Name/Number:	Muliwai Tissue/Project 838				Number of Containers	Field Duplicates Contact Tetra Tech					
Project Manager:	Susan Carstenn										
Sample I.D.	**Date**	**Time**	**LAB ID**	**Matrix**							**REMARKS**
2fd	08/03/06		2613-1	Tissue	1	X					K0607294-009
NW1fd	08/05/06		2	Tissue	1	X					K0607294-028
NW2fd	08/19/06		3	Tissue	1	X					K0607294-033
NW1SW1-1fd	08/09/06		4	Tissue	1	X					K0607294-038
9afd and 10a Comp	08/03/06		2613-5	Tissue	1	X					K0607294-042

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_____ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date:_____

REPORT REQUIREMENTS

_____ I. Routine Report:

_____ II. Report Dup., MS, MSD as req.

_____ III. Data Validation Report (includes raw data)

V. EDD

Comments/Special Instructions:

Contact Susan Carstenn at Tetra Tech for testing requirements.

NW1fd=extra volume provided for MS/MSD.

Custody of sample aliquots relinquished to Batelle/Sequim, Wa.

Samples homogenized and frozen at CAS/Kelso prior to shipment.

RELINQUISHED BY:

Signature: _____

Printed Name: Amanda Juell

Firm: CAS/KELSO

RECEIVED BY:

Signature: A. Juell

Printed Name: Juell

Firm: CAS/Kelso

9/20/06 1420

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: MLF McGahan

Firm: MSL

Date/Time: 09/21/06 1115

Client Sample ID	Labcode	Field Duplicate Subaliquot for APPL	Field Duplicate Subaliquot for STL	Field Duplicate Subaliquot for Battelle
2fd	k0607294-009	120	30	40
9afd	k0607294-017	120	30	40
NW1fd	k0607294-028	360	90	120
NW2fd	k0607294-033	120	30	40
NW1SW1-1fd	k0607294-038	120	30	40
p 9afd and 10a	k0607294-042	120	30	40

Attn: Jill Brandenberger

~~Battelle~~ Batelle

1529 W. Sequim Bay Rd.

Sequim WA 98382

360-681-3698

HI / USACE

LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2613 Sample No(s): 1-5 Project Manager: Brandenberger

TO BE COMPLETED BY PROJECT MANAGER (prior to arrival when possible)

Matrix: FSS WP#

Yes	No	
☐	☐	Navy-type Project (requires high-level sample tracking procedures)
☐	☐	Filter Samples: *Amount:* Entire sample Half of sample
☐	☐	Freeze dry sample(s) - samples will be weighed and placed in ultralow temp freezer (Lab# 130)
☐	☐	Special instructions:

Sample Preservation Instructions:

Date To Archive: Date To Dispose:

TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN

Yes	No	N/A	Indicate in Appropriate Box
☑	☐	☐	Was a custody seal present?
☑	☐	☐	Was the custody seal intact?
☑	☐	☐	Was cooler(s) temperature(s) within acceptable range of 4±2°C or frozen? -3.4 °C (if multiple coolers, note temp. of each) °C
☐	☐	☑	Was Project Manager notified of any custody/login discrepancies (cooler temp, sponsor codes, etc)? Comment/Remedy: Samples on dry ice
☑	☐	☐	Were all chain of custody forms signed and dated?
☐	☑	☐	Were samples filtered at MSL?

Sample condition(s): Acceptable Other (explain):

Container type: Teflon Poly Glass Spex Other:

Notes: Rec in glass jars. Transfered to spex jars & put into Deep freezer

Completed By: [signature] Date/Time: 09/21/06 1135

SAMPLE PRESERVATION

- ☑ Sample(s) were preserved at MSL
- ☐ Sample(s) were preserved prior to arrival at MSL (noted on CoC / Sample / per PM Instruction)
- ☐ Random pH checked for ~10% of samples (use dip paper) Sample IDs:
- ☐ Complete pH check required for project (use pH meter and record on pH Record form)

If preservation necessary, record Acid Lot#

Type:			
	☐	0.2% HNO3	Notes:
	☐	0.5% HCl (Hg samples)	Notes:
	☑	Refrigerate/Freeze	Notes: Deep freeze D-1
	☐	Other	Notes:

Completed By: [signature] Date/Time: 09/21/06 1145

Revsed 033006

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

October 9, 2006 Service Request No: K0607294

Gary Floyd
Tetra Tech, Incorporated
180 Howard Street, Suite 250
San Francisco, CA 94105

RE: MuliwaiTissue/Project 838

Dear Gary:

Enclosed are the results of the sample(s) submitted to our laboratory on August 29, 2006. For your reference, these analyses have been assigned our service request number K0607294.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@kelso.caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/lmb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Tetra Tech, Inc.	**Service Request No.:**	K0607294
Project:	Muliwai Tissue	**Date Received:**	8/29/2006
Sample Matrix:	Tissue		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Thirty nine tissue samples were received for analysis at Columbia Analytical Services on 8/29/2006. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored frozen at –20°C upon receipt at the laboratory. The samples were approved for testing by Tetra Tech, Inc. on 9/12/06. Revisions to the analytical request were received on 9/21/06 (Sample NW1 was placed on hold) and 10/4/06 (Benzene, Acetone and PCP were added to the target analyte list).

General Discussion

In accordance with instructions from Tetra Tech, Inc., the samples were homogenized at CAS. Subaliquots of the homogenized samples were frozen and relinquished under chain of custody to the designated laboratories.

Methyl Mercury

Matrix Spike Recovery Exceptions:
The matrix spike and duplicate matrix spike recoveries of Methyl Mercury for samples 4, and NW1 SW1-1 were outside control criteria. Recovery in the Standard Reference Materials (SRM) as well as all other associated QA/QC results (i.e. Method Blanks, OPR, QCS, etc.) were acceptable, which indicates the analyses were in control. Additionally, the matrix spike and duplicate matrix spike were prepared for sample 4 a second time with similar results. The matrix spike outliers suggest a potential low bias in this matrix. No further corrective action was appropriate.

Total Metals

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Antimony for samples 4 and NW1 SW1-1 and Silver for samples NW2 and NW1 SW1-1 were below the lower control limit established for biological tissues analyzed at CAS/Kelso. The recoveries suggest a potential low bias to these samples. The samples were relatively high in insoluble material which may have contributed to the low recoveries. The recoveries for Silver in the Standard Reference Materials (SRM) were very good, which indicate the analytical batches were in control. Note the SRMs analyzed do not have certified values for Antimony. No further corrective action was appropriate.

The control criteria for matrix spike recoveries of Aluminum, Iron, and Manganese for sample 4 are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Approved by _____ **Date** 10/24/06

The control criteria for matrix spike recoveries of Aluminum and Iron for sample NW1 SW1-1 are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The matrix spike recovery of Manganese by method 6020 for sample NW1 SW1-1 was outside the CAS control criteria as a result of the heterogeneous character of the sample. The Relative Percent Difference (RPD) for the replicate analysis supports this. Variability between replicates was sufficient to bias the percent recoveries outside normal CAS control criteria. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control. No further corrective action was appropriate.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Aluminum and Iron in sample NW1 SW1-1 was outside the normal CAS control limits. The variability in the results is attributed to the heterogeneous character of the sample. Standard mixing techniques were used (i.e. the samples were homogenized in a blender), but were not sufficient for complete homogenization of this sample.

Organochlorine Pesticides by EPA Method 8081A

Sample Confirmation Notes:
The confirmation comparison criteria of 40% difference for a few analytes was exceeded in most field samples. The higher of the two values is reported when no evidence of a peak anomaly was observed. The lower of the two values was reported when an apparent interference on the alternate column produced the higher value.

Elevated Method Reporting Limits:
The reporting limit is elevated for a few analytes in all field samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the reporting limit. The results are flagged to indicate the matrix interference.

The reporting limit is elevated for all analytes in samples NW2, NW9, and NW10. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. The extract was highly colored and viscous, which indicated the need to perform a dilution prior to injection into the instrument. Clean-up of the extract was performed within the scope of the method, but did not eliminate enough of the background components to prevent dilution. A semiquantitative screen was performed prior to final analysis. The results of the screening indicated the need to perform a dilution. The results are flagged to indicate the matrix interference.

Volatile Organic Compounds by EPA Method 8260B

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analyte in Initial Calibration (ICAL) ID CAL5163: 1,3,5-Trimethylbenzene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 9.9%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

Surrogate Exceptions:
The control criteria were exceeded for one or more of the following surrogates in samples 1, 4, 10, NW4, NW5, NW6, NW7, NW9, NW10, NW1 SW2-1, Comp 8,8a, 3, 1b, 6, 7, 9, 12, 13, 14, NW2, NW3, and NW8 due to matrix interferences: Dibromofluoromethane, Toluene-d8 and 4-Bromofluorobzene. Reanalyses were performed, but produced similar results. The results of the original analyses are reported. No further corrective action was required.

Approved by _____ **Date** 10/13/06

Semivolatile Organic Compounds by EPA Method 8270C

Continuing Calibration Verification Exceptions:
The upper control criterion was exceeded for the following analytes in Continuing Calibration Verifications (CCV) MS17\1006F033.D and MS17\1010F002.D: 2,4,6-Tribromophenol. The analyte in question was not reported from the field samples analyzed in this sequence. The data quality is not affected. No further corrective action was required.

Matrix Spike Recovery Exceptions:
The matrix spike recoveries of Di-n-butyl Phthalate, Pyrene, and Bis(2-ethylhexyl) Phthalate for sample 4 were outside control criteria because of matrix interference. All recoveries in the associated LCS were within control criteria, indicating the analytical batch was in control. The results of the original analysis are reported. No further corrective action was appropriate.

Elevated Method Reporting Limits:
The reporting limit is elevated for Di-n-octyl Phthalate in several samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compound at the reporting limit. The results are flagged to indicate the matrix interference.

Perchlorate

The analysis for Perchlorate was performed at CAS in Rochester New York. The analytical report is included in its entirety herein.

Dioxins and Furans by EPA Method 8290

The analysis for dioxins and furans was performed at CAS in Houston Texas. The analytical report is included in its entirety herein.

Approved by _____ **Date** 10/13/08

Chain of Custody Documentation

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: K060 7262

PAGE 1 OF 1 COC #

PROJECT NAME: Marine Resources Study
PROJECT NUMBER: K838-0404
PROJECT MANAGER: Gary Floyd
COMPANY/ADDRESS: 820 Mililani St., Suite 700
CITY/STATE/ZIP: Honolulu, HI 96813
E-MAIL ADDRESS: Susane.Carstenn@tetratech.com
PHONE #: 808-533-3366 FAX: 808-533-3306
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS (bags)	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	As per contract	REMARKS
NW2F17-1	8/19/06	1100	1	Fish	1																✓	
NW2F17-2D		1130	2		1																	
NW2F9-1		1200	3		1																	
NW2F6-1		1230	4		1																	
NW2F18-1		1400	5		1																	
NW2F14-1	↓	1700	6		1																	
NW2F5-1	8/20/06	1200	7		1																	
NW2F13-1	↓	1300	8	↓	1																	
NW1SW3-1	8/24/06	0845	9	Seawater	1																	
NW1SW1-1	↓	0845	10	↓	1																	

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 Day
_____ Standard (10-15 working days)
_____ Provide FAX Results
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

H260130

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: 8/25/06 1148	Signature: tram sober 8.25.06 1148	Signature: tram sober 8.25.06 1300	Signature: 8/25/06 0900
Printed Name: L. Johnson	Printed Name: tracie sober	Printed Name: tracie sober	Printed Name:
Firm: Tetra Tech, Inc	Firm: VWD CAS	Firm: VWD CAS	Firm: CAS
Date/Time	Date/Time	Date/Time	Date/Time

RCOC #1 06/03

9

CHAIN OF CUSTODY

SR#: _____

PAGE _____ OF _____ COC # _____

Columbia Analytical Services INC.
An Employee - Owned Company
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PROJECT NAME: Marine Resource Study
PROJECT NUMBER: F039-0404
PROJECT MANAGER: Gary Floyd
COMPANY/ADDRESS: Tetra Tech Inc 820 Mililani St
CITY/STATE/ZIP: Honolulu HI 96813
E-MAIL ADDRESS:
PHONE #: FAX#:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐	BTEX ☐ 8021 ☐	Fuel Fingerprint (FIQ) NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle) Hex-Chrom ☐	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	As Per Contract	REMARKS
M2F1-5	5 Aug 06	1300		Fish																	✓	
NW1U1-2	5 Aug 06	1300		Urchin																		
NW1F5-1	5 Aug 06	1300		Fish																		
NW1F6-1	5 Aug 06	1300		Fish																		
NW1F7-1	5 Aug 06	1300		Fish																		
NW1F8-1	5 Aug 06	1300		Fish																		
NW1F9-1	5 Aug 06	1300		Fish																		
NW1F10-1	5 Aug 06	1300		Fish																		
NW1F11-1	5 Aug 06	1300		Fish																		
NW1F11-2	10 Aug 06	1400		Fish																	✓	

10

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 Day
_____ Standard (10-15 working days)
_____ Provide FAX Results

_____
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature: [signature]	Signature: [signature]
Date/Time: 8.7.06 17:40	Date/Time: 8.7.06 1720	Date/Time: 8.8.06 1020	Date/Time: 8/9/06 1000
Printed Name: C. Johnson	Printed Name: Tracie Sober	Printed Name: Tracie Sober	Printed Name: Blank
Firm: Tetra Tech	Firm: VND CAS	Firm: VND CAS	Firm: CAS

CHAIN OF CUSTODY

SR#:_____

PAGE _____ OF _____ COC #_____

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PROJECT NAME: Marine Resource Study
PROJECT NUMBER: K039-0404
PROJECT MANAGER: Gary Floyd
COMPANY/ADDRESS: Tetra Tech, Inc. 820 Militani St, Suite 700
CITY/STATE/ZIP: Honolulu HI 96813
E-MAIL ADDRESS: susan.carstenn@tetratech.com
PHONE: (808) 533-3366 FAX# (808) 523-3300
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 SGT☐ 1664 HEM☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics Tri☐ Tetra☐ - 8151M PCP☐	PAHS 8310☐ SIM☐	Metals, Total or Dissolved (See list below)	Cyanide☐ Hex-Chrom☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐ AOX 1650☐ 506☐	As per contract				REMARKS
NWI F19-2	10 Aug 06	1400		Fish																✓				

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REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 Day
_____ Standard (10-15 working days)
_____ Provide FAX Results

_____
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature	Date/Time 8-7-06 1720	Signature Tram Sober	Date/Time 8.7.06 1720	Signature Tram Sober	Date/Time 8.8.06 1020	Signature Tracy Black	Date/Time 8/9/06 1000
Printed Name L. Johnson	Firm Tetra Tech	Printed Name Tracie Sober	Firm VND CAS	Printed Name Tracie Sober	Firm VND CAS	Printed Name Black	Firm CAS

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SR#: K0606658

PAGE _____ OF _____ COC # _____

PROJECT NAME: Marine Resource Study
PROJECT NUMBER: K030-0404
PROJECT MANAGER: Gary Floyd
COMPANY/ADDRESS: Tetratech, Inc. 920 Mililani St Suite 700
CITY/STATE/ZIP: Honolulu, HI 96922
E-MAIL ADDRESS: Susan.carstenn@tetratech.com
PHONE #: (808) 533-3366 FAX#: (808) 533-3306
SAMPLER'S SIGNATURE: Dawn [signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	As Per contract				REMARKS
NW1 F5-2	6 Aug 06	1400		Fish																✓				
NW1 F12-2	6 Aug 06	1400		Fish																				
NW1 F14-2	6 Aug 06	1400		Fish																				
NW1 F13-2	6 Aug 06	1400		Fish																				
NW1 F15-2	6 Aug 06	1400		Fish																				
NW1 F16-2	6 Aug 06	1400		Fish																				
NW1 F6-2	6 Aug 06	1400		Fish																				
NW1 F17-2	6 Aug 06	1400		Fish																				
NW1 F20-2	6 Aug 06	1400		Fish																				
NW1 F19-2	6 Aug 06	1400		Fish																				

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 Day
_____ Standard (10-15 working days)
_____ Provide FAX Results

_____
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

H260125

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
[signature]	8-7-06 17:00	Train Sober	8.7.06 1720	Train Sober	8.8.06 1020	Tracy Black	8/9/06 1000
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
Johnson	Tetra Tech	Tracie Sober	VWD CAS	Tracie Sober	VWD CAS	Black	CAS
Printed Name	Firm	Printed Name	Firm	Printed Name	Firm	Printed Name	Firm

RCOC #1 06/03

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CHAIN OF CUSTODY

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SR#: _____

PAGE 1 OF 1 COC # _____

PROJECT NAME: Marine Resources Study
PROJECT NUMBER: K030-0404
PROJECT MANAGER: Gary Floyd
COMPANY/ADDRESS: 920 Mililani St. Suite 700
CITY/STATE/ZIP: Honolulu, HI 96813
E-MAIL ADDRESS: Susan.Carstenn@tetratech.com
PHONE #: (800) 733-3866 FAX#: (800) 733-3306
SAMPLER'S SIGNATURE: Susan Carstenn

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics Tri ☐ Tetra ☐ - 8151M PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	As Per Contract				REMARKS
MIF1-1S	8/2/06	1200		fish																					
MIF2-2	8/2/06	1200		fish																					
MIF2-3S	8/2/06	1200		fish																					
MIF1-4	8/2/06	1200		fish																					
MIF3-5	8/2/06	1200		fish																					
MIF4-6S	8/2/06	1200		fish																					
MIF4-7	8/2/06	1200		fish																					
MIF2-8	8/2/06	1200		fish																					

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 Day
_____ Standard (10-15 working days)
_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:
Hold testing per instructions from Susan Carstenn 8/4/06 LAM

H26122

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Susan Carstenn 8/2/06 16:00	Tram Sober 8.2.06 1600	Tram Sober 8.3.06 1005	Amanda Jucll 8/4/06 1000
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
Susan Carstenn Tetra Tech	Tracie Sober VND CAS	Tracie Sober VND CAS	Jucll CAS
Printed Name / Firm	Printed Name / Firm	Printed Name / Firm	Printed Name / Firm

BCOC #1 06/03

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SR#: 160606562

PAGE 1 OF 1 COC #

PROJECT NAME: Marine Resource Study
PROJECT NUMBER: K033-0404
PROJECT MANAGER: Gary Floyd
COMPANY/ADDRESS: 820 Mililani Street Suite 700
CITY/STATE/ZIP: Honolulu, HI 96813
E-MAIL ADDRESS: susan.carsten@tetratech.com
PHONE #: (808) 533-3161 FAX#: (808) 533-3300
SAMPLER'S SIGNATURE: Dawn Alleas

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4-F, NO_2, NO_3, BOD, TSS, TDS (circle) NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	As Per Contract	REMARKS
M2F1-1	8/3/06	1130	1	fish																✓	
M2F4-2	8/3/06	1130	2	fish																	
M2F4-3	8/3/06	1130	3	fish																	
M2F3-4	8/3/06	1130	4	fish																	
~~M2F3~~	8/3/06																				
NWI UI-1	8/3/06	1350	5	urchin																✓	

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 Day
_____ Standard (10-15 working days)
_____ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

H260123

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Dawn Alleas	Signature: Tracie Sober	Signature: Tracie Sober	Signature:
Printed Name: Dawn A. Lleces	Printed Name: Tracie Sober	Printed Name: Tracie Sober	Printed Name:
Firm: Tetra Tech	Firm: VND CAS	Firm: VND CAS	Firm:
Date/Time: Aug 3, 2006 1524	Date/Time: 8.3.06 1524	Date/Time: 8.4.06 1055	Date/Time: 8/5/06 0900

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SR#: K0606602

PAGE _____ OF _____ COC # _____

PROJECT NAME: Marine Resource Study
PROJECT NUMBER: K839-0404
PROJECT MANAGER: Gary Floyd
COMPANY/ADDRESS: Tetra Tech, Inc.
920 Mililani St, Suite 700
CITY/STATE/ZIP: Honolulu, HI 96813
E-MAIL ADDRESS: susan.carstenn@tetratech.com
PHONE #: 533-3366 FAX#: 533-3306
SAMPLER'S SIGNATURE: Dawn A Lleces

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	As Per Contract				REMARKS
M2 F4-5D	8/4/06	1030		fish																				
M3 F4-1	8/4/06	1500		fish																				

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
___ Standard (10-15 working days)
___ Provide FAX Results

_____
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

H260124

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Dawn A Lleces	8/4/06 1610	Tram Sober	8/4/06 1610	Tram Sober	8/7/6 1100	[signature]	8/8/06 1000
Signature	Date/Time	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
Dawn A. Lleces	Tetra Tech, Inc.	Tracie Sober	VWD CAS	Tracie Sober	VWD CAS	[signature]	CAS
Printed Name	Firm	Printed Name	Firm	Printed Name	Firm	Printed Name	Firm

RCOC #1 06/03

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SR#:_____

PAGE _____ OF _____ COC #_____

PROJECT NAME	Marine Resources Study
PROJECT NUMBER	K0330-0404
PROJECT MANAGER	Gary Floyd
COMPANY/ADDRESS	TetraTech Inc
	820 Mililani St, Suite 700
CITY/STATE/ZIP	Honolulu, HI 96813
E-MAIL ADDRESS	susan.carstenn@tetratech.com
PHONE #	(808) 523-3344 FAX# (808) 523-3306
SAMPLER'S SIGNATURE	Dawn A Lleces

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics Tri ☐ Tetra ☐ - 8151M PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle) NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	As per contract				REMARKS
M3F2-1	9 Aug 06	1300		fish																	✓				
M3F2-2	9 Aug 06	1300		fish																					
M2F3-90	9 Aug 06	1300		fish																					
M2F1-91	9 Aug 06	1300		fish																					
M2F1-92	9 Aug 06	1300		fish																					
M2F1-93	9 Aug 06	1300		fish																					
NW1SW1-1	9 Aug 06	1400		Seaweed																					
NW1SW2-1	9 Aug 06	1400		Seaweed																					

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

_____

_____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (10-15 working days)

_____ Provide FAX Results

_____

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

H260126

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Dawn A Lleces	Signature: Tracie Sober	Signature: Tracie Sober	Signature: Tracy Black
Printed Name: Dawn A. Lleces	Printed Name: Tracie Sober	Printed Name: Tracie Sober	Printed Name: Tracy Black
Firm: TetraTech	Firm: VWD CAS	Firm: VWD CAS	Firm: CAS
Date/Time: 9 Aug 06 1635	Date/Time: 8.9.06 1635	Date/Time: 8.10.06 1120	Date/Time: 8/10/06 1000

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC LYNDA

Project/Client TETRA TECH, INC Service Request K06 6658

Cooler received on 8/9/06 and opened on 8/9/06 by AB

1.	Were custody seals on outside of coolers?				(Y)	N
	If yes, how many and where?					
2.	Were custody seals intact?				(Y)	N
3.	Were signature and date present on the custody seals?	8329718981 75			Y	(N)
4.	Is the shipper's airbill available and filed? If no, record airbill number:	852916931 4950			Y	(N)
5.	COC#					
	Temperature of cooler(s) upon receipt: (°C)	-9.6	-4.0			
	Temperature Blank: (°C)					
	Were samples hand delivered on the same day as collection?				Y	(N)
6.	Were custody papers properly filled out (ink, signed, etc.)?				(Y)	N
7.	Type of packing material present ICE, GEL PACKS					
8.	**Did all bottles arrive in good condition (unbroken)?**				(Y)	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?				(Y)	N
10.	Did all bottle labels and tags agree with custody papers?				(Y)	N
11.	**Were the correct types of bottles used for the tests indicated?**				(Y)	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?				~~Y~~	~~N~~
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
14.	Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
15.	Did the bottles originate from CAS/K or a branch laboratory?				Y	(N)
16.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**				~~Y~~	~~N~~
17.	Was C12/Res negative?				~~Y~~	~~N~~

Explain any discrepancies: _____

RESOLUTION: _____

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Columbia Analytical Services Inc. PC 477
Cooler Receipt and Preservation Form

Project/Client TetraTech Service Request K06 06562

Cooler received on 8/5/06 and opened on 8/5/06 by FA

1. Were custody seals on outside of coolers? (Y) N
   If yes, how many and where? 1 front
2. Were custody seals intact? (Y) N
3. Were signature and date present on the custody seals? (Y) N
4. Is the shipper's airbill available and filed? If no, record airbill number: (Y) N
5. COC#

Temperature of cooler(s) upon receipt: (°C)	Dry Ice	Frozen Solid	
Temperature Blank: (°C)			

Were samples hand delivered on the same day as collection? ~~Y~~ ~~N~~

6. Were custody papers properly filled out (ink, signed, etc.)? (Y) N
7. Type of packing material present Foam Packs
8. **Did all bottles arrive in good condition (unbroken)?** (Y) N
9. Were all bottle labels complete (i.e analysis, preservation, etc.)? (Y) N
10. Did all bottle labels and tags agree with custody papers? (Y) N
11. **Were the correct types of bottles used for the tests indicated?** (Y) N
12. Were all of the preserved bottles received at the lab with the appropriate pH? ~~Y~~ N
13. Were VOA vials checked for absence of air bubbles, and if present, noted below? ~~Y~~ N
14. Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below? ~~Y~~ ~~N~~
15. Did the bottles originate from CAS/K or a branch laboratory? Y (N)
16. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** ~~Y~~ ~~N~~
17. Was C12/Res negative? ~~Y~~ ~~N~~

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Columbia Analytical Services Inc. PC LII
Cooler Receipt and Preservation Form

Project/Client MARINE RESOURCES STUDY Service Request K06 06543

Cooler received on 8/4/06 and opened on 8/4/06 by AB

1.	Were custody seals on outside of coolers?	(Y)	N
	If yes, how many and where? 1 FRONT		
2.	Were custody seals intact?	(Y)	N
3.	Were signature and date present on the custody seals?	(Y)	N
4.	Is the shipper's airbill available and filed? If no, record airbill number: 8572 2820 8692	Y	(N)
5.	COC#		
	Temperature of cooler(s) upon receipt: (°C) -4.9		
	Temperature Blank: (°C) N/A		
	Were samples hand delivered on the same day as collection?	Y	(N)
6.	Were custody papers properly filled out (ink, signed, etc.)?	(Y)	N
7.	Type of packing material present DRY ICE, NEWSPAPER, PHONEBOOKS		
8.	**Did all bottles arrive in good condition (unbroken)?**	(Y)	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?	(Y)	N
10.	Did all bottle labels and tags agree with custody papers?	(Y)	N
11.	**Were the correct types of bottles used for the tests indicated?**	(Y)	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?	~~Y~~	~~N~~
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~
14.	Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~
15.	Did the bottles originate from CAS/K or a branch laboratory?	Y	(N)
16.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**	~~Y~~	~~N~~
17.	Was C12/Res negative?	~~Y~~	~~N~~

Explain any discrepancies: 2 samples for MIFI-1S

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC Lynnette

Project/Client Tetra Tech Service Request K06 6779

Cooler received on 8.11.06 and opened on 8.11.06 by BW

1.	Were custody seals on outside of coolers? If yes, how many and where? 1 front				(Y)	N
2.	Were custody seals intact?				(Y)	N
3.	Were signature and date present on the custody seals?				(Y)	N
4.	Is the shipper's airbill available and filed? If no, record airbill number: Fed Ex 8329-7189-8153				(Y)	N
5.	COC#					
	Temperature of cooler(s) upon receipt: (°C)	3.8				
	Temperature Blank: (°C)	N.P				
	Were samples hand delivered on the same day as collection?				~~Y~~	N
6.	Were custody papers properly filled out (ink, signed, etc.)?				(Y)	N
7.	Type of packing material present ICE, Bubble					
8.	**Did all bottles arrive in good condition (unbroken)?**				(Y)	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?				(Y)	N
10.	Did all bottle labels and tags agree with custody papers?				(Y)	N
11.	**Were the correct types of bottles used for the tests indicated?**				(Y)	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?				~~Y~~	~~N~~
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
14.	Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
15.	Did the bottles originate from CAS/K or a branch laboratory?				(Y)	N
16.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**				~~Y~~	N
17.	Was C12/Res negative?				~~Y~~	N

Explain any discrepancies: _____

RESOLUTION: _____

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC LH

Project/Client MARINE RESOURCES STUDY Service Request K06 07262

Cooler received on 8/26/16 and opened on 8/26/16 by DB

1.	Were custody seals on outside of coolers?				Y	(N)
	If yes, how many and where?					
2.	Were custody seals intact?				~~Y~~	~~N~~
3.	Were signature and date present on the custody seals?				~~Y~~	~~N~~
4.	Is the shipper's airbill available and filed? If no, record airbill number: 883297189164				Y	(N)
5.	COC#					
	Temperature of cooler(s) upon receipt: (°C)	-3.7				
	Temperature Blank: (°C)	-				
	Were samples hand delivered on the same day as collection?				Y	(N)
6.	Were custody papers properly filled out (ink, signed, etc.)?				(Y)	N
7.	Type of packing material present gel packs, bubble wrap, ice					
8.	**Did all bottles arrive in good condition (unbroken)?**				(Y)	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?				(Y)	N
10.	Did all bottle labels and tags agree with custody papers?				(Y)	N
11.	**Were the correct types of bottles used for the tests indicated?**				(Y)	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?				~~Y~~	~~N~~
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
14.	Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
15.	Did the bottles originate from CAS/K or a branch laboratory?				~~Y~~	(N)
16.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**				~~Y~~	~~N~~
17.	Was C12/Res negative?				~~Y~~	~~N~~

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC LH

Project/Client TETRA TECH, INC Service Request K06 06602

Cooler received on 8/8/06 and opened on 8/8/06 by AB

1. Were custody seals on outside of coolers?	(Y)	N				
If yes, how many and where? FRONT						
2. Were custody seals intact?	(Y)	N				
3. Were signature and date present on the custody seals?	Y	(N)				
4. Is the shipper's airbill available and filed? If no, record airbill number:	(Y)	N				
5. COC#						
Temperature of cooler(s) upon receipt: (°C)	-2.0					
Temperature Blank: (°C)	N/A					
Were samples hand delivered on the same day as collection?	Y	(N)				
6. Were custody papers properly filled out (ink, signed, etc.)?	(Y)	N				
7. Type of packing material present BUBBLE WRAP, ICE, GEL PACKS						
8. Did all bottles arrive in good condition (unbroken)?	(Y)	N				
9. Were all bottle labels complete (i.e analysis, preservation, etc.)?	(Y)	N				
10. Did all bottle labels and tags agree with custody papers?	(Y)	N				
11. Were the correct types of bottles used for the tests indicated?	(Y)	N				
12. Were all of the preserved bottles received at the lab with the appropriate pH?	~~Y~~	~~N~~				
13. Were VOA vials checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~				
14. Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~				
15. Did the bottles originate from CAS/K or a branch laboratory?	Y	~~N~~				
16. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?	~~Y~~	~~N~~				
17. Was C12/Res negative?	Y	N				

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC LH

Project/Client TETRATECH, INC Service Request K06 06602

Cooler received on 8/8/06 and opened on 8/8/06 by AB

1.	Were custody seals on outside of coolers?	(Y)	N		
	If yes, how many and where? FRONT				
2.	Were custody seals intact?	(Y)	N		
3.	Were signature and date present on the custody seals?	Y	(N)		
4.	Is the shipper's airbill available and filed? If no, record airbill number:	(Y)	N		
5.	COC#				
	Temperature of cooler(s) upon receipt: (°C)	-2.0			
	Temperature Blank: (°C)	N/A			
	Were samples hand delivered on the same day as collection?	Y	(N)		
6.	Were custody papers properly filled out (ink, signed, etc.)?	(Y)	N		
7.	Type of packing material present BUBBLE WRAP, ICE, GEL PACKS				
8.	**Did all bottles arrive in good condition (unbroken)?**	(Y)	N		
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?	(Y)	N		
10.	Did all bottle labels and tags agree with custody papers?	(Y)	N		
11.	**Were the correct types of bottles used for the tests indicated?**	(Y)	N		
12.	Were all of the preserved bottles received at the lab with the appropriate pH?	~~Y~~	~~N~~		
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~		
14.	Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~		
15.	Did the bottles originate from CAS/K or a branch laboratory?	Y	~~N~~		
16.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**	~~Y~~	~~N~~		
17.	Was C12/Res negative?	Y	N		

Explain any discrepancies: _____

RESOLUTION: _____

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K0607294
Project:	MuliwaiTissue/Project 838	**Date Collected:**	8/2/06
Sample Matrix:	Tissue	**Date Received:**	8/29/06

Solids, Total

Prep Method:	NONE	Units:	PERCENT
Analysis Method:	Freeze Dry	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
1	K0607294-001	9/15/06	24.4	
3	K0607294-004	9/15/06	27.7	
4	K0607294-005	9/15/06	27.4	
1b	K0607294-006	9/15/06	28.1	
5	K0607294-007	9/15/06	26.1	
6	K0607294-008	9/15/06	29.0	
7	K0607294-012	9/15/06	30.6	
9	K0607294-016	9/15/06	26.3	
10	K0607294-018	9/15/06	25.7	
12	K0607294-020	9/15/06	28.7	
13	K0607294-021	9/15/06	28.2	
14	K0607294-022	9/15/06	27.3	
NW1	K0607294-024	9/15/06	30.2	
NW2	K0607294-025	9/15/06	30.3	
NW3	K0607294-026	9/15/06	30.7	
NW4	K0607294-027	9/20/06	34.2	
NW5	K0607294-029	9/15/06	27.6	
NW6	K0607294-030	9/15/06	27.1	
NW7	K0607294-031	9/15/06	26.5	
NW8	K0607294-032	9/15/06	28.7	
NW9	K0607294-034	9/15/06	31.8	
NW10	K0607294-035	9/15/06	30.0	
NW1 SW3-1	K0607294-036	9/15/06	18.1	
NW1 SW1-1	K0607294-037	9/15/06	18.8	
NW1 SW2-1	K0607294-039	9/15/06	11.6	
Comp 8,8a	K0607294-040	9/15/06	26.3	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
Sample Matrix: Tissue

Service Request: K0607294
Date Collected: 8/2/06
Date Received: 8/29/06
Date Extracted: NA
Date Analyzed: 9/15/06

Duplicate Summary
Total Metals

Sample Name: 4
Lab Code: K0607294-005D
Test Notes:

Units: PERCENT
Basis: Wet

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	27.4	27.0	27.2	1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
Sample Matrix: Tissue

Service Request: K0607294
Date Collected: 8/5/06
Date Received: 8/29/06
Date Extracted: NA
Date Analyzed: 9/15/06

Duplicate Summary
Total Metals

Sample Name: NW1
Lab Code: K0607294-024D
Test Notes:

Units: PERCENT
Basis: Wet

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	30.2	30.8	30.5	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
Sample Matrix: Tissue

Service Request: K0607294
Date Collected: 8/24/06
Date Received: 8/29/06
Date Extracted: NA
Date Analyzed: 9/15/06

Duplicate Summary
Total Metals

Sample Name: NW1 SW1-1
Lab Code: K0607294-037D
Test Notes:

Units: PERCENT
Basis: Wet

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	18.8	17.8	18.3	5	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
Sample Matrix: Tissue

Service Request: K0607294
Date Collected: 08/02/06
Date Received: 08/29/06

Methyl Mercury

Prep Method: CAS SOP
Analysis Method: CAS SOP
Test Notes:

Units: mg/Kg
Basis: Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
1	K0607294-001	0.01	0.004	1	10/03/06	10/04/06	0.070	
3	K0607294-004	0.01	0.004	1	10/03/06	10/04/06	0.044	
4	K0607294-005	0.01	0.004	1	10/03/06	10/04/06	0.020	
1b	K0607294-006	0.01	0.004	1	10/03/06	10/04/06	0.021	
5	K0607294-007	0.01	0.004	1	10/03/06	10/04/06	0.012	
6	K0607294-008	0.01	0.004	1	10/03/06	10/04/06	0.038	
7	K0607294-012	0.01	0.004	1	10/03/06	10/04/06	0.040	
9	K0607294-016	0.01	0.004	1	10/03/06	10/04/06	0.072	
10	K0607294-018	0.01	0.004	1	10/03/06	10/04/06	0.086	
12	K0607294-020	0.01	0.004	1	10/03/06	10/04/06	0.053	
13	K0607294-021	0.01	0.004	1	10/03/06	10/04/06	0.033	
14	K0607294-022	0.01	0.004	1	10/03/06	10/04/06	0.032	
NW2	K0607294-025	0.01	0.004	1	10/03/06	10/04/06	0.059	
NW3	K0607294-026	0.01	0.004	1	10/03/06	10/04/06	0.084	
NW4	K0607294-027	0.01	0.004	1	10/03/06	10/04/06	0.043	
NW5	K0607294-029	0.01	0.004	1	10/03/06	10/04/06	0.034	
NW6	K0607294-030	0.01	0.004	1	10/03/06	10/04/06	0.045	
NW7	K0607294-031	0.01	0.004	1	10/03/06	10/04/06	0.038	
Method Blank 1	K0607294-MB1	0.01	0.004	1	10/03/06	10/04/06	ND	
Method Blank 2	K0607294-MB2	0.01	0.004	1	10/03/06	10/04/06	ND	
Method Blank 3	K0607294-MB3	0.01	0.004	1	10/03/06	10/04/06	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
Sample Matrix: Tissue

Service Request: K0607294
Date Collected: 08/19/06
Date Received: 08/29/06

Methyl Mercury

Prep Method: CAS SOP
Analysis Method: CAS SOP
Test Notes:

Units: mg/Kg
Basis: Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
NW8	K0607294-032	0.01	0.004	1	10/05/06	10/06/06	0.027	
NW9	K0607294-034	0.01	0.004	1	10/05/06	10/06/06	0.006	B
NW10	K0607294-035	0.01	0.004	1	10/05/06	10/06/06	0.056	
NW1 SW3-1	K0607294-036	0.01	0.004	1	10/05/06	10/06/06	ND	
NW1 SW1-1	K0607294-037	0.01	0.004	1	10/05/06	10/06/06	ND	
NW1 SW2-1	K0607294-039	0.01	0.004	1	10/05/06	10/06/06	ND	
Comp 8,8a	K0607294-040	0.01	0.004	1	10/05/06	10/06/06	0.170	
Method Blank 1	K0607294-MB1	0.01	0.004	1	10/05/06	10/06/06	ND	
Method Blank 2	K0607294-MB2	0.01	0.004	1	10/05/06	10/06/06	ND	
Method Blank 3	K0607294-MB3	0.01	0.004	1	10/05/06	10/06/06	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K0607294
Project:	MuliwaiTissue/Project 838	**Date Collected:**	08/02/06
Sample Matrix:	Tissue	**Date Received:**	08/29/06
		Date Extracted:	10/03/06
		Date Analyzed:	10/04/06

Matrix Spike/Duplicate Matrix Spike Summary
Metals

Sample Name:	4	Units:	mg/Kg
Lab Code:	K0607294-005MS, K0607294-005DMS	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	0.01	0.39	0.38	0.020	0.248	0.247	58	60	65-135	<1	N

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
Sample Matrix: Tissue

Service Request: K0607294
Date Collected: 08/24/06
Date Received: 08/29/06
Date Extracted: 10/05/06
Date Analyzed: 10/06/06

Matrix Spike/Duplicate Matrix Spike Summary
Metals

Sample Name: NW1 SW1-1
Lab Code: K0607294-037MS, K0607294-037DMS
Test Notes:

Units: mg/Kg
Basis: Dry

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	0.01	0.39	0.37	ND	0.156	0.182	40	49	65-135	15	N

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
LCS Matrix: Water

Service Request: K0607294
Date Collected: NA
Date Received: NA
Date Extracted: 10/03/06
Date Analyzed: 10/04/06

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	25	20.1	80	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
LCS Matrix: Water

Service Request: K0607294
Date Collected: NA
Date Received: NA
Date Extracted: 10/03/06
Date Analyzed: 10/04/06

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	25	20.8	83	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
LCS Matrix: Water

Service Request: K0607294
Date Collected: NA
Date Received: NA
Date Extracted: 10/05/06
Date Analyzed: 10/06/06

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	25	22.3	89	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K0607294
Project:	MuliwaiTissue/Project 838	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/05/06
		Date Analyzed:	10/06/06

Ongoing Precision and Recovery (OPR) Sample Summary

Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	25	18.9	76	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
LCS Matrix: Tissue

Service Request: K0607294
Date Collected: NA
Date Received: NA
Date Extracted: 10/03/06
Date Analyzed: 10/04/06

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: mg/Kg
Basis: Dry

Source: NRCC DOLT-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	1.59	1.70	107	1.15-2.05	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: MuliwaiTissue/Project 838
LCS Matrix: Tissue

Service Request: K0607294
Date Collected: NA
Date Received: NA
Date Extracted: 10/05/06
Date Analyzed: 10/06/06

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: mg/Kg
Basis: Dry

Source: NRCC DORM-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	4.47	3.48	78	3.32-5.75	

Batch Number: K0607294
Method Number: MeHg in Tissue

Project Number(s):
Instrument ID: K-AFS-02

Date Analyzed: 10/6/06
Analyst Name: Guy Reggio

Run	Run Type	Name/ID	Method Blank	Peak	Peak Height	Analyzed Result (ng)	Final Result (mg/Kg)	QA Results	Criteria	Notes
1	CB	BBLR 1		3	210	0.000509		0.000509	< 0.002	accept
2	CB	BBLR 1		2	191	0.000463		0.000463	< 0.002	accept
3	STD	STD 2		2	1,094	0.00217		108	75-125	accept
4	STD	STD 5		2	2,444	0.00544		109	75-125	accept
5	STD	STD 50		2	19,198	0.0461		92.2	75-125	accept
6	STD	STD 250		3	94,514	0.229		91.5	75-125	accept
7	STD	STD 500		5	210,358	0.510		102	75-125	accept
8	QCS	CRM DORM2	MBA	2	58,319	0.141	3.48	77.9	67-133	accept
9	OPR	OPR		5	9,385	0.0223		89.1	67-133	accept
10	MBA	MBLK1		3	197	-0.00000849	-0.0000425	-0.0000425	< 0.005	accept
11	MBA	MBLK2		2	233	0.0000788	0.000394	0.000394	< 0.005	accept
12	MBA	MBLK3		3	274	0.000178	0.000891	0.000891	< 0.005	accept
13	S	K0607294-005	MBA	2	1,526	0.00322	0.0122		< HS	accept
14	MS	K0607294-005 (1)	MBA	3	18,684	0.0448	0.161	41.3	65-135	reject
15	MSD	K0607294-005	MBA	2	18,374	0.0441	0.159	40.6	65-135	reject
16	S	K0607294-032	MBA	3	3,179	0.00723	0.0267		< HS	accept
17	S	K0607294-034	MBA	2	942	0.00180	0.00621		< HS	accept
18	S	K0607294-035	MBA	3	6,350	0.0149	0.0558		< HS	accept
19	S	K0607294-036	MBA	2	264	0.000154	0.000204		< HS	accept
20	QCS	QCS		2	8,400	0.0199		79.6	67-133	accept
21	S	K0607294-037	MBA	3	274	0.000178	0.000253		< HS	accept
22	MS	K0607294-037	MBA	2	16,601	0.0398	0.156	39.6	65-135	reject
23	MSD	K0607294-037	MBA	2	20,300	0.0488	0.182	48.6	65-135	reject
24	S	K0607294-039	MBA	3	388	0.000455	0.00139		< HS	accept
25	S	K0607294-040	MBA	2	19,208	0.0461	0.170		< HS	accept
26	OPR	OPR		3	7,994	0.0189		75.6	67-133	accept

Comments (1) Confirmation only. Not reported

PMT 684
Offset50407
Noise36

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: K0607294
Method Number: MeHg in Tissue

Project Number(s):
Instrument ID: K-AFS-02

Date Analyzed: 10/6/06
Analyst Name: Guy Reggio

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K0607294-005	0.161	mg/Kg	0.3596	0.0122	41.3	65-135			reject
	K0607294-037	0.156	mg/Kg	0.3934	0.000253	39.6	65-135			reject
MSD	K0607294-005	0.159	mg/Kg	0.3611	0.0122	40.6	65-135			reject
	K0607294-037	0.182	mg/Kg	0.3732	0.000253	48.6	65-135			reject
OPR	OPR	0.0223	ng	0.025		89.1	67-133			accept
	OPR	0.0189	ng	0.025		75.6	67-133			accept
QCS	CRM DORM2	3.48	mg/Kg	4.47		77.9	67-133			accept
	QCS	0.0199	ng	0.025		79.6	67-133			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	STD 2	0.00217	ng	0.002	108	75-125			accept
	STD 5	0.00544	ng	0.005	109	75-125			accept
	STD 50	0.0461	ng	0.050	92.2	75-125			accept
	STD 250	0.229	ng	0.250	91.5	75-125			accept
	STD 500	0.510	ng	0.500	102	75-125			accept
Calibration Factor		0.00000243	ng/PH				8.48	< 15	accept
Calibration Date		10/6/06							

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: K0607294
Method Number: MeHg in Tissue

Project Number(s):
Instrument ID: K-AFS-02

Date Analyzed: 10/6/06
Analyst Name: Guy Reggio

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	BBLR 1	0.000509	ng	< 0.002			accept
	BBLR 1	0.000463	ng	< 0.002			accept
Average		0.000486	ng	< 0.002	0.0000326	25	accept
MBA	MBLK1	-0.0000425	mg/Kg	< 0.005			accept
	MBLK2	0.000394	mg/Kg	< 0.005			accept
	MBLK3	0.000891	mg/Kg	< 0.005			accept
Average		0.000414	mg/Kg		0.000467		

Comments

PMT 684
Offset50407
Noise36

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Batch Number: K0607294
Method Number: MeHg in Tissue

Project Number(s):
Instrument ID: K-AFS-02

Date Analyzed: 10/6/06
Analyst Name: Guy Reggio

Run	Name/ID	Final Result (mg/Kg)	Notes
13	K0607294-005	0.0122	accepted
16	K0607294-032	0.0267	accepted
17	K0607294-034	0.00621	accepted
18	K0607294-035	0.0558	accepted
19	K0607294-036	0.000204	accepted
21	K0607294-037	0.000253	accepted
24	K0607294-039	0.00139	accepted
25	K0607294-040	0.170	accepted

HgGuru ver 3.0 (c) 2003 Brooks Rand LLC

Service Request Number(s):				K0607294		Sample Number(s):								
Analysis for:		Methyl Mercury				Method:	Methyl Mercury in Tissue							
Analyst:		G Reggio/J. Bailey				Freeze Dried		Yes						
DATA FILE:		K0607294T3				Date Prepared		10/5/06						
STAR LIMS PREP #						Date Run		10/6/06						
	Sample	Bot ID	Teflon Bomb	SPL WT (mg) (200 typical)	Aliquot VOL (mL)	Final SPL VOL (mL)	Dilution	Spike STD name	STD CONC. pg/mL	Spike Vol (mL)	Spike AMT (pg) in bomb	Spike amt(pg) in 50mL	Comment factor in guru (soln / spl wt)	
1	MBLK 1		1											
2	MBLK 2		2											
3	MBLK 3		3											
4	K0607294	-005	4	254.9	0.05	50								
5	K0607294	-005MS	5	278.1	0.05	50			10000	0.5	5000	100.000	0.3596	
6	K0607294	-005DMS	6	276.9	0.05	50			10000	0.5	5000	100.000	0.3611	
7	K0607294	-032	7	266.2	0.05	50								
8	K0607294	-034	8	271.5	0.05	50								
9	K0607294	-035	9	265.4	0.05	50								
10	K0607294	-036	10	248.9	0.05	50								
11	K0607294	-037	11	267.0	0.05	50								
12	K0607294	-037 MS	12	254.2	0.05	50			10000	0.5	5000	100.000	0.3934	
13	K0607294	-037 MSD	13	267.9	0.05	50			10000	0.5	5000	100.000	0.3733	
14	K0607294	-039	14	251.8	0.05	50								
15	K0607294	-040	15	271.2	0.05	50								
16	DORM-2		16	202.3	0.05	250							4.47 mg/Kg	

	Calibration Standard		Bubbler Vessel		Spike STD name	STD CONC. pg/mL	Spike Vol (mL)	Spike AMT (pg)
	BBLK1		1					
	BBLK2		2					
	STD 2		3			10	0.2	2
	STD 5		4			10	0.5	5
	STD 50		5			100	0.5	50
	STD 200		6			100	2	200
	STD 500		7			1000	0.5	500

Calibration Standard		Bubbler Vessel		Spike STD name	STD CONC. pg/mL	Spike Vol (mL)	Spike AMT (pg)
BBLK1		1					
BBLK2		2					
STD 2		3		AF1-24-C	10	0.20	2
STD 5		4		AF1-24-C	10	0.50	5
STD 50		5		AF1-24-B	100	0.50	50
STD 250		6		AF1-24-A	1000	0.25	200
STD 500		7		AF1-24-A	1000	0.50	500
OPR (same source cal ver)				AF1-24-B	100	0.25	25
QCS (2nd Source Cal Ver)				AF1-24-E	100	0.25	25

Source	STD name	STD CONC. pg/mL	Expires
MeHgCl	AF1-24-G	10000	10/4/06
MeHgCl	AF1-24-A	1000	10/4/06
MeHgCl	AF1-24-B	100	10/4/06
MeHgCl	AF1-24-C	10	10/4/06
MeHgOH	AF1-24-D	1000	10/4/06
MeHgOH	AF1-24-E	100	10/4/06
MeHgOH	AF1-24-F	10	10/4/06

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client: Tetra Tech, Incorporated

Service Request: K0607294

Project No.: Project 838

Project Name: MuliwaiTissue

Sample No.	Lab Sample ID.
1	K0607294-001
3	K0607294-004
4	K0607294-005
4D	K0607294-005D
4S	K0607294-005S
1b	K0607294-006
5	K0607294-007
6	K0607294-008
7	K0607294-012
9	K0607294-016
10	K0607294-018
12	K0607294-020
13	K0607294-021
14	K0607294-022
NW2	K0607294-025
NW2D	K0607294-025D
NW2S	K0607294-025S
NW3	K0607294-026
NW4	K0607294-027
NW5	K0607294-029
NW6	K0607294-030
NW7	K0607294-031
NW8	K0607294-032

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature: _____ Date: 10/26/06

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client: Tetra Tech, Incorporated

Service Request: K0607294

Project No.: Project 838

Project Name: MuliwaiTissue

Sample No.	Lab Sample ID.
NW9	K0607294-034
NW10	K0607294-035
NW1 SW3-1	K0607294-036
NW1 SW1-1	K0607294-037
NW1 SW1-1D	K0607294-037D
NW1 SW1-1S	K0607294-037S
NW1 SW2-1	K0607294-039
Comp 8,8a	K0607294-040
Method Blank	K0607294-MB
Method Blank	K0607294-MB2

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature: _____ Date: 10/30/06

METALS

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/02/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 1 Lab Code: K0607294-001

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	5.0	4.0	1	9/22/06	10/2/06	2950		
Antimony	6020	0.05	0.02	5	9/22/06	10/3/06	0.02	U	N
Arsenic	6020	0.50	0.05	5	9/22/06	10/3/06	2.25		
Barium	6020	0.05	0.03	5	9/22/06	10/3/06	22.7		
Beryllium	6020	0.020	0.003	5	9/22/06	10/3/06	0.037		
Cadmium	6020	0.02	0.02	5	9/22/06	10/3/06	0.06		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	11.9		
Cobalt	6020	0.020	0.005	5	9/22/06	10/3/06	2.580		
Copper	6020	0.10	0.02	5	9/22/06	10/3/06	166		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	3460		
Lead	6020	0.020	0.006	5	9/22/06	10/3/06	3.160		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	239		
Mercury	7471A	0.019	0.002	1	10/2/06	10/4/06	0.074		
Selenium	7740	1.00	0.50	10	9/22/06	10/3/06	3.71		
Silver	6020	0.020	0.008	5	9/22/06	10/3/06	1.130		N
Thallium	6020	0.020	0.009	5	9/22/06	10/3/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/3/06	19.3		
Zinc	6020	0.50	0.06	5	9/22/06	10/3/06	129		

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/02/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 3 Lab Code: K0607294-004

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020	2.0	0.2	5	9/22/06	10/3/06	48.3		
Antimony	6020	0.05	0.02	5	9/22/06	10/3/06	0.04	B	N
Arsenic	6020	0.50	0.05	5	9/22/06	10/3/06	2.87		
Barium	6020	0.05	0.03	5	9/22/06	10/3/06	5.53		
Beryllium	6020	0.020	0.003	5	9/22/06	10/3/06	0.003	U	
Cadmium	6020	0.02	0.02	5	9/22/06	10/3/06	0.02		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	0.9		
Cobalt	6020	0.020	0.005	5	9/22/06	10/3/06	0.397		
Copper	6020	0.10	0.02	5	9/22/06	10/3/06	6.39		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	122		
Lead	6020	0.020	0.006	5	9/22/06	10/3/06	5.390		
Manganese	6020	0.05	0.02	5	9/22/06	10/3/06	11.9		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.038		
Selenium	7740	0.99	0.50	10	9/22/06	10/3/06	1.83		
Silver	6020	0.020	0.008	5	9/22/06	10/3/06	0.014	B	N
Thallium	6020	0.020	0.009	5	9/22/06	10/3/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/3/06	1.24		
Zinc	6020	0.50	0.06	5	9/22/06	10/3/06	98.8		

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/02/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 4 Lab Code: K0607294-005

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020	99.4	9.9	250	9/22/06	10/3/06	2000		
Antimony	6020	0.05	0.02	5	9/22/06	10/3/06	0.02	U	N
Arsenic	6020	0.50	0.05	5	9/22/06	10/3/06	2.53		
Barium	6020	0.05	0.03	5	9/22/06	10/3/06	26.1		
Beryllium	6020	0.020	0.003	5	9/22/06	10/3/06	0.028		
Cadmium	6020	0.02	0.02	5	9/22/06	10/3/06	0.05		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	8.2		
Cobalt	6020	0.020	0.005	5	9/22/06	10/3/06	2.670		
Copper	6020	0.10	0.02	5	9/22/06	10/3/06	44.1		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	2140		
Lead	6020	0.020	0.006	5	9/22/06	10/3/06	2.040		
Manganese	6020	2.48	0.99	250	9/22/06	10/3/06	259		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.024		
Selenium	7740	0.99	0.50	10	9/22/06	10/3/06	2.24		
Silver	6020	0.020	0.008	5	9/22/06	10/3/06	0.285		N
Thallium	6020	0.020	0.009	5	9/22/06	10/3/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/3/06	11.2		
Zinc	6020	0.50	0.06	5	9/22/06	10/3/06	103		

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/03/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 1b

Lab Code: K0607294-006

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	2840		
Antimony	6020	0.05	0.02	5	9/22/06	10/3/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/3/06	3.18		
Barium	6020	0.05	0.03	5	9/22/06	10/3/06	26.1		
Beryllium	6020	0.020	0.003	5	9/22/06	10/3/06	0.034		
Cadmium	6020	0.02	0.02	5	9/22/06	10/3/06	0.06		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	10.5		
Cobalt	6020	0.020	0.005	5	9/22/06	10/3/06	3.250		
Copper	6020	0.10	0.02	5	9/22/06	10/3/06	45.3		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	2810		
Lead	6020	0.020	0.006	5	9/22/06	10/3/06	1.250		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	328		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.029		
Selenium	7740	0.98	0.49	10	9/22/06	10/3/06	1.97		
Silver	6020	0.020	0.008	5	9/22/06	10/3/06	0.245		N
Thallium	6020	0.020	0.009	5	9/22/06	10/3/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/3/06	15.0		
Zinc	6020	0.49	0.06	5	9/22/06	10/3/06	112		

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/03/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 5 Lab Code: K0607294-007

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	4240		
Antimony	6020	0.05	0.02	5	9/22/06	10/3/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/3/06	3.81		
Barium	6020	0.05	0.03	5	9/22/06	10/3/06	23.5		
Beryllium	6020	0.020	0.003	5	9/22/06	10/3/06	0.051		
Cadmium	6020	0.02	0.02	5	9/22/06	10/3/06	0.08		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	14.7		
Cobalt	6020	0.020	0.005	5	9/22/06	10/3/06	4.170		
Copper	6020	0.10	0.02	5	9/22/06	10/3/06	48.8		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	4530		
Lead	6020	0.020	0.006	5	9/22/06	10/3/06	1.340		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	386		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.030		
Selenium	7740	0.98	0.49	10	9/22/06	10/3/06	2.16		
Silver	6020	0.020	0.008	5	9/22/06	10/3/06	0.302		N
Thallium	6020	0.020	0.009	5	9/22/06	10/3/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/3/06	17.3		
Zinc	6020	0.49	0.06	5	9/22/06	10/3/06	127		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/03/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 6 Lab Code: K0607294-008

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	1250		
Antimony	6020	0.05	0.02	5	9/22/06	10/3/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/3/06	2.35		
Barium	6020	0.05	0.03	5	9/22/06	10/3/06	16.6		
Beryllium	6020	0.019	0.003	5	9/22/06	10/3/06	0.018	B	
Cadmium	6020	0.02	0.02	5	9/22/06	10/3/06	0.02		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	23.0		
Cobalt	6020	0.019	0.005	5	9/22/06	10/3/06	2.530		
Copper	6020	0.10	0.02	5	9/22/06	10/3/06	20.9		
Iron	6010B	1.9	0.9	1	9/22/06	10/2/06	2570		
Lead	6020	0.019	0.006	5	9/22/06	10/3/06	1.200		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	94.9		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.044		
Selenium	7740	0.97	0.49	10	9/22/06	10/3/06	2.03		
Silver	6020	0.019	0.008	5	9/22/06	10/3/06	0.047		N
Thallium	6020	0.019	0.009	5	9/22/06	10/3/06	0.009	U	
Vanadium	6020	0.19	0.02	5	9/22/06	10/3/06	9.23		
Zinc	6020	0.49	0.06	5	9/22/06	10/3/06	91.5		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/03/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 7 Lab Code: K0607294-012

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	1150		
Antimony	6020	0.05	0.02	5	9/22/06	10/4/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/4/06	2.18		
Barium	6020	0.05	0.03	5	9/22/06	10/4/06	15.1		
Beryllium	6020	0.020	0.003	5	9/22/06	10/4/06	0.018	B	
Cadmium	6020	0.02	0.02	5	9/22/06	10/4/06	0.03		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	31.5		
Cobalt	6020	0.020	0.005	5	9/22/06	10/4/06	2.390		
Copper	6020	0.10	0.02	5	9/22/06	10/4/06	14.2		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	2690		
Lead	6020	0.020	0.006	5	9/22/06	10/4/06	1.020		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	113		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.034		
Selenium	7740	0.98	0.49	10	9/22/06	10/3/06	1.61		
Silver	6020	0.020	0.008	5	9/22/06	10/4/06	0.046		N
Thallium	6020	0.020	0.009	5	9/22/06	10/4/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/4/06	9.19		
Zinc	6020	0.49	0.06	5	9/22/06	10/4/06	85.2		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/03/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 9 Lab Code: K0607294-016

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	2880		
Antimony	6020	0.05	0.02	5	9/22/06	10/4/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/4/06	1.72		
Barium	6020	0.05	0.03	5	9/22/06	10/4/06	21.2		
Beryllium	6020	0.020	0.003	5	9/22/06	10/4/06	0.032		
Cadmium	6020	0.02	0.02	5	9/22/06	10/4/06	0.05		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	12.4		
Cobalt	6020	0.020	0.005	5	9/22/06	10/4/06	2.210		
Copper	6020	0.10	0.02	5	9/22/06	10/4/06	109		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	3450		
Lead	6020	0.020	0.006	5	9/22/06	10/4/06	2.600		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	184		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.068		
Selenium	7740	0.97	0.49	10	9/22/06	10/3/06	2.80		
Silver	6020	0.020	0.008	5	9/22/06	10/4/06	0.822		N
Thallium	6020	0.020	0.009	5	9/22/06	10/4/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/4/06	18.2		
Zinc	6020	0.49	0.06	5	9/22/06	10/4/06	106		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/03/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 10 Lab Code: K0607294-018

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	5.0	4.0	1	9/22/06	10/2/06	2140		
Antimony	6020	0.05	0.02	5	9/22/06	10/4/06	0.02	U	N
Arsenic	6020	0.50	0.05	5	9/22/06	10/4/06	1.46		
Barium	6020	0.05	0.03	5	9/22/06	10/4/06	18.7		
Beryllium	6020	0.020	0.003	5	9/22/06	10/4/06	0.024		
Cadmium	6020	0.02	0.02	5	9/22/06	10/4/06	0.05		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	10.9		
Cobalt	6020	0.020	0.005	5	9/22/06	10/4/06	1.940		
Copper	6020	0.10	0.02	5	9/22/06	10/4/06	67.3		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	2540		
Lead	6020	0.020	0.006	5	9/22/06	10/4/06	2.250		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	159		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.075		
Selenium	7740	1.00	0.50	10	9/22/06	10/3/06	2.65		
Silver	6020	0.020	0.008	5	9/22/06	10/4/06	0.657		N
Thallium	6020	0.020	0.009	5	9/22/06	10/4/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/4/06	11.7		
Zinc	6020	0.50	0.06	5	9/22/06	10/4/06	117		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/04/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 12 Lab Code: K0607294-020

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	3810		
Antimony	6020	0.05	0.02	5	9/22/06	10/4/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/4/06	2.51		
Barium	6020	0.05	0.03	5	9/22/06	10/4/06	39.7		
Beryllium	6020	0.019	0.003	5	9/22/06	10/4/06	0.078		
Cadmium	6020	0.02	0.02	5	9/22/06	10/4/06	0.11		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	22.3		
Cobalt	6020	0.019	0.005	5	9/22/06	10/4/06	4.590		
Copper	6020	0.10	0.02	5	9/22/06	10/4/06	70.0		
Iron	6010B	1.9	0.9	1	9/22/06	10/2/06	5410		
Lead	6020	0.019	0.006	5	9/22/06	10/4/06	2.010		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	501		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.042		
Selenium	7740	0.97	0.49	10	9/22/06	10/3/06	2.19		
Silver	6020	0.019	0.008	5	9/22/06	10/4/06	0.527		N
Thallium	6020	0.019	0.009	5	9/22/06	10/4/06	0.009	U	
Vanadium	6020	0.19	0.02	5	9/22/06	10/4/06	19.6		
Zinc	6020	0.49	0.06	5	9/22/06	10/4/06	108		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/04/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 13 Lab Code: K0607294-021

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	5170		
Antimony	6020	0.05	0.02	5	9/22/06	10/4/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/4/06	2.57		
Barium	6020	0.05	0.03	5	9/22/06	10/4/06	43.6		
Beryllium	6020	0.020	0.003	5	9/22/06	10/4/06	0.094		
Cadmium	6020	0.02	0.02	5	9/22/06	10/4/06	0.12		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	24.7		
Cobalt	6020	0.020	0.005	5	9/22/06	10/4/06	5.250		
Copper	6020	0.10	0.02	5	9/22/06	10/4/06	64.9		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	7010		
Lead	6020	0.020	0.006	5	9/22/06	10/4/06	2.020		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	603		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.047		
Selenium	7740	0.98	0.49	10	9/22/06	10/3/06	2.39		
Silver	6020	0.020	0.008	5	9/22/06	10/4/06	0.594		N
Thallium	6020	0.020	0.009	5	9/22/06	10/4/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/4/06	23.6		
Zinc	6020	0.49	0.06	5	9/22/06	10/4/06	111		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/04/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: 14 Lab Code: K0607294-022

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010B	4.9	3.9	1	9/22/06	10/2/06	4420		
Antimony	6020	0.05	0.02	5	9/22/06	10/4/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/4/06	2.54		
Barium	6020	0.05	0.03	5	9/22/06	10/4/06	39.1		
Beryllium	6020	0.020	0.003	5	9/22/06	10/4/06	0.082		
Cadmium	6020	0.02	0.02	5	9/22/06	10/4/06	0.13		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	19.7		
Cobalt	6020	0.020	0.005	5	9/22/06	10/4/06	4.860		
Copper	6020	0.10	0.02	5	9/22/06	10/4/06	79.9		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	5570		
Lead	6020	0.020	0.006	5	9/22/06	10/4/06	2.150		
Manganese	6010B	0.5	0.1	1	9/22/06	10/2/06	611		
Mercury	7471A	0.020	0.002	1	10/2/06	10/4/06	0.043		
Selenium	7740	0.98	0.49	10	9/22/06	10/3/06	2.57		
Silver	6020	0.020	0.008	5	9/22/06	10/4/06	0.703		N
Thallium	6020	0.020	0.009	5	9/22/06	10/4/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/4/06	19.7		
Zinc	6020	0.49	0.06	5	9/22/06	10/4/06	116		

Comments:

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INORGANIC ANALYSIS DATA SHEET

Client:	Tetra Tech, Incorporated	Service Request:	K0607294
Project No.:	Project 838	Date Collected:	08/06/06
Project Name:	MuliwaiTissue	Date Received:	08/29/06
Matrix:	ANIMAL T	Units:	mg/kg
		Basis:	Dry

Sample Name: NW2 Lab Code: K0607294-025

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020	9.9	1.0	25	9/22/06	10/4/06	51.3		
Antimony	6020	0.05	0.02	5	9/22/06	10/4/06	0.02	U	N
Arsenic	6020	0.49	0.05	5	9/22/06	10/4/06	37.3		
Barium	6020	0.05	0.03	5	9/22/06	10/4/06	1.27		
Beryllium	6020	0.020	0.003	5	9/22/06	10/4/06	0.003	U	
Cadmium	6020	0.02	0.02	5	9/22/06	10/4/06	0.21		
Chromium	6010B	0.5	0.4	1	9/22/06	10/2/06	8.8		
Cobalt	6020	0.020	0.005	5	9/22/06	10/4/06	0.413		
Copper	6020	0.10	0.02	5	9/22/06	10/4/06	9.78		
Iron	6010B	2.0	0.9	1	9/22/06	10/2/06	302		
Lead	6020	0.020	0.006	5	9/22/06	10/4/06	0.945		
Manganese	6020	0.05	0.02	5	9/22/06	10/4/06	15.7		
Mercury	7471A	0.019	0.002	1	10/2/06	10/4/06	0.055		
Selenium	7740	0.99	0.49	10	9/22/06	10/3/06	1.60		
Silver	6020	0.020	0.008	5	9/22/06	10/4/06	0.008	U	N
Thallium	6020	0.020	0.009	5	9/22/06	10/4/06	0.009	U	
Vanadium	6020	0.20	0.02	5	9/22/06	10/4/06	1.24		
Zinc	6020	0.49	0.06	5	9/22/06	10/4/06	149		

Comments: